

2002 FARM BILL BASE AND YIELD OPTIONS DECISIONS MADE BY COTTON PRODUCERS

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Abstract

The 2002 Farm Bill provided farmers an opportunity to update base acreage and program payment yields for the first time since 1996. The paper examines changes in enrolled area and program payment yields, comparing current levels for cotton across regions, comparing current cotton levels with previous levels, and comparing changes in cotton to changes in other program commodities.

Introduction

Base updates were very much on producers' minds long before the 2002 Farm Bill was completed, and the interval allowed for updating has ended. The Farm Service Agency (FSA) has aggregated all those farm-level decisions to produce a national and state picture for all program commodities. In November 2003, FSA posted the enrollment data on our public website. I'll give you that web address at the end of my presentation (United States Department of Agriculture, Farm Service Agency 2003).

In case you're not sure what it says about us that we're so interested in this seemingly arcane topic, I'll provide some context. Then I'll give you an overview of the numbers. Then we can talk about why things turned out as they did and what it means.

Base Updates: Why It Matters

In a single word, base updates matter because of money – money that producers receive from the U.S. Government. When prices are low, program payments can provide a safety net to producers. When budgets are tight, increased program payments draw more scrutiny. And whenever a country introduces a new program or changes an existing one, countries all around the world watch to see whether the programs comply with prior commitments in trade agreements and what effect the programs may have on a country's trade interests.

For the direct payments (DP) and countercyclical payments (CCP) provided for in the Farm Bill, payments are as follows:

$$\text{Direct and Countercyclical Payments} = .85 * \text{Base acres} * \text{Program payment yield} * \text{Payment rate}$$

Under the 2002 Farm Bill, both the base acres and the program payment yields could change. The Farm Bill provided producers with several options, which will be listed below.

Farmers

Direct payments for 2003 cotton will be something on the order of \$630 million. As a result of updates, \$150 million more for 2003 DP is available than for 2001 payments under the production flexibility contracts (PFC) under the 1996 Farm Bill. But due to relatively high cotton prices, DP are coincidentally likely to be just about equal to net CCC upland cotton costs for 2003. While \$150 million is not much relative to total payments in some recent years, it is certainly significant when there are no loan deficiency payments (LDP) and small or zero CCP.

The October 2003 advance CCP rate was 2.01 cents per pound. With upland cotton farm prices in the mid-60s range today, additional CCP payments may be zero or very low if current and expected market conditions prevail to the end of the marketing year.

Program Expenditures

The updates mean the same for CCC expenditures, about \$150 million more for 2003 DP than for 2001 production flexibility contract (PFC), the roughly analogous program under the 1996 Farm Bill. Recall that John Maguire on Tuesday morning here at the Beltwide Cotton Conferences' opening session referred to defending the Farm Bill, paying close attention to the appropriations process, and the talk of deficit reduction. The cotton program may be fortunate to have low net outlays in the current situation of high deficits.

WTO Commitments

I also want to give some emphasis to WTO commitments and relate that back to what Mark Lange said on Tuesday morning when he conveyed his view that trade policy will be of equal importance with the farm program for cotton's future.

Other countries have been paying close attention to the base update issue. Why? In the WTO, decoupled payments like the PFC payments under the 1996 Act were classified in the Green Box, where there is no ceiling on spending. But to qualify for the Green Box, programs must conform to general criteria in Annex II of the WTO Agreement on Agriculture (World Trade Organization 1994):

- “Have no, or at most minimal, trade-distorting effects or effects on production,” and
- “Not have the effect of providing price support to producers”

Additionally, decoupled income support must conform to additional specific criteria:

- “defined and fixed base period,” and
- payments shall not be related to, or based on, volume of production, prices, or factors of production employed in any year after the base year

The WTO status of these programs after updating bases is somewhat uncertain. However, Congress was mindful of Green Box criteria as they were deliberating base updates.

With that background, let’s talk about the numbers.

Base Acreage Updates

Total acreage in the traditional farm program commodities was unlikely to change much as a result of the 2002 Farm Bill, but switching was possible. Moreover, oilseeds and peanuts were added to base acreage. Yields generally increase, and some yields of some crops increase faster in some regions than for other crops or for other regions. So we might expect some variation by state or region or product. I’ll tell you what producers elected to do with their possibilities for updating, comparing 1996 to 2003 for cotton, comparing cotton changes to changes for other commodities, and looking at the changes by state for both area and program payment yield.

