

risks; the West has less variation in yields, and payment limitations may discourage participation, thus rates are usually the lowest in this region. The Southeast and Delta generally have similar program participation rates.

Direct Payments to Producers. The level of income support (or deficiency payment per pound) is the difference between the established target price and the higher of loan rate or calendar year average farm price (this contrasts with programs for grains, which use a season-average price to determine the payment rate). Since 1986/87, the deficiency payment rate has varied from 26 cents a pound for the 1986 season to only 4.6 cents in 1994/95 (table 10). For each crop year except 1986/87, the farm price has been above the loan rate, resulting in lower deficiency payments to producers than the maximum allowed.

Direct payments to producers totaled only \$260 million in 1994/95, but averaged about \$1.1 billion during 1986-93 (table 11). Payments ranged from the \$260 million for the 1994 crop to \$1.5 billion during the 1993 season. Deficiency payments are the primary means of support, accounting for over 75 percent of all payments in most years.

Beginning with the 1986 season, producers also were eligible for loan deficiency payments. These payments are made to producers participating in the program, but who agree to forgo the CCC loan. Payments are made only when the weekly AWP is below the prevailing loan rate, with the amount equal to the difference between the AWP and loan rate. Payments are made in cash and are subject to the payment limitations. Because of low world prices during the 1991-93 seasons, loan deficiency payments were relatively high, averaging \$242 million. No loan

Table 9—Upland cotton program ARP levels and participation rates, 1986-94

Crop year	ARP level	Participation rate
		Percent
1986	25.0	92.0
1987	25.0	93.0
1988	12.5	89.0
1989	25.0	89.0
1990	12.5	86.0
1991	5.0	84.0
1992	10.0	89.0
1993	7.5	91.0
1994	11.0	89.0

Source: USDA.

Table 11—Direct payments to upland cotton producers, 1986-94

Crop year	Deficiency	Loan deficiency	Disaster	Total 1/
				Million dollars
1986	1,258.3	127.2	0	1,385.5
1987	953.1	0.4	0	953.5
1988	1,144.2	41.7	150.7	1,336.6
1989	655.3	0	170.6	825.9
1990	409.7	0	43.1	452.8
1991	552.1	154.2	93.3	799.6
1992	1,017.4	268.0	134.1	1,419.5
1993	1,055.5	303.9	163.0	1,522.4
1994 2/	260.0	0	0	260.0

1/ Excludes marketing loan gain.

2/ Preliminary estimates.

Source: USDA.

Table 10—Average price support levels and average price received by farmers for upland cotton, 1986-94

Crop year	Target price	Loan rate	Farm price 1/	Support level 2/
				Cents per pound
1986	81.00	55.00	53.80	26.00
1987	79.40	52.25	62.10	17.30
1988	75.90	51.80	56.50	19.40
1989	73.40	50.00	60.30	13.10
1990	72.90	50.27	65.60	7.30
1991	72.90	50.77	62.80	10.10
1992	72.90	52.35	52.60	20.30
1993	72.90	52.35	54.30	18.60
1994	72.90	50.00	68.30	4.60

1/ Calendar year average price received by farmers for upland cotton used to compute deficiency payment rates.

2/ Target price minus the higher of the loan rate or calendar year farm price.

deficiency payments were made for the 1994 crop, as the AWP remained above the loan rate.

The importance of government payments to producers' income is shown in table 12. During 1986-94, direct payments as a share of total income (excluding cottonseed value, which averaged \$500-\$600 million annually) varied greatly. Government payments represented only 4 percent of total income for the 1994 crop, but about 37 percent in 1986/87. While the level of direct government payments as a share of total cotton farm income has shown year-to-year variation, differences between farm bill periods have been surprisingly stable. Government payments aver-

aged 21 percent of total income during 1981-85 and 1986-90, and about 18 percent for the first 4 years of the current program. However, the proportion would be 6-7 percentage points greater under current legislation if marketing loan gains were counted as direct payments.

On a per-pound-of-production basis, direct payments averaged 15.0 cents on a nominal basis, and 13.8 cents on a real basis since 1986 (table 13). Payments ranged from a nominal 2.8 cents per pound in 1994 to 30.3 cents in 1986. In both nominal and real terms, the level of per-pound government payments are related to the level of market prices. As expected,

Table 12—U.S. farm value of upland cotton lint produced and government payments, 1986-94

Crop year	Farm value	Direct payments 1/	Total income 2/	Share of total	
				Lint value	Payments
-----Million dollars-----					
1986	2,360	1,386	3,746	63	37
1987	4,413	954	5,367	82	18
1988	4,001	1,337	5,338	75	25
1989	3,555	826	4,381	81	19
1990	4,894	453	5,347	92	8
1991	4,728	800	5,528	86	14
1992	4,082	1,420	5,502	74	26
1993	4,367	1,522	5,889	74	26
1994 3/	6,255	260	6,515	96	4

1/ Includes deficiency, diversion, and disaster payments, but excludes any marketing loan gains.
 2/ Does not include value of cottonseed sold.
 3/ Preliminary estimates.

