



United States  
General Accounting Office  
Washington, D.C. 20548

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Resources, Community, and  
Economic Development Division

B-271614

April 24, 1996

The Honorable Richard K. Arney  
House of Representatives

Dear Mr. Arney:

This responds to your request that we review a July 1995 report by the National Cotton Council entitled GAO Report on Cotton Program Ignores Results and address the report's critique of our June 1995 report on the U.S. Department of Agriculture's (USDA) cotton program.<sup>1</sup> Our report described the program's cost and complexity, distribution of payments, effects on producers' costs and returns, and effectiveness in enhancing U.S. cotton exports.

We have carefully reviewed the Cotton Council's report as well as our adherence to GAO standards, policies, and procedures. We are confident that our work was performed with due professional care consistent with generally accepted government auditing standards and that our facts are well supported; our conclusions flow logically from the facts, and our recommendations offer reasonable suggestions for addressing the problems we identified.

Enclosure I contains our point-by-point responses to specific comments made in the Cotton Council's report. The Council's primary concerns are discussed below, along with our responses. (See encl. II for the Council's report.)

The Council raised four primary points. First, the Council had concerns about the approach we used in conducting the economic analysis, specifically our use of the gross domestic product implicit price deflator to compare costs over a period of time (1986-93) and our use of 1993 as the base year, which the Council believes overstated costs. Comparing constant dollars over time (rather than nominal dollars as the Council suggested) is a reasonable and generally accepted method to assess the real costs of a government program over a number of years. We clearly explained the use of the price deflator in our presentation of our objectives, scope, and methodology and used the price deflator consistently in our analysis. In addition, the use of 1993 as the base year did not overstate program costs because a dollar was worth more in 1987

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<sup>1</sup>Cotton Program: Costly and Complex Government Program Needs to Be Reassessed (GAO/RCED-95-107, June 20, 1995).

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than 1993. We provided a separate appendix to our report to fully explain our economic analysis of the cotton program.

Second, the Council believes that the marketing loan program helped to support cotton exports, whereas our report stated that cotton exports declined under the marketing loan provision. We believe our report's discussion of this issue was fair, balanced, and complete. The marketing loan, established under the 1985 Farm Bill as a measure to maintain and enhance cotton exports in times of low prices, was in effect in only 3 of the years between 1986 and 1993—1988, 1991, and 1992. In those 3 years, as our report pointed out, U.S. cotton exports and market share declined. However, we also reported that over the entire 8-year period, cotton exports slightly increased. We also noted that during the 12-year period between 1981 and 1993, the volume of cotton exports was up by 2 percent. Any increase in exports that occurred in years other than when the marketing loan provision was in effect resulted from other factors.

Third, the Council disagreed with our estimates of the cost of producing cotton, our estimates of domestic market returns available to producers, and our use of averages for the 1986-93 period to present the data. The Council expressed the view that on a year-by-year basis, producers' long-run production costs exceeded the combination of market revenues and government payments every year but one. We believe our facts are correct and our analytical approach was appropriate. Whether the data are analyzed by using multiyear averages or individual years, the result is virtually the same—the combination of market revenues and government payments exceeded long-run production costs in every year but 2—1989 and 1990. In 1989 and 1990, total revenues covered 96 and 99.4 percent, respectively, of long-run production costs. For the other 6 years, combined revenues ranged from a low of 110 percent to more than 132 percent of long-run production costs.

Fourth, the Council stated that we did not adequately consider the impact of the breakup of the Soviet Union on cotton markets during 1991 and 1992. We disagree because our report recognized that the breakup of the Soviet Union was a factor in the decline of the world price of cotton. However, this is the kind of international situation that marketing loan and step 2 provisions were designed to counteract. During 1991 and 1992, exports of U.S. cotton declined despite the availability and "influence" of the marketing loan and step 2 payments.

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In summary, our findings, conclusions, and recommendations regarding the cotton program are well supported. In doing our work we took the following actions:

- We used proven and widely accepted evaluation methodologies. These included using an established economic model—a static partial equilibrium model—to assess the economic impact of the program on cotton buyers’ costs and producers’ benefits. We also reviewed other economic studies to ensure that (1) our findings were based on the best information and analysis available at the time we performed our work and (2) accurately applied the model to the cotton program. Furthermore, we based our analysis of program costs, payments, yields, and costs of production on published data from USDA.
- We assigned staff to the review who (1) had years and, in most instances, more than a decade of experience in evaluating federal programs and activities; (2) collectively possessed the professional proficiency for the tasks required; and (3) were free from any impairments to their independence, such as ties to agricultural businesses.
- We held exit conferences with USDA and the National Cotton Council and discussed the facts disclosed by our work. In addition, we obtained written agency comments on the draft of our report. These comments and our evaluations of them were fully disclosed in the final report, and, as explained, we made changes to the report in response to the comments.

As such, our report provided the Congress with objective information on this issue and with constructive approaches for evaluating whether the benefits from the program are worth their costs.

We would be glad to meet with you or your staff to further discuss the issues raised in this letter. If you desire such discussions or have any questions, you can contact me at (202) 512-5138.

Sincerely yours,

A handwritten signature in black ink that reads "Robert A. Robinson". The signature is written in a cursive style with a large, stylized initial "R".

Robert A. Robinson  
Director, Food and  
Agriculture Issues  
Enclosures - 3



# GAO's Responses to the Cotton Council's Critique

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The following are GAO's responses to the specific concerns in the National Cotton Council's critique of our report entitled Cotton Program: Costly and Complex Government Program Needs to Be Reassessed (GAO/RCED-95-107, June 20, 1995). The numbered comments are keyed to an annotated version of the applicable sections of the Council's report, which is reproduced in its entirety in enclosure II.