Cotton Base Acres: 2003 Versus 1996

Nationwide, base acres for upland cotton increased 13.7 percent (Table 1). Enrollment in southeastern states far outstripped any other region, increasing by 47 percent. Enrollment declined in western states by 4 percent. Other areas showed moderate increases, e.g., Texas increased by 10 percent.

Base acreage enrolled changed annually under the 1996 Farm Bill, but only slightly. Any changes had to come about within the rules established in the 1996 Farm Bill, and those rules did not change until the 2002 Farm Bill came into effect. Nonetheless, there were changes. The sources of change between the 1996 and 2002 farm Bills resulted from acres coming into or leaving the Conservation Reserve Program (CRP). Producers could receive PFC or CRP payments, but not both on the same acres. Crop insurance considerations may have led to base enrollment changes in some states, e.g., Mississippi. Additionally, economic factors drove some enrollment changes. For example, enrollment in California decreased somewhat due to economic factors such as water availability and the profitability of non-program crops.

Cotton Versus Other Crops

Due to the addition of new crops into the enrolled acreage base, total acres increased 25 percent (Table 2). The biggest change in farm program base acres was the addition of soybeans (Figure 1). Peanuts and minor oilseeds were also added.

Of the crops that were already in the program, corn acres increased the most. Next to corn, cotton showed the largest absolute increase. But the corn base is about five times larger than cotton’s base. On a percentage basis, the cotton base increased twice as much as the corn base.

Program Payment Yield Updates

As a result of program payment yield updates, cotton payment yields increased 6 percent (Table 3). Among the larger cotton-producing states, payment yields increased most in North Carolina, Arkansas, and Texas. Increases were smaller in Alabama, Georgia, Mississippi, and California.

How Did Producers Make Their Decisions?

For cotton producers, this was a complex decision. To assist them, USDA, several universities, and various farm advisory services all developed software tools to help producers sort out their options.

Without expressing any preferences for any particular advisor's program, let's consider the presentation of options by Texas A&M. Five base acre update options and four program payment yield options combined for seven combinations of acreage and yield update options:

- A. Retain 2002 PFC acres and payment yields and do not add oilseeds.
- B. Retain 2002 PFC acres and add oilseed base acres without offset, freeze non-oilseed 2002 PFC yields and establish oilseed payment yields.
- C. Retain 2002 PFC acres and add oilseed base acres with maximum offset, freeze non-oilseed 2002 PFC payment yields and establish oilseed payment yields.
- D. Retain 2002 PFC acres and add oilseed base acres to maximize government payments, freeze non-oilseed payment yields and establish oilseed payment yields.
- E. Update all base acres, freeze non-oilseed 2002 PFC payment yields and establish oilseed payment yields.
- F. Update all base acres and establish payment yields for all crops using the 70 percent formula.
- G. Update all base acres and establish payment yields for all crops using the 93.5 percent formula.

The explanation of the analysis accompanying the Texas A&M listing of options underscored the important risk management element in making update choices. In a half-page description of price volatility and the update options, they used the word "risk" or "risky" nine times.

Bearing in mind that future payments don't depend on future plantings, producers were able to focus on expected government payments resulting from different declarations of base and choices of existing yields for program purposes versus the more recent 1998-2001 yields. This calculation depended on many factors such as yield improvements, changes in cropping patterns that would allow base changes, and price expectations for different crops that would affect the desirability of updating yields.

The Texas A&M work showed more advantage for cotton producers to update base and yield than for any other crop, and that was true for both the DP and CCP programs. For other products, other considerations were more important. For sunflower producers, it was important to include minor oilseeds. For soybean producers, include soybeans. For wheat producers, updating base and yields was generally expected to be disadvantageous.

For cotton producers in the Southeast, where enrolled acreage increased most, acreage had begun increasing before the 1996 Farm Bill, which effectively froze base enrolled acres for the life of the Farm Bill. While the base was fixed, acres planted to cotton in the Southeast continued to rise, resulting by 2002 in a base that no longer reflected farmland allocation to the various farm program crops in the region. While the flexibility to change the mix of crops was intentional in the 1996 Farm Bill and was maintained in the 2002 Farm Bill, producers wished to realign their bases to reflect current plantings, i.e., if cotton prices were low, CCP would offset losses on the acres planted to cotton.