Source: USDA.

Table 13—Nominal and deflated upland cotton prices and payments per pound produced, 1986-94

Crop year	Average farm price		Average direct payments		Total	
	Nominal	Real 1/	Nominal	Real 1/	Nominal	Real 1/
Cents per pound						
1986	51.5	53.1	30.3	31.3	81.8	84.4
1987	63.7	63.7	13.7	13.7	77.4	77.4
1988	55.6	53.5	18.5	17.8	74.1	71.3
1989	63.6	58.6	15.0	13.8	78.6	72.4
1990	67.1	59.2	6.2	5.5	73.3	64.7
1991	56.8	48.3	9.7	8.2	66.5	56.5
1992	53.7	44.4	18.8	15.6	72.5	60.0
1993	58.1	47.0	20.1	16.3	78.2	63.3
1994 2/	67.8	53.8	2.8	2.2	70.6	56.0

1/ Nominal value divided by the gross domestic product price deflator (1987 = 100).
 2/ Based on preliminary estimates. The average farm price is an August-December average, not a projection for the year.

Source: USDA.

government payments were higher in years when market prices were lower.

Acreage and Production. Government programs have had a direct effect on cotton acres planted and the amount produced over the years. In an effort to control production, support farm income, and limit government costs, various acreage limitation programs have been employed. Current provisions for acreage bases, ARP levels, and flex acres help provide a better balance between supply and demand.

ARP's were authorized by the Agriculture and Food Act of 1981 to replace acreage "set-aside" programs used in the late 1970's. ARP's allow USDA to implement acreage control by idling land on a commodity-specific basis, in contrast to the more general set-aside program.

Annual ARP's have been in effect for cotton since 1982. ARP levels have ranged from 5 to 11 percent under the 1990 FACT Act, compared with 12.5 to 25 percent during 1986-90. For the coming 1995 crop, a zero percent ARP has been announced because of the exceptionally strong demand for U.S. cotton. Annual acreage idled under the programs (including 50/92) since 1991 has ranged from 1.2 to 1.7 million acres, down from 2.0 to 4.0 million during 1986-90. In addition to higher cotton use in recent years, the ARP's have been smaller because 1.4 million acres of cotton base are enrolled in the 10-year Conservation Reserve Program.

Beginning with the 1985 Farm Act, cotton acreage began expanding again in response to increased demand for cotton and more market-oriented policies. During 1986-90, planted acres rose steadily from 9.9 million in 1986 to 12.1 million in 1990. Under the 1990 FACT Act, the market for cotton has continued to grow, attracting additional acreage into the program. Planted acreage for the 1994 season totaled 13.9 million acres, and has averaged 13.5 million for the 1991-94 period. The normal flex acres provision has raised annual cotton plantings by 100,000 to 350,000 acres, with the largest increase in 1994.

There is little doubt that most cotton producers benefited from participation in the acreage reduction programs during 1986-93. Large deficiency payments were made during those years, marketing loan gains have been large in some years, and market prices are higher due to the acreage reduction programs.

Consumers

Government cotton programs have had little effect on retail prices of cotton textile and apparel products. The wide farm-to-retail price spread and the small amount of cotton used per item insulate consumers from most price changes at the farm level. In 1993, domestic per capita consumption of cotton had increased to 29.3 pounds, up from 21.4 pounds in 1988. The estimated farm value of this quantity was \$17.14 in 1993, compared with \$11.90 in 1988.

The cotton programs of recent years featured direct payments to support farm incomes. Thus, most of the program costs have been borne directly by the taxpayers rather than by higher cost of textiles paid by consumers.

In addition, price increases at the farm level may not be reflected as higher retail values in the short run because of the highly competitive nature of the cotton textile industry. The impact of raw cotton prices (cost 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. As an illustration, about 3/4 pound of raw cotton is required to produce a typical business shirt or a bath towel, compared with about 2 pounds for denim jeans. The cost of raw cotton as a share of the estimated 1993 retail value was only about 3 percent for a shirt, 11 percent for a bath towel, and 8 percent for denim jeans. Thus, a 10-percent increase in farm price may increase the retail price of a shirt by less than 1 percent and the price of bath towels and jeans about 1 percent.