1. The National Cotton Council criticized our use of the gross domestic product implicit price deflator to compare costs over a period of time, 1986-93. However, comparing constant dollars over time, rather than nominal dollars as the Council suggested, is a generally accepted economic technique used to adjust for inflation. In our analyses, costs were expressed in 1993 dollars to give a perspective of the program's cost in previous years in terms of the prices in 1993 (the last year of the period we studied).
2. The Council stated that we inaccurately reported that cotton exports have dropped under the marketing loan program. Instead, the Council stated, average annual exports since 1986 have increased. In fact, our report clearly stated that during the years 1986 to 1993, "export volume has shown a slight upward trend." However, the marketing loan provision was established under the 1985 Farm Bill as a measure to maintain and enhance cotton exports in times of low prices. The report defined the marketing loan provision specifically as the provision under which producers may redeem their loans at the adjusted world price (AWP). This provision is in effect when the AWP is at or below the loan rate. This situation occurred during 3 of the 8 years of our analysis—1988, 1991, and 1992. During those 3 years, exports and market share declined. For other years of our analysis, the AWP was above the loan rate; therefore, the marketing loan was not operating. Sales during those years occurred without the use of the marketing loan provision of the cotton program. We also noted that between 1981 and 1993, the volume of cotton exports was up by 2 percent.
3. The Council questioned our conclusions about producers' returns and government support compared with the costs of production. We continue to believe that our analysis of these matters is sound. Our analysis used the Economic Research Service's (ERS) 1992 production cost data and its latest forecast of production costs for 1993 (the most current data available at the time of our review). Our analyses included the average payments the U.S. Department of Agriculture (USDA) made to producers participating in the cotton program, as well as the average U.S. market

price producers received for selling their cotton and cottonseed. We used the gross domestic product implicit price deflator to convert amounts in prior years to 1993 dollars.

We examined the national averages for both revenue and cost for an 8-year period, from 1986 to 1993, as well as for each individual year. In only 2 years, 1989 and 1990, did the combination of revenues from market prices and government payments not fully cover long-run production costs. In 1989 and 1990, total revenues covered 96 and 99.4 percent, respectively, of long-run production costs. In the other 6 years, total revenues ranged from a low of 110 percent to a high of over 132 percent of long-run production costs. For the entire 8-year period, total revenues averaged 115 percent of long-run production costs.

4. The Council stated that we largely ignored the impact of the breakup of the Soviet Union on cotton markets. However, as noted on page 55 of our report, the breakup of the Soviet Union was a factor in the decline in world prices during 1991 and 1992. While the breakup of the Soviet Union may have released a great deal of cotton onto the world market unexpectedly, this is the kind of international situation that the cotton program's marketing loan and step 2 provisions were designed to counteract. These provisions were designed to keep U.S. cotton competitive in world markets and maintain and expand the export of U.S. cotton in periods of high world supplies and falling prices. Such events occurred in 1988 (when only the marketing loan was available), 1991, and 1992. During those years, exports of U.S. cotton declined from the previous years despite the availability and "influence" of the marketing loan and step 2 payments. Given the rules for applying the marketing loan concept and step 2 payments, these were the only years in which world prices were low enough to activate these provisions, and, therefore, they were the only years available for our examination.

5. The Council appeared to give the cotton program almost total credit for the growth in the cotton industry. However, the world economy is dynamic. The world population is constantly growing, as is the demand for goods and services of all kinds, including cotton. Although the demand for cotton has been increasing in recent years, we believe the record demand for U.S. cotton stemmed not from the U.S. cotton program but from declines in production in other countries. Major cotton-producing countries have had weather and insect problems that reduced their cotton production. These reductions opened the door for the increased demand, production, and marketing of U.S. cotton.

6. The Council believed that we were inconsistent in our analysis, using numbers from specific years in some instances, and averages from multiple years in others. We disagree. We analyzed the effect of the marketing loan and step 2 payments for all of the years that the provisions were available—1988, 1991, and 1992. It would have been incorrect to have used years when the provisions were not operable. Similarly, to analyze producers' costs and returns, we used the average of production costs and revenues for the 8-year period covered by our review.

7. We disagree with the Council's view concerning our reporting of the social welfare loss associated with the cotton program. The cotton program results in a social welfare loss even though it also results in lower consumer prices than would otherwise be the case. We reported that domestic consumers gained an average of \$16 million over the period of our analysis. These gains occurred when prices under the program were less than they would have been in the absence of the program. The majority of these gains occurred in 1986, during the transition to the marketing loan, when the government released previously accumulated stocks onto the market, thereby increasing the supply, which resulted in reduced prices. Additional, and considerably smaller, gains occurred in 1992 and 1993, when the level of acreage taken out of production under the acreage reduction program was relatively low and step 2 payments made to domestic mills may have contributed to lower prices. These gains, however, were far outweighed by the costs of the economic inefficiencies created by the program, resulting in an average net social welfare loss of \$738 million. In addition, any "buy down" in price through step 2 payments to exporters would have resulted in lower prices for foreign buyers. We believe the merit of using taxpayer dollars to benefit foreign buyers is questionable.

8. We disagree with the Council's view that we did not accurately portray the 1993 costs of production. We reported \$0.66 as the 1993 average cost of production. We presented \$0.58 per pound as part of a range of the estimated short- and long-run production costs per pound for various producers with different yields.

9. Comparing constant dollars over time is a reasonable and generally accepted method for assessing the real costs of a government program over a period of time. Presenting such analysis in nominal dollars, as the Council suggests, is invalid because the value of the dollar changes over time. We consistently used 1993 constant dollars in our analysis.

10. Our methodology relied on the use of data provided by USDA. The data used were the most current available from USDA. The 1993 data, for example, were provided by USDA as the latest forecasts available as of November 4, 1994—the time we were preparing our draft report. Figure 5.4, page 61 of the report, shows a comparison between total cost plus government payments and adjusted world price, in 1993 constant dollars per pound, as in all such comparisons we made. The “\$1.60” represents costs in 1986 expressed in 1993 cents per pound.

11. We do not agree with the Council that strong cotton demand and exports are directly attributable to the cotton program. As we previously stated, the world population is constantly growing, as is the demand for goods and services of all kinds, including cotton. Recent high export levels of U.S. cotton are probably due more to reduced available supplies in other countries than to the U.S. cotton program. Our report showed what program costs have been over the years. We also showed that in the years when world prices were low and the marketing loan and step 2 provisions were in effect, exports declined.

12. The Council took issue with the fact that we did not report, as an achievement of the program, the recent record demand for cotton and a drop in program costs. We did not report these facts as an achievement of the program because we do not believe they resulted from the program itself. Reductions in foreign cotton production and increased preference for more “natural” (cotton) products resulted in record demand for U.S. cotton and increased market prices. High market prices caused most provisions of the cotton program to become inactive, thus reducing program costs.

