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AFPC

Agricultural & Food Policy Center

at Texas A&M University

Economic Outlook for Representative Cotton Farms Given the August 2004 FAPRI/AFPC Baseline

AFPC Working Paper 04-3

November 2004

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A policy working paper is designed to provide economic research on a timely basis. It is an interim product of a larger AFPC research project which will eventually be published as a policy research report. These results are published at this time because they are believed to contain relevant information to the resolution of current policy issues. AFPC welcomes comments and discussions of these results and their implications. Address such comments to the author(s) at:

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ECONOMIC OUTLOOK FOR REPRESENTATIVE COTTON FARMS GIVEN THE AUGUST 2004 FAPRI/AFPC BASELINE

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Executive Summary

The Agricultural and Food Policy Center (AFPC) at Texas A&M University develops and maintains data to simulate 18 representative cotton operations in major production areas in eight states. The chief purpose of this analysis is to project those farms' economic viability for 2004 through 2008. The data necessary to simulate the economic activity of these operations is developed through ongoing cooperation with panels of agricultural producers in each of the states. The Food and Agricultural Policy Research Institute (FAPRI) provided projected prices and input inflation rates in their August 2004 Baseline, assuming a continuation of the 2002 Farm Bill.

- Cotton prices are projected to increase from $0.47/lb in 2004 to $0.50/lb in 2007 and to more than $0.52/lb in 2008.

- The graph on the following page contains the summary results for each farm that is typically presented to Congress and their staffs. Given the August 2004 FAPRI Baseline, the following observations of future cotton farm viability can be made:

    - Four of the 18 farms (TXEC5000, TXCB5500, ALC3000, and NCC1500) are projected to be in poor overall financial condition during the 2004-2008 period. All four of these farms end the period with greater than a 50 percent probability of having a cash flow deficit. Only TXEC5000, however, has greater than a 40 percent probability of losing real (inflation-adjusted) net worth by 2008.

    - Eleven of the farms (CAC9000, TXSP2239, TXSP3745, TXPC2500, TXRP2500, TXMC3500, TXCB1850, TXVC4500, LAC2640, ARC5000, and TNC4050) are classified as marginal. These farms are marginal because of their vulnerability to cash flow pressures through 2008. Only one of the marginal farms, LAC2640, has greater than a 20 percent probability of declining real net worth by 2008.

    - Three of the farms (CAC2400, TNC1900, and GAC1700) have less than a 25 percent probability of cash flow deficits and of losing real net worth which would lead to an overall classification of good.

    - All regions contain farms that are in good or marginal condition while the farms in poor condition are either located in Texas or in the deep South.

Economic Viability of Representative Cotton Farms
August 2004 Baseline

Farm Name	P(Cash Flow Deficit)	P(Real Net Worth Declines)
3/11/4	2004-2008	2004-2008
CAC2400	18-23	1-1
CAC9000	37-40	1-5
TXSP2239	9-41	1-2
TXSP3745	39-49	1-11
TXPC2500	15-44	1-1
TXEC5000	82-77	1-44
TXRP2500	14-34	1-11
TXMC3500	33-38	1-9
TXCB1850	38-48	1-8
TXCB5500	40-61	1-34
TXVC4500	47-52	1-8
LAC2640	30-49	1-34
ARC5000	7-40	1-1
TNC1900	1-5	1-1
TNC4050	25-37	1-17
ALC3000	50-52	1-28
GAC1700	23-8	1-1
NCC1500	37-60	1-32

< 25%	25-50%	>50%

ECONOMIC OUTLOOK FOR REPRESENTATIVE COTTON FARMS GIVEN THE AUGUST 2004 FAPRI/AFPC BASELINE

The farm level economic impacts of the Farm Security and Rural Investment Act of 2002 on representative cotton farms are projected in this report. The analysis was conducted over the 2001-2008 planning horizon using FLIPSIM, AFPC's whole farm simulation model. Data to simulate cotton operations in the nation's major production regions came from two sources:

- Producer panel cooperation to develop economic information to describe and simulate representative cotton farms.