Taxpayers

Since 1986, cotton program costs have varied from a net gain of \$79 million in fiscal 1990 to a high of \$2.2 billion in fiscal 1993 (table 14). During 1991-94, cotton program's net expenditures averaged about \$1.4 billion, or about 15 percent of the total public expenditures on all commodity price support and related programs. While cotton program costs represent a modest share of total farm outlays, they appear to have accomplished the program goals of keeping U.S. cotton competitive in domestic and world markets. But these budget outlays represent a direct transfer of income from taxpayers to the farming sector, and to cotton exporters and domestic mills when Step 2 user marketing certificates are issued.

The \$1.5 billion outlay in fiscal 1994 represented a \$12.51 cost to each taxpayer, while the \$79 million gain in 1990 represented a savings of about \$0.67 per

taxpayer. In comparison, 1994 taxpayer costs for other commodity programs include \$7.89 per taxpayer for feed grains, \$14.06 for wheat, and \$6.80 under the rice program.

Problems and Issues To Be Addressed in 1995

The 1995 farm bill debates will focus on a number of important problems and issues which may be critical to the continued health of the U.S. cotton sector. The overriding factor, however, will be Federal spending limits, or budget-driven considerations.

Structure and Performance Issues

The 1990 Farm Act has performed as intended by encouraging production and consumption and stabilizing farm income. Program provisions have operated to respond to the rising demand for U.S. cotton. The ARP is set using the ratio of carryover stocks to total use, which allows production to rise as projected consumption expands. The marketing loan provisions and Step 2 user certificates assure that cotton will be available at a competitive price. These benefits, however, were achieved at a relatively high government cost.

The challenge for the 1995 farm bill provisions for cotton is to preserve the flexibility and responsiveness of the current legislation, but at a reduced budget exposure to the Government.

Numerous structural or operational changes in program provisions will be debated in an effort to lower government costs. These options include ARP levels,

payment limitations, target price and loan rate levels, and possible limits on the value of Step 2 certificates. Earlier discussions of "means testing" for program benefits may also reappear. Planting flexibility and producers' payment acres will also receive increased attention. Most groups agree that producers should have increased flexibility in deciding what crops to grow on portions of their base acres, but additional flexibility is likely to result in cuts in program benefits.

An important issue of concern is what to do with land in the CRP as contracts begin to expire in fiscal 1995. A total of 36.4 million acres is involved, of which cotton land accounts for 1.4 million. Contracts representing approximately 65 percent of cotton CRP land expire in fiscal 1996 and 1997. If the CRP contracts are not extended, a significant amount of land could return to crop production. Higher ARP's may be necessary to hold down government costs and maintain the targeted stocks-to-use ratios.

While budget or cost considerations will be an important factor in the 1995 farm bill debate, conservation and environmental issues will also be addressed. Concerns about the environment and the impacts of farm operations on water quality, air pollution, and chemical use are receiving increased emphasis. Tying farm program benefits to environmental requirements and more stringent conservation plans will likely get increased attention.

Foreign Trade Issues

U. S. participation in trade negotiations leading to NAFTA and the Uruguay Round of the GATT raised questions and concerns about the impacts on the U.S. cotton and textile industries. Because textile trade has been one of the most heavily regulated areas of world commerce, the relaxation of trade barriers has global implications. The 1995 farm bill debate will take into account the anticipated impacts of these agreements.

North American Free Trade Agreement

In August 1992, the United States, Canada, and Mexico concluded negotiations on NAFTA, to eliminate many trade barriers between the three countries. NAFTA established separate bilateral agreements on cross-border trade, one between the United States and Mexico and the other between Canada and Mexico. NAFTA became effective in January 1994.

The most significant trade expansion from NAFTA will be with Mexico, already U.S. agriculture's third

Table 14--Farm program outlays for upland cotton, 1986-94

Fiscal year	Total cost 1/		Cost per taxpayer 2/	
	Nominal	Real 3/	Nominal	Real 3/
	Million dollars		Dollars	
1986	2,142	2,211	19.54	20.17
1987	1,786	1,786	15.88	15.88
1988	666	641	5.79	5.58
1989	1,461	1,347	12.45	11.48
1990	-79	-70	-0.67	-0.59
1991	382	325	3.27	2.78
1992	1,443	1,194	12.27	10.15
1993	2,239	1,813	18.77	15.20
1994	1,540	1,221	12.51	9.92

1/ Based on net CCC outlays; negative indicates net receipts for that fiscal year.