13. The Council incorrectly characterized our statement on producers' receipts under high- and low-price scenarios. Our report said: “This condition occurs when domestic and world prices are such that producers receive both marketing loan gains and deficiency payments. When these amounts are added to the market price, the total is more than the legislatively set target price.” Figure 4.2, page 46 of the report, clearly showed the interplay of these conditions in low- and high-price years.

The Council pointed out that producers may also receive “equity payments” from cotton buyers. On pages 56-58 of the report, we recognized the impact of these equity payments.

14. Our report's treatment of program costs, using 1993 dollars for the years 1986 through 1993, was appropriate and did not overstate expenditures. We expressed program costs for 1986 through 1993 in constant dollars to reflect the fact that the value of the dollar changes over time because of inflation. Dollars are made constant by relating a dollar amount in any given year to a base year and adjusting for the inflation that occurred between the base year and the year for which the adjustment is being made. Whether 1987 or 1993 is used as the base year, the resulting amounts are all constant dollars—in the first case constant dollars relative to the value of a dollar in 1987 and in the second, relative to the value of a dollar in 1993. There is no reason why using 1987 rather than 1993 as the base year would be "more appropriate" in the context of our report. Comparing constant dollars over time, rather than nominal dollars as the Council suggested, is a reasonable and generally accepted method used to assess the real costs of a government program over a number of years. (Also, see our response in comment 1 above.)

15. The Council's point referring to price competitiveness and the spread between the world price and the loan redemption rate was unclear. The Council seemed to be trying to show that the United States is better able to sell cotton when prices are high, indicating a tight world supply. We made this same point on page 53 of our report.

16. The Council incorrectly assumed that we did not account for the program's effect, or the impact of technological changes in textile manufacturing, on the demand for cotton. To the contrary, our analysis accounted for the impact of the program on the quantity demanded primarily through the program's effect on price, a movement along the demand curve. In addition, we estimated the demand curve by assuming that the most readily observable point on the curve is the one at today's current price-quantity combination. Then, using a range of elasticities of demand reported in the literature and appropriate assumptions (constant elasticity in the relevant range), we approximated the rest of the curve. In using today's current price-quantity combination, the resulting demand curve would incorporate any shifts that may have occurred to the curve over time because of productivity changes in textile manufacturing.

17. The Council suggested that without the program, the quantity of cotton produced would decline and jobs would be lost throughout the industry. Our analysis does not support this conclusion. Our analysis took into consideration that the program itself, and especially keeping land idle, increases production costs. Therefore, without the program, producers'

costs would be expected to decline, making it economically feasible to produce more at any given price (all else held constant). Our analysis, which was based on a comparison of prices and quantities both with the program and without the program for 1986 through 1993, showed that, on average, production without the program would have been greater than production with the program, while prices would have been about the same. The results would, however, vary from year to year. The supply curve without the program and the resulting prices and quantities are an empirical question, depending on the net result of those aspects of the program, such as price supports, that encourage production and those aspects of the program, such as acreage restrictions, that discourage or limit production. Our results implied that over the period, the cotton program, through its reductions in acreage, has generally had a restrictive impact on production despite the incentives to increase production provided by the price supports.

We stated in the report that the magnitude of the social welfare loss derives from (1) the number of idled acres; (2) government costs, in terms of program benefits, that the government incurs to induce producers to leave those acres idle; and (3) government stock-holding activities—particularly the release of large stocks at prices less than the government paid for them, as occurred in 1986. We also stated that the number of idled acres and social welfare loss have generally declined since 1986. In 1992 and 1993, however, social welfare losses increased because of increases in program benefits, particularly through the marketing loan provision and step 2 payments.

# Report by the National Cotton Council of America



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## GAO Report on Cotton Program Ignores Results

*Response Paper Prepared by the National Cotton Council of America, July 1995*

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The General Accounting Office has recently released a report critical of the U.S. cotton program. The report concludes that the current cotton program is flawed and has failed to achieve its policy objectives. Citing high costs that the program incurred in 1993 and asserting the cotton program actually penalizes producers when prices rise, the report targets the marketing loan program and its competitiveness provisions. GAO argues that cotton producers are being unnecessarily enriched and that the cotton program is causing troubling economic consequences. The analysis of the National Cotton Council reveals the GAO report itself to be severely flawed and obviously biased against the cotton program. This report relays the facts about the U.S. cotton industry and the current U.S. cotton program.

### Executive Summary

The U.S. cotton program is a model of success, resulting in record levels of production, offtake and economic return to the nation as a whole. The cost of the cotton program is declining dramatically. The report of the General Accounting Office on the U.S. cotton program reaches the wrong conclusions, manipulates data and is often deliberately misleading.

See comment 1.

1. *The very first sentence of the GAO report is inaccurate.* In stating that the cotton program costs \$1.5 billion per year, GAO overstates actual expenditures by 28%! GAO developed this number by inflating 1987, 1988, 1989, 1990, 1991 and 1992 expenditures. Cotton program costs are expected to be around \$137 million in 1995, about \$1.3 billion less than GAO's "average annual cost."

See comment 2.

2. The report inaccurately states that U.S. cotton exports have dropped under the marketing loan program. This is untrue. Average annual exports since 1986 have increased by over 1.4 million bales. On the same day the GAO report was issued, the U.S. Department of Agriculture reported 94-95 U.S. cotton exports at \$4 billion dollars—the highest total in 70 years. U.S. international market share is expected to increase to 33%.

See comment 3.

3. There is no support for GAO's conclusion that the combination of government support and market returns are above both the short-run and long-run cost of producing cotton. Using data published by USDA, ERS in the "Cost of Production—Major Field Crops & Livestock and Dairy, 1992" and looking at individual years indicates that the combination of market returns and government support were below the U.S. average long-run cost of production estimates in every year but one.

See comment 4.

4. GAO's analysis practically ignores one of the most significant occurrences in world agricultural trade in the last 10 years — the dissolution of the Soviet Union. The breakup of the Soviet Union left about 6 million bales of cotton produced by former Soviet republics without a market during 1992-93. That cotton was sold in the world market at very low prices—depressing a world cotton market that was already fairly saturated. The GAO report states that "such world events are not relevant" when assessing the program's effectiveness. The report specifically targets these two years of high U.S. cotton program costs, but while GAO either naively or prejudicially criticizes the program during this time period, the cotton industry views those years as convincing evidence of a successful U.S. cotton policy. *It was the program that brought the U.S. through the crisis.* The proof is in the result. GAO's failure to appropriately consider the breakup of the Soviet Union and its impact on world cotton markets creates a counterproductive bias.