- Projected prices, policy variables, and input inflation rates from the Food and Agricultural Policy Research Institute (FAPRI) August 2004 Baseline.

The primary objective of the analysis is to determine cotton farms' economic viability by region through the life of the 2002 Farm Bill.

The FLIPSIM policy simulation model incorporates the historical price and production risk faced by cotton farmers. This report presents the results of the August 2004 Baseline in a risk context using selected simulated probabilities and ranges for annual net cash farm income values. The probability of a farm experiencing annual cash flow deficits and the probability of a farm losing real net worth are included as indicators of the cash flow and equity risks facing farms through the year 2008.

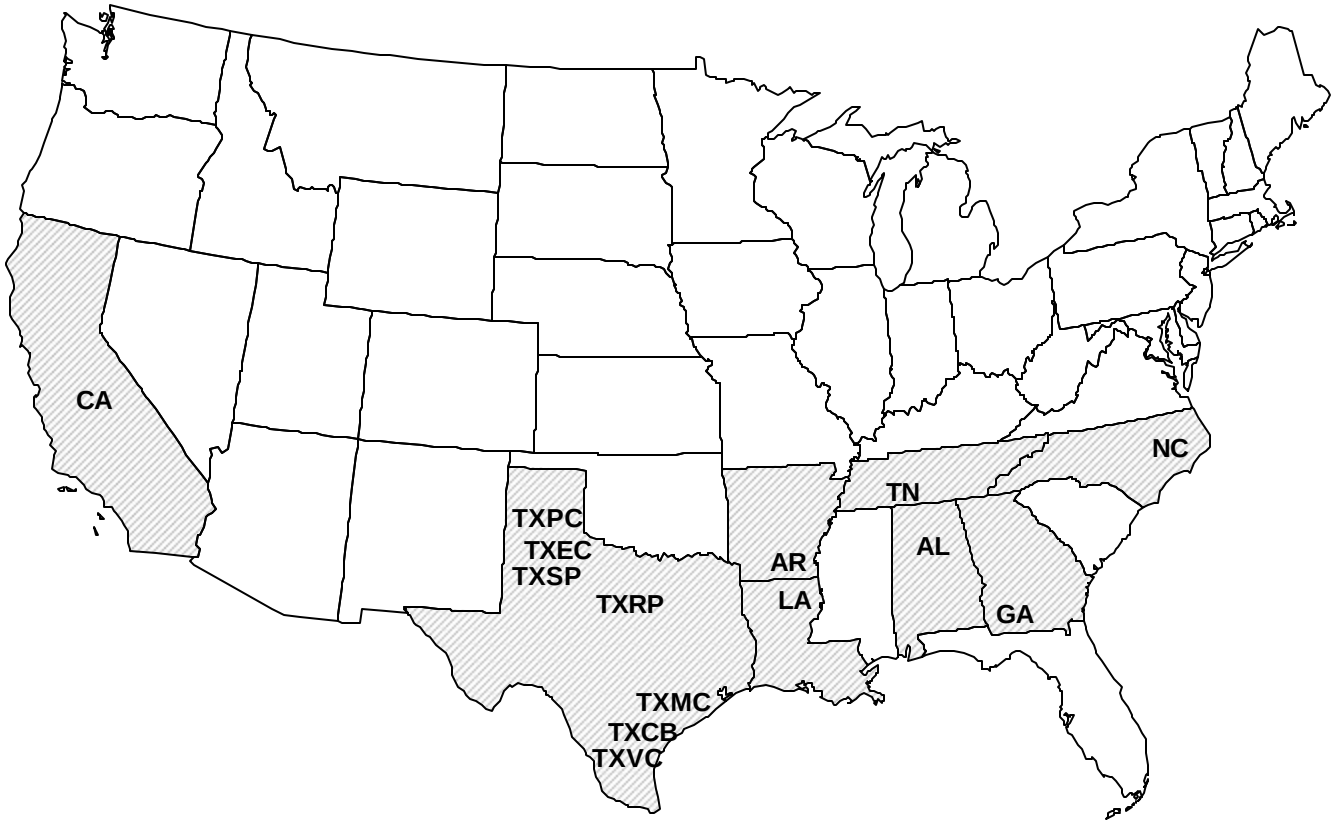
This report is organized into five sections. The first section summarizes the process used to develop the representative farms and the key assumptions utilized for the farm level analysis. The second section summarizes the FAPRI August 2004 Baseline and the policy and price assumptions used for the representative farm analyses. The third section presents the results of the simulation analyses for cotton farms. Two appendices constitute the final sections of the report. Appendix A provides tables to summarize the physical and financial characteristics for each of the representative cotton farms. Appendix B provides the names of producers, land grant faculty, and industry leaders who cooperated in the panel interview process to develop the representative farms.