2/ Net CCC outlays divided by total civilian employment.

3/ Nominal value deflated by gross domestic product price deflator (1987=100).

Source: USDA and Bureau of Labor Statistics.

largest market. The U.S.-Canada Free Trade Agreement was implemented in 1989 and had increased U.S. agricultural exports to Canada. Trade will be enhanced for several reasons. All tariffs, quotas, and licenses that are barriers to agricultural trade between the United States and Mexico will be eliminated. By increasing trade, the agreement will boost economic growth, especially in Mexico, which will lead to increased demand for food, fiber, and other agricultural products.

NAFTA is not expected to significantly change the competitive advantage in cotton between the United States and Mexico. There may be changes in cropping patterns and farming practices that could result in increases in production in Mexico. However, the impact on U.S. producers will be minor because the United States is a much larger player in world cotton trade.

Mexico's 10-percent tariff on cotton imports will be phased out over a 10-year period. The United States has an import quota on raw cotton from Mexico, but the quota has rarely been filled. Under NAFTA, the United States will establish a duty-free quota of about 46,000 bales for Mexico. The quota will grow 3 percent annually, with an over-quota tariff of 26 percent that will be phased out over 10 years.

Of more importance to the cotton industry are changes in textile and apparel trade under NAFTA. Raw cotton trade will be affected by rules of origin for textiles, which state that only North American goods receive NAFTA tariff preference. The "fiber-forward" rule of origin applies to yarns and knit fabrics. This rule requires that cotton yarns must be spun and cotton knit fabrics produced from cotton grown in NAFTA countries. The "yarn-forward" rule

applies to other cotton fabrics and apparel. It allows the import of cotton fibers, but the yarns must originate in a NAFTA country.

Under NAFTA, Mexico is expected to increase production of cotton textiles and apparel for export to the United States and Canada. Most cotton textile products are expected to be traded under the "yarn-forward" rule, which allows raw cotton to come from a non-NAFTA country. However, transportation costs will limit such raw cotton imports and any increase in Mexican demand for raw cotton will most likely be met by increased imports from the United States or increased cotton production in Mexico.

U.S. exports to Mexico of both raw cotton and cotton textiles and apparel are expected to increase. Larger U.S. exports will be spurred by NAFTA-generated income growth in Mexico and increased consumer demand for textiles and apparel, along with greater Mexican access to the U.S. market.

The General Agreement on Tariffs and Trade

In December 1993, the Uruguay Round of Multilateral Trade Negotiations (UR) under the GATT was concluded. The UR is an effort to open world agricultural markets, prompting increased trade and growth. The agricultural agreement covers four areas--export subsidies, market access, internal supports, and sanitary and phytosanitary rules.

The principal source of the agreement's impacts on cotton is higher incomes, which will increase world consumption of cotton textiles and apparel. Liberalization of textile and apparel trade eventually will further increase world cotton demand. Export subsidies are not important in world cotton trade, and

Table 15--Uruguay Round effects on upland cotton

Category	Unit	2000		2005	
		Uruguay Round	Percent change from baseline	Uruguay Round	Percent change from baseline
World trade 1/	Million bales	28.6 - 28.9	(1) - 0	30.4 - 30.9	(2) - 0
United States:					
Planted area	Million acres	13.2 - 13.3	2 - 2	13.7 - 14.2	1 - 4
Production	Million bales	18.2 - 18.3	2 - 2	19.8 - 20.5	2 - 5
Exports	Million bales	6.8 - 7.0	5 - 8	7.5 - 8.0	7 - 14
Domestic use	Million bales	11.3 - 11.4	(2) - (1)	12.1 - 12.3	(3) - (2)
Farm price	Cents/lb.	2/	1 - 2	2/	2 - 5
Gross farm receipts	Billion \$	5.20 - 5.27	3 - 4	5.99 - 6.35	3 - 9
Deficiency payments	Billion \$	0.77 - 0.74	3 - 0	0.61 - 0.54	(9) - (19)

() Denotes negative number.

1/ Includes a small amount of extra-long staple (ELS) cotton.

2/ USDA is prohibited from publishing projected prices.

Source: USDA.

support for cotton production is limited among GATT member countries. The agreement is not expected to cause significant changes in world cotton trade. The United States is projected to increase raw cotton exports by 500,000 to 1 million bales by 2005, with small increases in U.S. and world cotton prices (table 15).