See comment 5.

5. GAO attacks the cotton marketing loan program, one of the most successful agricultural programs on record. Since its introduction in 1985, the marketing

loan has been primarily responsible for reversing a 26-year decline in offtake of U.S. cotton; a 43-year decline in U.S. mill cotton consumption; and a 70-year decline in cotton's share of U.S. mill fiber consumption. This program led to record-breaking cotton production and offtake in 1994, with total use of U.S. cotton exceeding 21 million bales as compared to an average 11.25 million bales prior to 1985. The cotton program has been a cost-effective agricultural program by virtually any standard—and it has an amazing track record of success.

6. The analytical protocol used by GAO in its analysis is surprisingly inconsistent. The report jumps from using average numbers to yearly numbers to average numbers depending upon the subject in order to cast the cotton program in the worst possible light. Some numbers even change from one part of the report to another. For example:

See comment 6.

Based on numbers from 3 specific years, GAO concludes that U.S. cotton exports have declined and that government programs to aid exports have been fruitless.

• *Yet, annual cotton exports increased by 1.4 million bales, on average (about 20%), since 1985, in the face of the market disruption caused by the dissolution of the Soviet Union.*

• GAO averages cost of production and total returns over a several year period to conclude that returns have consistently exceeded the cost of production.

• *Yet, on a yearly basis, total returns exceeded long-term cost of production only once.*

See comment 7.

• GAO states that the U.S. cotton program operates as a "social welfare loss" to the U.S. public.

• *Yet, the report also concludes that the cotton program buys down the price of the commodity, resulting in lower consumer prices than would otherwise be the case—a significant social benefit.*

See comment 8.

• GAO reports 1993 cost of production of \$0.58 per lb and argues that 77% of U.S. producers could cover that cost from the market alone.

• *Yet, later the report pegs 1993 production costs at \$0.66 per lb., arguing that the cost far exceeds the world price of \$0.56 per lb., and therefore cotton is exported at a loss.*

See comment 9.

• GAO uses a price deflator (1987 dollars) to substantiate a claim that the value of cotton exports has declined.

• *Yet, the report, in a vast majority of cases, uses a price inflator (1993 dollars) to exaggerate the amount of government outlays in past years.*

See comment 10.

The repeated changes in analytical approach almost seem deliberately calculated to tilt the agency's analysis. Some numbers which are asserted as fact (such as 1993 cost of production figures) do not appear to be anything more than

extrapolations from old data. The \$1.60 per pound "cost" attributed to U.S. cotton in a table on page 61 of the report, for example, is utter nonsense.

Any assertion that the cotton program is not working simply ignores the facts and the clear results. The facts are:

- Strong exports—almost record levels in 1994 (including increased value-added exports);
- Record production in 1994, with an even higher level predicted in 1995;
- Record levels of domestic mill consumption (over 11 million bales) — a figure that has been rising dramatically since 1985.
- Strong prices and decreasing government costs despite record production numbers.

***Strong demand, strong exports, record production, high prices at the farm gate and dramatically declining federal costs***—these are all marks of success. To argue these are the signs of a failed policy is the worst sort of bureaucratic myopia.

See comment 11.

## The U.S. Cotton Marketing Loan

### *A Successful Policy Tool*

The cornerstone of the U.S. cotton program has been the successful operation of the marketing loan that was implemented in 1985. That program has made cotton competitive, at home and abroad. It has spurred domestic mill consumption and aided exports.

The U.S. cotton marketing loan program avoids the inequitable two-price system once used for U.S. cotton. Since 1985, the marketing loan has enabled U.S. cotton to compete effectively with foreign-grown cotton and with man-made fibers. Moreover, domestic manufacturers have been able to compete with foreign competition. With a marketing loan based upon world prices, U.S. cotton has competed effectively at home and in international markets.

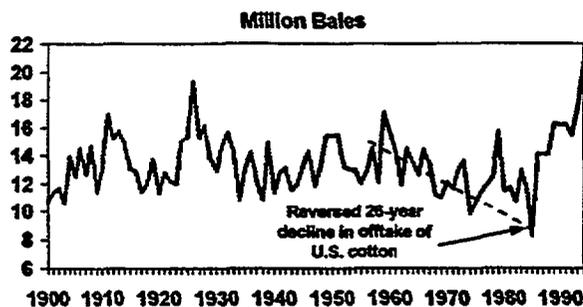
**The indisputable evidence – increased domestic mill consumption, increased market share, increased exports, more U.S. jobs and increased U.S. economic activity.**

### **Market-Oriented, Competitive Program**

The cotton marketing loan program is the single most market-oriented, competitive agricultural program on the books. By any objective measure, it has achieved tremendous economic policy successes. The cotton marketing loan program, introduced in 1985, is primarily responsible for—

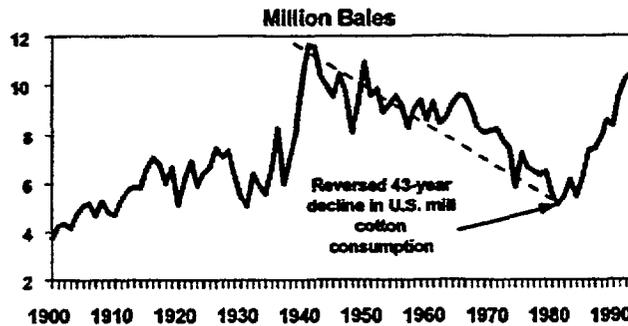
- reversing a 26-year decline in offtake of U.S. cotton;

### Offtake of U.S. Cotton



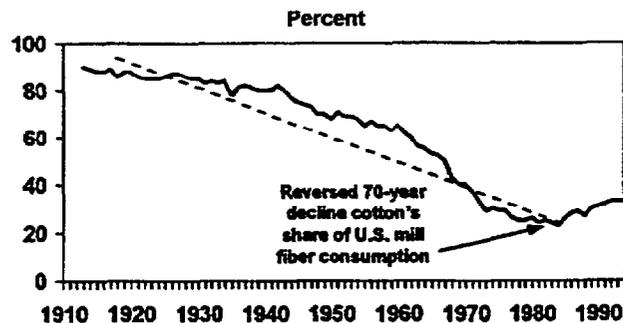
- reversing a 43-year decline in U.S. mill cotton consumption;

### U.S. Mill Cotton Consumption



- reversing a 70-year decline in cotton's share of U.S. mill fiber consumption;

### Cotton's Share of U.S. Mill Fiber Consumption



- increasing total U.S. cotton offtake from an average of 11.25 million bales prior to 1985 to more than 17 million bales during the last five years;
- record-breaking 1994 cotton offtake of 21 million bales;
- increasing U.S. cotton textile exports by 350%, to a current annual rate of 2 million bale equivalents;
- broad-based improvement in profitability across the cotton belt.