When producers elected to update enrolled acres and/or payment yields, they had to use one of the options above for the entire farm. In some cases, rice farmers had not had an opportunity to update for more than 20 years due to the varying rules in place at particular times and crop patterns in their region. When they had an opportunity to update yields that had improved markedly over that span, rice yield improvements and increases in rice acreage drove the decision to update bases and yields, which were then applied to all other program crops for their farm. In this way, cotton enrollment and payment yield outcomes were affected by choices driven by considerations of other program crops.

Summary and Conclusion

The updates mean that cotton payments will be higher for direct payments than under the PFC contracts. For CCP, program payments in any particular year obviously depend on prices. But the addition of soybeans, minor oilseeds, and peanuts means that payments will be made on more acres. And yield updates mean that those producers had increased yields more than enough to overcome the reduction factor, meaning that they expect higher program payments than they would have received otherwise.

References

United States Department of Agriculture, Farm Service Agency. Washington, DC. November 2003. http://www.fsa.usda.gov/pas/farmland/2002_2003_enroll.htm

World Trade Organization. Geneva, Switzerland. June 1994. [The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts](http://www.wto.org/english/docs_e/legal_e/14-ag.pdf). http://www.wto.org/english/docs_e/legal_e/14-ag.pdf

Table 1. Comparisons of Cotton Base Acres.

	1996	1999	2003	96/99 Difference	96/99 % Diff	96/03 Difference	96/03 % Diff
National	16,202,154	16,376,650	18,424,467	174,496	1.1%	2,222,313	13.7%
Alabama	573,895	576,008	698,680	2,113	0.4%	124,785	21.7%
Florida	79,112	80,382	114,232	1,270	1.6%	35,120	44.4%
Georgia	958,402	952,196	1,479,505	-6,206	-0.6%	521,103	54.4%
Maryland	10	10	112	0	0.0%	102	1018.0%
North Carolina	542,461	539,470	860,714	-2,991	-0.6%	318,253	58.7%
South Carolina	246,041	246,877	354,679	836	0.3%	108,638	44.2%
Virginia	52,836	52,361	104,233	-475	-0.9%	51,397	97.3%
Southeast	2,452,757	2,447,304	3,612,155	-5,453	-0.2%	1,159,398	47.3%
Arkansas	1,031,520	1,062,330	1,152,912	30,810	3.0%	121,392	11.8%
Kentucky	1	177	110	176	17600.0%	109	10940.0%
Louisiana	1,078,034	1,070,948	1,086,812	-7,086	-0.7%	8,778	0.8%
Mississippi	1,554,308	1,545,426	1,685,100	-8,882	-0.6%	130,792	8.4%
Missouri	382,012	382,030	439,344	18	0.0%	57,332	15.0%
Tennessee	690,096	693,797	767,008	3,701	0.5%	76,912	11.1%
Midsouth	4,735,971	4,754,708	5,131,285	18,737	0.4%	395,314	8.3%
Kansas	1,615	1,654	20,208	39	2.4%	18,593	1151.2%
Nebraska	9	9	8	0	0.0%	-1	-8.9%
Oklahoma	528,381	557,000	596,397	28,619	5.4%	68,016	12.9%
Texas	6,602,823	6,772,312	7,262,319	169,489	2.6%	659,496	10.0%
Southwest	7,132,828	7,330,975	7,878,932	198,147	2.8%	746,104	10.5%
Arizona	460,067	455,479	474,421	-4,588	-1.0%	14,354	3.1%
California	1,321,847	1,290,044	1,213,176	-31,803	-2.4%	-108,671	-8.2%
New Mexico	98,683	98,140	114,498	-543	-0.6%	15,815	16.0%
West	1,880,597	1,843,663	1,802,095	-36,934	-2.0%	-78,502	-4.2%

Table 2. Comparisons of National Enrolled Base By Crop (Thousand Acres).