The UR impacts on cotton depend significantly on liberalization of textile and apparel trade. However, the flexibility of UR provisions for liberalization make the scale and timing of impacts uncertain. Most impacts will likely be negligible until after 2000. Importers retain discretion over products to be liberalized and will minimize impacts. Almost half of all textile products can remain under quota until after 2005. Broad transitional safeguards will prevent surges in imports during the transition period.

China, the largest supplier of U.S. cotton textile and apparel imports, is not a GATT member and will receive limited benefits from liberalization. China's membership in the World Trade Organization, expected during the next few years, will increase those benefits. Liberalization of textile and apparel trade will tend to transfer manufacturing from developed to developing countries. The greatest impacts will be on highly labor-intensive apparel trade in which developing countries have a strong advantage.

Higher incomes under the UR will increase world demand for cotton textiles and apparel. The largest income increases will occur in moderate-income developing countries where the propensity to spend additional income on clothing is high. Liberalization of textile and apparel trade also will increase world demand for cotton textiles and apparel as lower manufacturing costs in developing countries reduce apparel prices. The increase in mill use in developing countries will more than offset the decline in developed countries like the United States. World consumption is expected to grow about 1.7 million bales above baseline projections by 2005.

Higher world consumption of textiles and apparel will require greater world cotton production under the UR. The United States is expected to expand production and will not require significant price increases or other adjustments to do so since 1.4 million acres remain idled under the ARP in baseline projections for 2005. U.S. cotton producers will benefit from the smaller ARP's and higher production as world demand for U.S. cotton increases.

Higher raw cotton exports are expected as the reduction of exports from several major competitors will provide significant opportunities for the United States. The rise in U.S. cotton exports more than offsets a decline in U.S. mill use caused by increased textile and apparel imports. Higher U.S. prices increase market returns and farm incomes, while deficiency payments decrease. No changes in domestic commodity programs are required to meet the internal support commitments. In addition, elimination of U.S. section 22 import quotas for cotton will have virtually no effect on U.S. raw cotton imports because transportation costs are too high for foreign cotton to be competitive in the U.S. market.

Policy Options and Alternatives

Cotton policy options and alternatives considered during the 1995 farm bill debates will cover a wide array of topics. Proposals will attempt to control governments costs and, at the same time, maintain or expand the competitiveness of U.S. cotton. Alternative means of supporting cotton farm income through simpler programs based on revenue assurance will also be evaluated. The recent reform of the federal crop insurance and disaster programs is projected to help stabilize farm income at less cost to the Government than previous insurance and ad hoc disaster programs.

The relative costs and benefits of program proposals will be measured against budget considerations and the increasing influence of environmental and conservation groups. One alternative, as always, is to extend current legislation with only some minor changes.

The likely impacts of extending the 1990 Act would be similar to those detailed in USDA's 10-year baseline projections for the cotton industry to the year 2005. These official projections were made in December 1994 and assume that about 200,000 acres of cotton CRP land will be phased back into production, and also that the NAFTA and GATT accords for agricultural commodities are implemented. A summary of baseline results is as follows:

- Between 1995 and 2000 upland cotton base is projected to expand about 900,000 acres to 16.5 million, with expired contracts for CRP acreage accounting for over 20 percent of the increase. During the following 5-year period, CRP acreage base will continue to grow at 100,000 acres annually. ARP's for upland cotton start at 0 percent in 1995, but range between 7.5 and 12.5 percent between 1996 and 2005. Upland cotton ARP's are used to maintain stocks-to-use ratios of 29.5 percent in 1995

and 1996, and 29 percent thereafter, as mandated by legislation. Area idled between 1996 and 2005 ranges from 1 to 1.7 million acres.

- The national average yield rises 10 pounds per year, reaching 770 pounds per harvested acre in 2005. Harvested area expands to 14 million acres in 1995 to rebuild stocks, then stabilizes near 13 million acres thereafter. Production declines in 1996 after stocks are rebuilt, then increases thereafter reaching over 21 million bales by 2005 to meet increases in domestic use and exports.
- Growth in domestic mill use and exports will be affected by the recently completed GATT which is expected to lower trade barriers and increase world cotton trade. Mill use is expected to increase 2 to 3 percent per year, reaching 12.5 million bales by 2000. However, as textile import quota restrictions are eased, mill use growth is expected to slow after 2000, increasing about 1 percent per year through 2005. Despite significant increases in textile imports, primarily apparel, U.S. textile exports of yarn, fabric, and semi-finished apparel continue to support growing mill use.
- Stronger growth in export demand for U.S. cotton is expected to more than offset slowing mill consump-

tion growth. Rising world incomes are driving demand growth for cotton textile products. As trade barriers are reduced, the United States is expected to capture a large share of world cotton trade. Between 1995 and 2005 U.S. cotton exports expand 21 percent and reach 8.1 million bales by 2005.