### ***Adjusted World Price - The Key to International Competitiveness***

The cotton marketing loan program is triggered off world prices—the fundamental key to U.S. competitiveness. It is generally understood that U.S. agricultural commodities must be competitive in the *world* market if the sector is to be economically viable. In 1994, the U.S. cotton industry exported over 50% of its production.

#### **Marketing Loan Concept**

The concept behind a non-recourse<sup>1</sup> marketing loan is to establish a loan level which permits producers to tender their commodity as collateral for a CCC loan and subsequently (1) redeem the collateral by repaying the lower of the initial loan rate or the market price, or (2) satisfy the loan repayment obligation by allowing CCC to take title to the loan collateral via forfeiture (in the case of cotton and rice) or via purchase agreement (in the case of grains).

The marketing loan accomplishes several fundamental marketing objectives: (1) permits U.S. commodities to meet price competition, (2) avoids excessive stock accumulations, (3) allows producers to market commodities over a period of time, rather than dumping the entire crop on the market at harvest time and (4) serves as a "safety net" under producer income.

Keys to effective administration of such non-recourse marketing loans are:

- Setting the initial loan rate at a level which provides producers with a meaningful source of revenue for debt service while the crop is being marketed;
- Avoiding an initial loan level that is high enough to constitute an attractive market and thereby interfering with normal marketing of the commodity; and
- Devising a redemption mechanism which permits the market price to fall below the initial loan rate when necessary to move the commodity to market.

If the initial loan rate is set too high, it encourages production for the loan—which is both expensive and counterproductive. If it is set too low, producers do not have access to sufficient revenue for meaningful debt service and are forced to glut the market with their commodity at harvest time rather than sell it over a longer period of time for a better average return.

A marketing loan simply is not a marketing loan unless it activates, and the key to activation is a market price which can fall below the loan rate when necessary to

<sup>1</sup> In this paper, the term "non-recourse" is used to identify (a) the cotton and rice type loans where the commodities used as collateral can be forfeited in full repayment of the original loan and (b) the wheat and feed grain type loans where CCC is obligated to purchase the commodities used as collateral at the original loan rate.

avoid stock accumulations and loan forfeitures. A marketing loan which does not activate is no different than a traditional non-recourse loan where, in periods of surplus, the loan becomes the most attractive market and serves as the price floor.

*The Marketing Loan in a Global Market*

All U.S. agricultural commodities which now operate under marketing loans depend upon viable export markets for healthy operations. Cotton, rice, wheat and feed grains would all be forced to idle a major part of their acreage bases if they were unable to be price competitive in the international market. It goes without saying, then, that the world price is an important benchmark for an effective marketing loan for these commodities. If the world price drops below the U.S. loan rate, the price at which U.S. cotton, rice, wheat and feed grains is available in the world market must also drop below the loan rate. Otherwise, the loan becomes the most attractive market for any U.S. supply of these commodities beyond domestic market requirements. Under such conditions, the U.S. becomes the residual supplier of such commodities in the world market, meaning our commodities move into international trade only after other nations' exportable supply has been depleted.

Some 95% of cotton entering world trade does so with the benefit of a subsidy of one kind or another. The net effect is a world price which is often below the cost of production in most, if not all, exporting countries. In shaping cotton policy to address this kind of global competition, policymakers must decide whether to fashion a program which will enable U.S. cotton to compete aggressively or, instead, assume the role of residual supplier.

Until implementation of the marketing loan in 1985, U.S. cotton was generally relegated to the role of residual supplier. The U.S. loan served as a floor under the U.S. price. In periods of global surplus, stocks accumulated in the U.S. and acreage was reduced while other exporting nations sold their exportable surplus and continued to expand acreage.

In 1985, policymakers made a conscious decision to meet subsidized competition head on. The marketing loan was adopted in 1985 farm law. The result was dramatic. Dating from 1985, U.S. cotton reversed a 26-year decline in offtake; reversed a 43-year decline in U.S. mill consumption; and reversed a 70-year decline in market share. And despite the costly breakup of the Soviet Union, these spectacular results have been achieved cost effectively. Under 1981 farm law, average annual expenditures for the cotton program were higher than expenditures since 1985. Under the Act of 1981, U.S. cotton production and offtake dropped to historical lows. Under the Acts of 1985 and 1990, U.S. cotton production and offtake have reached record levels.

Market orientation explains the 1985-1995 progress of U.S. cotton. The pre-1985 missing link in a totally market oriented cotton program was global price competitiveness.

## Is The Cotton Program Working?

### *Record Production, Prices, Consumption & Exports Highlight Cotton's Economic Situation*

Any assertion that the cotton program is not working simply ignores the facts and the clear results. The facts are:

1. Record levels of domestic mill consumption (over 11 million bales) — a figure that has been rising dramatically since 1985;
2. Strong exports—almost record levels in 1994 (plus sharply increased exports of value added cotton products);
3. Record production in 1994, with an even higher level predicted in 1995;
4. Record offtake—resulting from an all-time high in mill use and a near record level of raw cotton exports;
5. Strong prices and decreasing government costs despite record production numbers.

Strong demand, record production, high prices at the farm gate and dramatically declining federal costs—these are all marks of success. To argue these are the signs of a failed policy defies logic.

### **Market Distortions in '92/'93 Caused Increased Costs**

While the cotton program has been cost-effective on balance, there have been peaks and valleys with respect to government expenditures. Cotton spent more over the course of these last 5 years than could have been anticipated in 1990—particularly on the 1992 and 1993 crops. There were unusual market disruptions that occurred in 1992 and 1993, causing a worldwide supply/demand imbalance and increased government costs—

1. The dissolution of the Soviet Union left about 6 million bales of cotton produced by former Soviet republics without a market. That cotton was bartered in the world market at very low prices—depressing a world cotton market that was already fairly saturated;
2. Excessive world supplies caused the adjusted world price for cotton to fall well below the U.S. loan rate and cotton program costs rose sharply. At the same time, the U.S. was sending billions in food aid to the former republics of the Soviet Union which encouraged a continuation of cotton production and discouraged a shift to food crops which otherwise would have occurred.