Panel Process

AFPC has developed and maintains data to simulate 18 representative cotton farms chosen from major production areas across the United States (Figure 1). Characteristics for each of the farms in terms of location, size, crop mix, assets, and average receipts are summarized in Appendix A. The locations of these farms are primarily the results of discussions with staffers for the House and Senate Agriculture Committees. Information necessary to simulate the economic activity on these representative farms is developed from panels of producers using a consensus-building interview process. Normally two farms are developed in each region using separate panels of producers: one is representative of moderate size full-time farm operations, and the second panel usually represents farms two to three times larger.

The data collected from the panel farms are analyzed in the whole farm simulation model (FLIPSIM) developed by AFPC. The producer panels are provided pro-forma financial statements for their representative farm and are asked to verify the accuracy of simulated results for the past year and the reasonableness of a five-year projection. Each panel must approve the model's ability to reasonably reflect the economic activity on their representative farm prior to the AFPC using the farm for policy analyses.

FIGURE 1. REPRESENTATIVE FARMS PRODUCING COTTON



All farms used in the analysis have been updated with the panels since June 2001. All of the farms are assumed to begin 2001 with 20 percent intermediate- and long-term debt, based on information provided by ERS-USDA and the panel members. The debt levels the farms have at the outset of 2001 are based on a stratified tabulation of USDA's Farm Cost and Returns Survey for 2000, using the survey data for moderate to large size farms in states where AFPC has representative farms.

Key Assumptions

- All farms classified as moderate scale are the size (acres) considered to be representative of a majority of full-time commercial farming operations in the study area. In many regions a second farm two to three times larger than the moderate scale farm is developed as an indicator of size economies.

- The farms were structured so government payment limits were not effective at reducing direct, counter-cyclical, and loan deficiency payments.

- Minimum family living withdrawals were assumed to be the higher of 10 percent of gross receipts or $20,000 annually. Actual family living withdrawals are determined by historical consumption patterns. Therefore, as the farm's profitability increases so does the level of family living withdrawals.

- The farm is subject to owner/operator federal (income and self-employment) and state income taxes as a sole proprietor, based on the current income tax provisions.

- No off-farm-related income, including family employment, was included in the analyses. Therefore, the farm reflects only the ability of the farm to provide for family living and capital replacement.

- Farm program parameters, average annual prices, crop yield trends, interest rates, and input cost inflation (deflation) are based on the August 2004 FAPRI Baseline which assumes continuation of the 2002 Farm Bill through 2008.

- Direct payments are made based on 85 percent of their historical base acreage times direct payment yield times a direct payment rate. The direct payment rate is included in the August 2004 FAPRI Baseline.

- Marketing loan provisions for cotton were authorized in the 2002 Farm Bill and are assumed to be in place for the farm level analysis.