- The USDA is forbidden from publishing projections of cotton prices. However, the baseline assumes that target prices will be fixed at 72.9 cents per pound throughout the period; loan rates based on current program provisions would average about 53.6 cents per pound during 1996-2000, and an average of 55.8 cents a year for the next 5-year period through 2005.
- Net returns to cotton program participants vary only slightly in the baseline. Increasing prices are offset by larger ARP's required to keep stocks from growing. Net returns to nonparticipants increase and exceed participant returns in the last 2 years. Rising market prices result in a decline in program participation beyond 2000.
- Government deficiency payments are projected to average about \$682 million annually during 1996-2000, then fall to an average of \$336 million for the 2001-2005 period.

Appendix table 1—Acreage, yield, and production of upland cotton, 1980-94

Crop year	Planted	Harvested	Diverted	Yield per harvested acre	Production
	-----Million acres-----			Pounds	1,000 bales 1/
1980	14.5	13.1	---	402	11,018
1981	14.3	13.8	---	542	15,566
1982	11.3	9.7	1.6 2/	589	11,864
1983	7.9	7.3	6.6 3/	506	7,676
1984	11.1	10.3	2.5 2/	599	12,851
1985	10.6	10.1	3.6 4/	628	13,277
1986	9.9	8.4	4.3 5/	547	9,525
1987	10.3	9.9	4.6 5/	702	14,475
1988	12.3	11.8	3.2 5/	615	15,077
1989	10.2	9.2	4.7 5/	602	11,504
1990	12.1	11.5	3.3 5/	632	15,147
1991	13.8	12.7	2.5 5/	650	17,216
1992	13.0	10.9	3.1 5/	694	15,710
1993	13.2	12.6	2.8 5/	601	15,764
1994 6/	13.6	13.2	3.1 5/	707	19,386

--- = Not applicable.

1/ 480-pound net weight bales.

2/ Acreage reduction program.

3/ Includes 4.1 million acres in payment-in-kind program and 2.5 million acres in other reduction programs.

4/ 2.3 million acres in acreage reduction program and 1.3 million acres of paid land diversion.

5/ Acreage reduction program, conservation reserve program, and 50/92-0/92 program.

6/ Based on January 1995 estimates.

Source: USDA, National Agricultural Statistics Service and Consolidated Farm Service Agency.

Appendix table 2—Use and ending stocks for upland cotton, 1980-94

Crop year	Mill use	Exports	Total use	Ending stocks	Stocks-to-use ratio
	-----1,000 bales 1/-----				Percent
1980	5,828	5,893	11,721	2,614	22.3
1981	5,216	6,555	11,771	6,567	55.8
1982	5,457	5,194	10,651	7,844	73.6
1983	5,861	6,750	12,611	2,693	21.4
1984	5,490	6,125	11,615	4,024	34.6
1985	6,338	1,855	8,193	9,289	113.4
1986	7,385	6,570	13,955	4,942	35.4
1987	7,565	6,345	13,910	5,718	41.1
1988	7,711	5,883	13,594	7,026	51.7
1989	8,686	7,242	15,928	2,798	17.6
1990	8,592	7,378	15,970	2,262	14.2
1991	9,548	6,348	15,896	3,583	22.5
1992	10,190	4,869	15,059	4,456	29.6
1993	10,346	6,555	16,901	3,303	19.5
1994 2/	10,925	8,850	19,775	3,066	15.5

1/ 480-pound net weight bales.

2/ Based on January 1995 estimates.

Source: USDA and Bureau of the Census.

Appendix table 3—Prices and ending stocks for upland cotton, 1980-94

Crop year	Ending stocks			Average price received 2/	Loan rate 3/	Target price	Direct payment 4/
	CCC-owned	Free 1/	Total				
	-----1,000 bales-----			-----Cents per pound-----			
1980	5/	2,614	2,614	74.40	48.00	58.40	0.00
1981	1	6,566	6,567	54.00	52.46	70.87	7.67
1982	396	7,448	7,844	59.50	57.08	71.00	13.92
1983	158	2,535	2,693	65.30	55.00	76.00	12.10
1984	124	3,900	4,024	58.70	55.00	81.00	18.60
1985	775	8,514	9,289	56.80	57.30	81.00	23.70
1986	69	4,873	4,942	51.50	55.00	81.00	26.00
1987	5	5,713	5,718	63.70	52.25	79.40	17.30
1988	92	6,934	7,026	55.60	51.80	75.90	19.40
1989	27	2,771	2,798	63.60	50.00	73.40	13.10
1990	1	2,261	2,262	67.10	50.27	72.90	7.30
1991	5/	3,583	3,583	56.80	50.77	72.90	10.10
1992	8	4,448	4,456	53.70	52.35	72.90	20.30
1993	14	3,289	3,303	58.10	52.35	72.90	18.60
1994 6/	5/	3,066	3,066	67.80 7/	50.00	72.90	4.60