This activity in the world raw cotton market was matched by ferocious price cutting with respect to trade in cotton yarn. Countries such as Pakistan reached a zenith in

See comment 11.

their program designed to make them super competitive in cotton yarn trade. As they depressed their internal raw material prices and provided subsidies to their textile industry, they took market share away from the U.S., Turkey and other countries and caused significant economic strain in the Japanese spinning industry, normally a major customer for U.S. cotton.

While this unprecedented disruption in the world cotton market drove up costs of the U.S. cotton program, this should not be taken as a sign that the cotton program is flawed. Instead, it should be seen as evidence that the program worked as designed.

1. It allowed U.S. cotton to move to market instead of (a) moving into Commodity Credit Corporation ownership (as it would under a conventional loan program and with essentially the same level of government cost) or, (b) being sold at prices that would bankrupt growers (as would have occurred with no program at all);
2. It enabled U.S. cotton to maintain a strong presence in the world market and avoided imposition very high set-aside programs for several years which would have (a) been very costly to U.S. growers, (b) encouraged the foreign world to expand acreage, (c) prompted traditional customers for U.S. cotton to lose confidence in our determination to be viable suppliers and (d) reduce economic activity and job availability.

***GAO Report Focuses on Two Highest Cost Years for U.S. Cotton and Ignores Success***

GAO's report on the cotton program specifically targets the two highest cost years for the U.S. cotton program — 1992 and 1993. While GAO either naively or prejudiciously criticizes the program during this time period, the cotton industry views those years as convincing evidence of a successful U.S. cotton policy. *It was the program that brought the U.S. through the crisis. The proof is in the result.*

Only one major cotton producing country was able to survive that onslaught and return to the world market stronger than ever. Only one major cotton producing country has been there to deliver product in 1994 and 1995 as other suppliers have faltered. Through it all, domestic mill consumption has grown steadily. And program costs are decreasing. Although cotton spent more than expected the past 5 years, the program will probably be less costly than CBO and others currently predict over the next 5 years.

GAO's determination that major world market events such as the breakup of the Soviet Union and its impact on world cotton markets are irrelevant is shocking. World economic events are not "irrelevant" as GAO states. They are of extreme importance to agriculture and to all world trade.

***U.S. Program Saved Federal and Consumer Dollars In 1994-95***

Instead of ending a period of global market disruption such as occurred in 1992/93 with excessive government stocks, high ARP requirements and limited production in 1994, the U.S. produced a record crop at record prices. U.S. cotton has emerged from the disruptive Soviet Union breakup crisis as one of the most reliable suppliers in the world. The U.S. cotton industry was able to supply textile mills at home and abroad when other sources of fiber had dried up. If not for that record production, the domestic textile industry would be at a crisis stage now—without raw material to continue in operation. Prices to consumers would skyrocket and shortages would be likely. Instead, record demand is being serviced and U.S. cotton program cost has dropped sharply to an estimated \$137 million in FY 1995. Curiously, this record of achievement is not mentioned in GAO's report.

See comment 12.

***Factors Causing Distortions in '92/93 Unlikely to Occur Again***

The fallout from the dissolution of the Soviet Union was a one-time occurrence. It is difficult to imagine another situation where 6 million bales of production loses its market at one time. Such a drop in demand is unprecedented. The International Cotton Advisory Committee, USDA and the National Cotton Council have all issued estimates of the downward influence this loss of market had on world cotton prices. The consensus is that the breakup of the Soviet Union dropped world cotton prices by 30% in 1993. This translates into \$1 billion of additional annual cost for the U.S. cotton program in 1993 and nearly as much the year before and the year after.

Also, negotiations with Pakistan and India concerning their textile policies have produced agreements under which both countries have agreed to open their textile markets to increased competition. Pakistan agreed to end its two-tiered pricing system with respect to raw cotton. These agreements (if complied with) coupled with general textile market liberalization which is to occur under the GATT agreement should begin to even out trade flows to some degree.

See comment 13.

The discussion of producer receipts under high or low price scenarios included in the report displays a lack of understanding of the way in which cotton is marketed in the U.S. Producers who place cotton under loan do not receive the loan rate and a marketing loan gain — marketing loan gains are included in the original loan rate. Any revenue that a producer may receive in addition to the loan rate + deficiency payments would come in the form of payments made to producers by cotton merchants—often referred to in the cotton trade as an "equity payment."

Equity values are determined more by market conditions than cotton program provisions. Equities are largely established by the spread between the values on the New York Cotton Exchange No. 2 (NYCE) contract and the adjusted world price. Equity values depend, in part, on the relative strengths of domestic and international market conditions. Certain aspects of the U.S. cotton situation have contributed to relatively large equity offers during 1992 and 1993. First, the U.S. raw cotton market has been very protected from imports as a result of very

restrictive section 22 import quotas. Secondly, the manner in which step 2 certificate values were determined during this time period created a large variation in certificate values during the transition from old crop to new crop. This tended to increase the amount of "equity" that could be offered to producers by cotton merchants.

There have been significant changes in both of these areas. The GATT and NAFTA provisions have substantially liberalized trade in raw cotton, eliminating section 22 import quotas and replacing them with a tariff rate system. Also, the rules governing export certificates issued under the step 2 provisions underwent significant revisions in April 1994 designed to limit the instances in which large certificates would be available during the transition between old crop and new crop.

On balance, U.S. cotton appears to be positioned well to compete internationally with lower program costs than recently incurred. However, the marketing loan continues to be the best mechanism for ensuring global competitiveness in a cost effective way. The marketing loan costs nothing when it is not needed; it works to the benefit of the U.S. cotton industry and U.S. citizens at large when it is needed.

## GAO Report Exaggerated "Findings" to Grab Headlines

### *Analysis Flawed and Reflects Bias*

#### **GAO Report Overstates Cotton Program Costs**

The GAO report misrepresents spending on the U.S. upland cotton program in what appears to be an attempt to generate opposition to this commodity program. GAO's unjustified inflation of the actual dollar amount spent on the program results in an overstatement of expenditures by 28%!