- Counter-cyclical payments are triggered by marketing year prices included in the August 2004 FAPRI Baseline.

- The farm level simulation model incorporates price and yield risk faced by farmers. Historical yield variability for crops and production for livestock (sale weights, birth rates, and milk per cow) over the past ten years are assumed to prevail for the planning horizon. Random crop and livestock prices are simulated using the 2004 August Baseline by FAPRI as the forecast of average prices. Prices reflect national price volatility caused by domestic and international supply and demand conditions.

- Historical crop yields (2001-2003) were set at the actual values obtained from the producers. Crop yields for 2004-2008 were simulated stochastically based on the average yields provided by the producers and the historical yield variability for the farm. Prices were held constant at producer-provided values for 2001-2003. FAPRI's August Baseline prices were localized for the farms and used as the average prices for 2004-2008 to simulate stochastic prices.

- Market loss assistance payments and disaster provisions passed in 2001 have been incorporated into the analysis in 2001.
- Disaster payments to livestock producers in 2002 have been incorporated.
- Actual average loan deficiency payment (LDPs) rates in the counties where the representative farms are located are used for 2001, 2002, and 2003.
- All farms are assumed to carry Multi-Peril Crop Insurance (MPCI) at the 65/100 level.

Updated Cotton Farms Since the August 2003 Cotton Baseline Update

Since publication of the last AFPC Representative Farms Baseline Update, the following representative cotton farms have been updated:

ALC3000	Added irrigated corn and dryland soybeans to crop mix.
NCC1100	Decreased total size from 1500 to 1100 acres. Decreased cotton planted by 300 acres.
LAC2640	Increased corn acres planted and reduced cotton planted. Shifted more cotton to irrigated. Added rice base acres.

FAPRI August 2004 Baseline

Projected crop prices for FAPRI's August 2004 Baseline are summarized in Table 1. Cotton prices continue to increase gradually to $0.52/lb. in 2008. Corn prices start at a high of $2.40/bu. in 2003, decrease in 2004 to $2.28/bu. and then are projected to increase marginally to $2.44/bu. by 2008. Wheat prices are expected to increase from 2004 through 2008, peaking at $3.41/bu. Rice prices are expected to decrease from $7.48/cwt. in 2003 to $6.03/cwt. in 2007.

Assumed loan rates and direct payment rates are summarized in Table 1. The annual direct payment rates for 2002-2007 reflect the increase in these payment rates authorized in the 2002 Farm Bill.

Projected annual rates of change for variable cash expenses are summarized in Table 2. The rate of change in input prices and interest rates come from FAPRI's August 2004 Baseline which relies on Global Insight (formerly DRI) macroeconomic projections. Annual interest rates paid for long- and intermediate-term loans and earned for savings are also summarized in Table 2. Assumed annual rates of change in land values over the 2004-2008 period are provided by the FAPRI Baseline and indicate roughly a 2 to 3% per year increase in nominal land values throughout the 2005-2008 period (Table 2).

Table 1. FAPRI August 2004 Baseline Projections of Crop Prices, Loan Rates, and Direct Payment Rates, 2001-200