1/ Includes cotton in consuming establishments, public storage (including cotton under loan but excluding CCC-owned cotton), compresses, and cotton in transit.

2/ Marketing year average prices received by farmers for lint cotton, with no allowance for unredeemed loans.

3/ Loan rates shown for 1980-90 are basis Strict Low Middling 1-1/16 inch, micronaire 3.5-4.9. Loan rates shown for 1991-94 are basis Strict Low Middling 1-1/16 inch, micronaire 3.5-3.6 and 4.3-4.9 and strength of 24-25 gpt.

4/ The direct payments represent deficiency payments: the difference between the target price and the higher of the calendar year average price or the base loan rate. Diversion payments, disaster payments, and payment-in-kind entitlement are excluded.

5/ Fewer than 500 bales.

6/ Based on January 1995 projections.

7/ August-December average, not a projection for the crop year. USDA is prohibited by law from publishing cotton price projections.

Source: USDA, Consolidated Farm Service Agency and Agricultural Marketing Service.

Appendix table 4—Farm-related program outlays for upland cotton, 1980-94 1/

Fiscal year	Direct price support or deficiency payment	Diversion	Disaster	Loan operations		Total support and related expenditures 2/
				Outlays	Repayments	
Million dollars						
1980	-0.9 3/	---	104.0	402.8	441.6	64.3
1981	-0.1 3/	0.1 3/	303.9	523.4	491.6	335.7
1982	467.4	0.1 3/	99.9	1,392.4	770.1	1,189.7
1983	804.3	3.3	105.5	1,405.4	955.6	1,362.9
1984	145.1	-1.1	0.5	474.1	374.6	244.0
1985	1,048.5	161.8	---	763.5	421.1	1,552.7
1986	834.5	34.1	4/	1,969.1	695.8	2,141.9
1987	987.4	0.2	4/	1,537.4	739.3	1,785.7
1988	211.6	-0.1	0.4	1,427.8	973.9	665.8
1989	1,108.9	4/	0.4	2,789.9	2,438.1	1,461.1
1990	453.2	---	4/	904.4	1,436.4	-78.8
1991	401.5	---	---	742.0	761.2	382.2
1992	887.5	---	---	1,595.2	1,180.4	1,442.5
1993	1,508.4	---	---	2,175.7	1,558.9	2,238.8
1994	1,107.5	---	---	1,960.9	1,677.5	1,539.5

--- = No outlays. Negative indicates net receipts.

1/ Excludes PL 480 commodity costs.

2/ Direct price support or deficiency, diversion, and disaster payments plus government expenditures on loans, storage and handling, transportation, loan collateral settlements, and other expenses less sales proceeds, loan repayments, and other receipts. User marketing payments of \$140.3 million for 1992, \$113.6 million for 1993, and \$148.6 million for 1994 are included.

3/ Reflects prior year adjustment.

4/ Less than \$50,000.

Source: USDA, Consolidated Farm Service Agency.

Appendix table 5--Value comparisons for upland cotton, 1980-94

Crop year	Loan value per acre		Market value per acre		Gross value of production	
	Current dollars 1/	1987 dollars 2/	Current dollars 3/	1987 dollars 2/	Current dollars 4/	1987 dollars 2/
	-----Dollars-----				--Million dollars--	
1980	192.96	269.12	342.94	478.30	4,507	6,286
1981	284.33	360.37	332.83	421.84	4,587	5,814
1982	336.20	401.19	387.12	461.96	3,741	4,464
1983	278.30	319.15	404.34	463.69	2,946	3,378
1984	329.45	362.03	400.43	440.03	4,124	4,532
1985	359.84	381.19	385.22	408.07	3,908	4,140
1986	300.85	310.47	318.80	329.00	2,664	2,749
1987	366.80	366.80	494.01	494.01	4,888	4,888
1988	318.57	306.61	401.31	386.25	4,719	4,542
1989	301.00	277.42	441.65	407.05	4,048	3,731
1990	317.71	280.41	488.18	430.87	5,617	4,958
1991	330.01	280.62	410.57	349.12	5,221	4,440
1992	363.31	300.50	431.75	357.11	4,690	3,879
1993	314.62	254.75	403.44	326.67	5,081	4,114
1994 5/	353.50	280.33	529.77	420.12	7,031	5,576