Inexplicably GAO expressed cotton program costs for the years 1987 through 1993 in 1993 dollars. There is absolutely no rational explanation for doing this. The result is to overstate actual program costs for all years prior to 1993. Typically, economists adjust a data series to remove the effects of inflation, thereby reflecting the series in terms of *real* or *constant* dollars. But GAO adjusted the series to add in eight years of inflation—thereby adding "cost" that simply was not incurred.<sup>2</sup> While justification is lacking, motivation seems all too clear. GAO's obvious intent was to show cotton program costs in the worst possible light.

The absurdity of GAO's adjustment procedure is further depicted by their representation of producers' 1986-93 revenues, which GAO shows at 91 cents a pound! The overwhelming majority of cotton producers have never seen 91 cents a pound in any year. They certainly did not average 91 cents a pound during the 1986-93 period!

A more accurate picture of cotton program cost is reflected in the chart below. As indicated by the bars, program costs in nominal dollars have declined under the marketing loan, while cotton production has risen dramatically. Under the pre-marketing loan Act of 1981, cotton program costs averaged nearly \$1.3 billion. During the post marketing loan years (FY '87-'95), program costs have averaged just over a \$1 billion, and would have been far less were it not for the market-depressing effects of the Soviet Union breakup. Production continues to increase and program costs continue to decline. By FY '95 cotton program costs had dropped to \$137 million and costs are projected to be next to nothing in FY '96. For

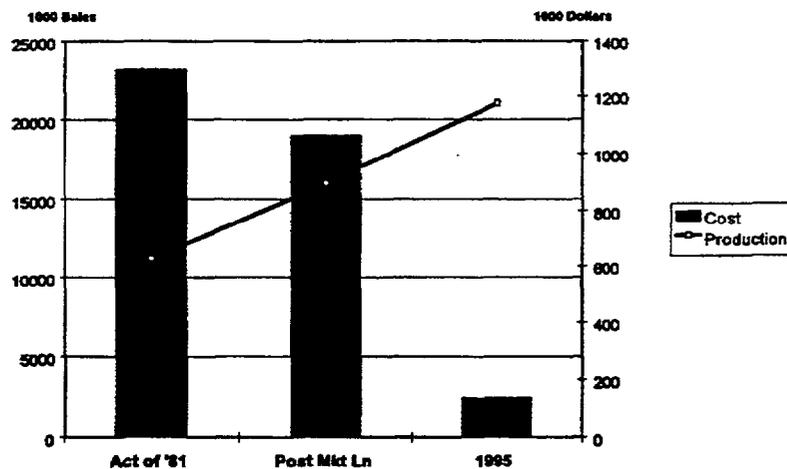
<sup>2</sup> The consistent inflation of government expenditures that permeates this report seriously undermines the credibility of GAO. On page 25, deep inside a rather lengthy paragraph, GAO states, "As necessary, we adjusted figures in this report to 1993 dollars to more accurately compare prices and costs over time." It is difficult to develop any meaningful economic rationale for this methodology, much less any necessity for it. By using this protocol (although not when it proved disadvantageous in other aspects of the report) GAO has managed to inflate the actual amount of government dollars spent — even though target prices have not increased at all during this time period. Using GAO's analysis, a producer could have received one dollar in 1987 and another dollar in 1993, but his average receipts over these two years might be \$1.25 cents—this is a new bureaucratic math.

See comment 14.

the '95 crop year, U.S. cotton production is projected to reach another record – 21.5 million bales.

In terms of cost effectiveness, the cotton program has made extraordinary progress since introduction of the marketing loan. Under the '81 Act (pre marketing loan), program costs averaged \$116/bale; under the Acts of '85 and '90, program costs averaged \$66/bale; and in FY '95, program costs averaged \$6/bale. These are actual dollars, not GAO inflated dollars. If expressed in terms of constant or real FY '87 dollars, the downward trend in cotton program costs would be even more pronounced.

**Cotton Program Cost and Average Production Levels**



**Government's Efforts to Boost Exports Are Cost Effective**

GAO criticizes federal efforts to enhance U.S. cotton exports as costly.

Seemingly, an evaluation of the merit of the cotton program would begin with an assessment of the competitive arena in which U.S. cotton functions. Had GAO's study team made such an assessment, they would have found that some 95% of cotton entering world trade is subsidized. This is the primary competitive factor giving rise to the need for a government program for U.S. cotton. The effect of these pervasive subsidies is to "buy down" the world cotton price below the cost of production in most countries.

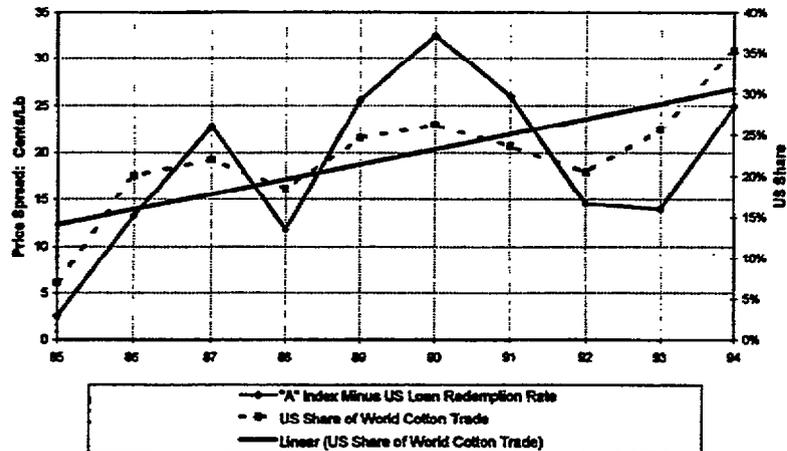
But, even without making such an assessment, GAO should have found that the marketing loan has been effective in expanding U.S. cotton exports. They should have found, for example, that the conventional loan program under which U.S.

cotton operated prior to the marketing loan, caused the U.S. to be a residual supplier in the world market. The loan became a floor under the price of U.S. cotton. In years like 1977, 1981, 1982 and 1985 a non-competitive price caused exports to lag and stocks to accumulate. Finally, in 1985 U.S. cotton's ending stocks stood at 11% percent of offtake. Congress wisely included the marketing loan concept in 1985 farm law.