	1996	1999	2003	96/99 Difference	96/99 % Diff	99/03 Difference	99/03 % Diff
All Crops	207,558	212,914	266,196	5,356	2.6%	53,282	25.0%
Wheat	76,674	79,038	75,527	2,364	3.1%	-3,511	-4.4%
Rice	4,158	4,152	4,487	-6	-0.1%	335	8.1%
Cotton	16,202	16,377	18,424	175	1.1%	2,047	12.5%
Peanuts	----	----	1,466	----	----	----	----
Corn	80,726	81,905	86,851	1,179	1.5%	4,946	6.0%
Sorghum	13,093	13,664	11,944	571	4.4%	-1,720	-12.6%
Barley	10,529	11,242	8,705	713	6.8%	-2,537	-22.6%
Oats	6,176	6,536	3,102	360	5.8%	-3,434	-52.5%
Soybeans	----	----	52,789	----	----	----	----
Sunflower	----	----	1,837	----	----	----	----
Rapeseed	----	----	2	----	----	----	----
Canola	----	----	722	----	----	----	----
Safflower	----	----	105	----	----	----	----
Flaxseed	----	----	184	----	----	----	----
Mustard	----	----	31	----	----	----	----
Crambe	----	----	19	----	----	----	----
Sesame	----	----	1	----	----	----	----

Table 3. Comparison of Program Payment Yields.

	1999 -----	2003 DP	2003 CCP	99/03DP Difference	99/03DP % Diff	99/03CCP Difference	99/03CCP % Diff
<i>National</i>	604	604	638	0	0.0%	35	5.8%
<i>Southeast</i>							
Alabama	674	675	696	1	0.2%	22	3.2%
Florida	712	693	710	-19	-2.7%	-3	-0.4%
Georgia	689	688	717	-1	-0.2%	27	4.0%
Maryland	540	713	898	173	32.0%	358	66.3%
North Carolina	566	564	678	-1	-0.2%	113	19.9%
South Carolina	687	692	704	5	0.7%	17	2.5%
Virginia	505	509	706	4	0.8%	200	39.6%
<i>Midsouth</i>							
Arkansas	616	617	687	1	0.2%	71	11.6%
Kentucky	498	500	677	2	0.4%	179	36.0%
Louisiana	720	728	734	8	1.1%	14	1.9%
Mississippi	755	764	778	8	1.1%	23	3.0%
Missouri	546	548	621	3	0.5%	75	13.8%
Tennessee	542	544	586	2	0.4%	44	8.2%
<i>Southwest</i>							
Kansas	362	362	405	0	0.1%	43	11.9%
Nebraska	113	113	113	0	0.0%	0	0.0%
Oklahoma	385	388	401	4	0.9%	16	4.2%
Texas	425	430	461	5	1.1%	35	8.3%
<i>West</i>							
Arizona	1,243	1,239	1,260	-4	-0.3%	17	1.4%
California	1,074	1,076	1,102	2	0.2%	28	2.6%
New Mexico	606	589	673	-18	-2.9%	67	11.1%

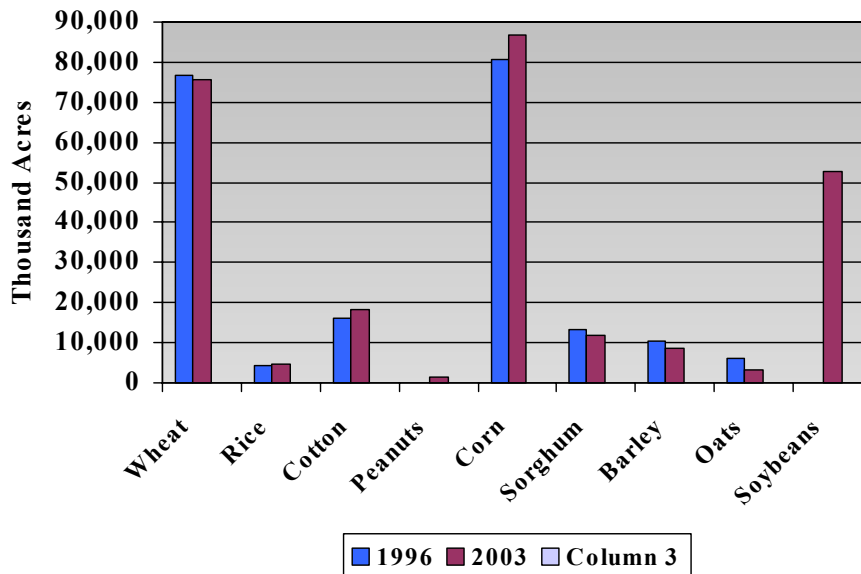


Figure 1. Enrolled Base, 1996 and 2003.