1/ Loan values per harvested acre obtained by multiplying appropriate base loan rates per pound (from appendix table 3) by average yields per harvested acre.
 2/ Current dollars deflated by the GDP implicit price deflator (1987 = 100).
 3/ Gross value of production of upland cotton lint and seed, divided by harvested acres. Excludes government payments.
 4/ Total value of upland cotton lint and seed produced, excluding government payments. The value of cottonseed produced averaged about 12 percent of the total value of lint and seed during 1980-94.
 5/ Estimated.

Appendix table 6--World production, consumption, exports, and stocks of cotton, 1980-94

Crop year	Production	Consumption	Exports	Ending stocks	Stocks-to-use ratio
					Percent
	-----1,000 bales-----				
1980	63,489	64,979	26,243	20,683	31.8
1981	68,671	63,234	25,849	25,727	40.7
1982	66,619	66,806	25,650	25,682	38.4
1983	65,745	68,496	25,239	24,300	35.5
1984	88,652	68,985	27,199	43,982	63.8
1985	80,282	76,906	28,048	48,143	62.6
1986	70,581	82,768	33,368	35,589	43.0
1987	81,026	84,171	29,863	32,597	38.7
1988	84,391	85,267	33,359	31,364	36.8
1989	79,741	86,579	31,275	25,771	29.8
1990	86,964	85,492	29,678	28,102	32.9
1991	95,991	84,507	28,120	40,114	47.5
1992	82,729	85,651	25,423	37,330	43.6
1993 1/	76,921	84,886	26,844	29,945	35.3
1994 2/	84,014	86,111	27,924	28,569	33.2

1/ Estimated.
 2/ Forecast.

Source: USDA, Foreign Agricultural Service.

SUMMARY OF REPORT #AER-705

The 1995 Farm Bill

**Greater Dairy Price Variability
a Concern for Policymakers**

April 1995

Contact: Don P. Blayney, (202) 219-0711

The increased variability in U.S. dairy prices and obligations resulting from new international trade agreements will be major points of concern during the 1995 farm bill debate.

The likely parameters of that debate are outlined in *Dairy: Background for 1995 Farm Legislation*, a new report from USDA's Economic Research Service that describes dairy policy options, the history of dairy policy, and the current state of the U.S. dairy sector.

Dairy Programs and Policies

In addition to trade concerns, other important dairy-policy issues this year include the price support system, possible policy alternatives, desires to cut the Federal budget, and environmental concerns, including water quality, air quality, animal waste management, and water availability (an issue in areas where production agriculture is competing more and more with urban and environmental water "customers.")

Government policy has traditionally played a major role in the pricing and marketing of milk and dairy products in the United States. Federal regulations prevail in most areas, with California's State dairy program being one prominent exception.

The major Federal dairy policies date from the 1930's and 1940's, but have been modified significantly since then as the structure of the dairy sector has evolved. The two principal parts of Federal dairy policy are the price support and milk marketing order programs, both of which have been under increasing pressure to change. Import quotas on dairy products have been used with the price support program.

The 1980's and the first few years of the 1990's were marked by attempts to reduce government dairy program costs by adjusting price supports and initiating voluntary supply control measures. Government spending limits are expected to be an important factor in the debates over dairy policy and other farm legislation this year.

Recent years have seen a revival of State regulations aimed at improving dairy farmers' income. However, most of the new regulations have not survived court tests.

The U.S. Dairy Sector

Cash receipts from milk marketings totaled \$19.3 billion in 1993, ranking milk third in value among all U.S. agricultural commodities. Consumers spend about 13 percent of their food budget on milk and milk products. Milk is produced and processed in every State, but more than half of total production in 1993 came from five States: Wisconsin, California, New York, Pennsylvania, and Minnesota.

Farm numbers and cow numbers continue to decline while output rises. Milk production is growing in sections of the country outside the traditional dairy areas of the upper Midwest and the Northeast. California recently surpassed Wisconsin as the top milk-producing State.

To Order This Report...

The information presented here is excerpted from *Dairy: Background for 1995 Farm Legislation*, AER-705, by Don P. Blayney, James J. Miller, and Richard P. Stillman. The cost is \$9.00.

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