The export record has improved substantially, despite the breakup of the Soviet Union in the early 1990s. The chart below illustrates a strong relationship between U.S. cotton's price competitiveness and its share of world cotton trade. In the chart, price competitiveness is determined by looking at the difference between the World price (the "A" Index) and the U.S. loan redemption rate. When the spread widens between the "A" Index and the U.S. loan redemption rate, cotton's share of world cotton trade tends to fare well. When the spread is narrow, the price of U.S. cotton is less competitive and cotton's share of world cotton trade suffers.

See comment 15.

**Spread: "A" Index Minus US Loan Redemption Rate  
 and US Share of World Cotton Trade**



The linear trend line shows that U.S. cotton's share of world cotton trade has been moving upward throughout the marketing loan years. With exports rising and cotton program costs declining (see previous chart), GAO should have found the marketing loan to be a far more cost effective mechanism for helping the U.S. cotton industry compete with subsidized competition than the previous conventional loan program.

**Cotton Program Provides a Social Welfare Gain**

GAO scores the cotton program as a net loss to society. Such a finding underscores the inadequacy of simple models for dealing with international competition and is contrary to common sense. The U.S. cotton industry is one of the most significant parts of U.S. agriculture. Cotton accounts for approximately 350,000 jobs annually and over \$50 billion to the nation's economy. It is the cornerstone of our country's textile industry and the basic fabric of choice among all Americans. Further, more than 5 billion pounds of whole cottonseed and cottonseed meal are used in feed for livestock, dairy cattle and poultry every year, with more than 100 million gallons of cottonseed oil finding its way into food products such as margarine and salad dressing. Cotton is a fundamental industrial raw product. Its value is substantial, its impact on everyday life extraordinary. The cotton program has helped maintain this vital industry in the face of widespread international subsidization. In the process, it has helped reduce the cost to consumers of cotton products. Far from being a social cost, the cotton program and the cotton industry provide a social gain to the United States.

**GAO's Economic Welfare Analysis**

GAO uses a static partial equilibrium welfare approach in its economic analysis of the U.S. cotton program. This type of welfare analysis, while common, is not without severe flaws. For example, such an approach treats the demand curve as independent of the program provisions or existence of a program. Taking this reasoning to its logical conclusion, GAO is asserting that the presence or absence of the cotton program has had no effect on the demand for cotton.

The demand curve for cotton consists of domestic manufacturing demand and export demand. Since 1986, the U.S. textile industry has invested an annual average of \$2.2 billion in new plant and equipment. Productivity studies by MIT have shown the U.S. textile industry to have achieved the highest annual growth in productivity of any U.S. manufacturing sector. Such changes have shifted the U.S. textile manufacturing sector's demand curve out to the right, representing an increase in the quantity of cotton consumed.<sup>3</sup> In fact, U.S. textile mills now use twice the amount of cotton annually consumed just ten years ago.

Without a cotton program, U.S. annual raw cotton production would be subject to wide swings. It is inconceivable that this level of investment in plant and equipment by the U.S. textile industry would have occurred without the presence of a stabilizing influence on U.S. cotton production, namely the cotton program. Take away the cotton program, and there will likely be an immediate reversal in the demand curve for cotton, resulting in a shrinking U.S. cotton and textile industry. The demand curve is as much a result of a commodity program as the supply curve.

In a most incredible turn of economic inconsistency, the report hypothesizes that the supply curve for cotton would shift out to the right, an expansion in supply, in the

<sup>3</sup> A rightward shift in the demand curve increases the quantity of cotton consumed at every price.

See comment 16.

See comment 17.

absence of any program. Having devoted pages criticizing the payments made to producers supporting cotton production and arguing that cotton production places a burden on U.S. taxpayers, the report concludes that production would increase at any market price in the absence of a program.

GAO's rationale for the rightward shift in supply is due to the presence of the acreage reduction program (ARP) in the current law. GAO presumes that, in the absence of the ARP, supply is increased. However, the position of the current supply curve is dependent on program provisions other than price supports. In the absence of a non-recourse loan program, also an integral part of the current cotton program, the supply curve would shift strongly to the left, resulting in a dramatic reduction in supply. The aspect of financial risk reduction of the non-recourse loan has been completely ignored by GAO.

The reduced social welfare estimate by GAO is largely derived from the acres idled under the ARP. But to conclude that in the absence of a cotton program, more acres would be planted—even if the cotton producer was certain to lose money on his operation—is preposterous. More cotton will be planted if prices and demand are favorable. When prices fall and producers are left without the safety net of a cotton program, cotton acreage in the U.S. will shrink far below any limiting effect currently imposed by the ARP. The result will be lost jobs at every level in the cotton industry—from production to processing, merchandising and textile manufacturing.

## Conclusion

### *Structure of Cotton Program is Sound*

The structure of cotton's marketing loan program is sound. U.S. prices are able to follow world market prices down whenever supplies are abundant, keeping U.S. cotton competitive in both the domestic and international arena. Because of its design, the cotton program brought the U.S. industry through one of the most dramatic events in the history of the modern world—the dissolution of the Soviet Union. The marketing loan prevented a run up in U.S. cotton stocks, prevented CCC forfeitures, and opened the door to the decreasing government costs that have occurred in 1994 and 1995.

The value and success of the current cotton program was demonstrated very clearly over these last 5 years. Its success seems so obvious that the cotton industry is shocked by the criticisms this program is getting. Every segment of the cotton industry represented by the National Cotton Council—producer, ginner, warehouseman, cooperative, cottonseed crusher, merchant and textile manufacturer—favor the continuation of the current program. It has helped the entire industry. It has prompted an increase in domestic mill use and overall demand.

Tinkering with components of a successful program is risky. The current cotton program was crafted with the input and approval of all seven segments of the cotton industry, USDA and the Congress. The legislative language wisely provides authority for a three-step competitiveness plan to be established and administered through USDA regulations. Through the years several rule changes have been made to fine tune administration of this plan. These changes have occurred after a thorough rulemaking procedure which provides the industry and government agencies the opportunity to provide input. If further modifications should be needed, the Secretary of Agriculture has ample authority to make them through the same orderly rulemaking process.

The short-comings and biased findings of the GAO report should in no way overshadow the impressive record of success of the U.S. cotton program. The seven segments of the U.S. cotton industry want this successful program to continue delivering a high return on public and private investment.

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