	2001	2002	2003	2004	2005	2006	2007	2008
Crop Prices								
Corn ($/bu.)	1.97	2.32	2.40	2.28	2.37	2.40	2.43	2.44
Wheat ($/bu.)	2.78	3.56	3.40	3.19	3.23	3.20	3.31	3.41
Cotton ($/lb.)	0.2980	0.4450	0.6240	0.4697	0.4691	0.4738	0.4969	0.5238
Sorghum ($/bu.)	1.94	2.32	2.38	2.20	2.30	2.30	2.32	2.33
Soybeans ($/bu.)	4.38	5.53	7.40	5.84	5.46	5.36	5.46	5.38
Barley ($/bu.)	2.22	2.72	2.83	2.45	2.57	2.59	2.58	2.57
Oats ($/bu.)	1.59	1.81	1.48	1.40	1.44	1.45	1.47	1.48
Rice ($/cwt.)	4.25	4.49	7.48	7.10	6.30	6.13	6.03	6.18
Soybean Meal ($/ton)	159.98	173.18	247.99	182.05	177.72	182.01	187.79	186.44
All Hay ($/ton)	96.50	92.40	92.90	87.03	89.06	90.81	91.87	92.81
Peanuts ($/ton)	468.00	364.00	376.00	374.56	359.71	372.72	378.13	379.80
Loan Rates								
Corn ($/bu.)	1.89	1.98	1.98	1.95	1.95	1.95	1.95	1.95
Wheat ($/bu.)	2.58	2.80	2.80	2.75	2.75	2.75	2.75	2.75
Cotton ($/lb.)	0.5192	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200
Sorghum ($/bu.)	1.71	1.98	1.98	1.95	1.95	1.95	1.95	1.95
Soybeans ($/bu.)	5.26	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Barley ($/bu.)	1.65	1.88	1.88	1.85	1.85	1.85	1.85	1.85
Oats ($/bu.)	1.21	1.35	1.35	1.33	1.33	1.33	1.33	1.33
Rice ($/cwt.)	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Peanuts ($/ton)	610.00	355.00	355.00	355.00	355.00	355.00	355.00	355.00
Direct Payment Rates								
Corn ($/bu.)	0.5670	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Wheat ($/bu.)	0.9952	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Cotton ($/lb.)	0.1209	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667	0.0667
Sorghum ($/bu.)	0.6795	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Soybeans ($/bu.)	0.1195	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Barley ($/bu.)	0.4268	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Oats ($/bu.)	0.0453	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Rice ($/cwt.)	4.4323	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Peanuts ($/ton)	0.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00

Source: Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri-Columbia and Iowa State University.

Table 2. FAPRI August 2004 Baseline Assumed Rates of Change in Input Prices, Annual Interest Rates, and Annual Changes in Land Values, 2002-2008

	2002	2003	2004	2005	2006	2007	2008
Annual Rate of Change for Input Prices Paid							
Seed Prices (%)	1.30	7.12	1.21	0.45	0.74	1.00	0.89
Fertilizer Prices (%)	0.07	20.60	-8.83	-4.84	-1.17	2.02	1.56
Chemical Prices (%)	1.64	6.36	-0.16	2.90	2.03	1.09	0.77
Machinery Prices (%)	1.95	0.30	0.39	0.40	0.31	0.34	0.34
Fuel and Lube Prices (%)	0.14	20.60	-8.83	-4.84	-1.17	2.02	1.56
Labor (%)	4.38	0.76	0.73	0.73	0.68	0.69	0.67
Other Input Prices (%)	2.31	1.51	1.78	2.17	2.15	2.19	2.24
Non-Feed Dairy Costs (%)	0.56	4.86	-0.76	0.12	0.56	0.96	0.82
Non-Feed Beef Costs (%)	0.56	4.86	-0.76	0.12	0.56	0.96	0.82
Non-Feed Hog Costs (%)	0.56	4.86	-0.76	0.12	0.56	0.96	0.82
Annual Change in Consumer Price Index (%)	2.32	1.51	1.78	2.17	2.15	2.19	2.24
Annual Interest Rates							
Long-Term (%)	5.40	4.99	5.47	5.85	5.71	5.71	5.98
Intermediate-Term (%)	4.53	3.65	4.34	5.10	5.24	5.36	5.84
Savings Account (%)	1.70	1.11	1.11	1.80	2.17	2.44	3.18
Annual Rate of Change for U.S. Land Prices (%)	5.22	4.96	4.62	2.11	2.00	2.57	2.73

Source: Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri-Columbia and Iowa State University.

Definitions of Variables in the Summary Tables

- **Overall Financial Position, 2004-2008** -- As a means of summarizing the representative farms' economic efficiency, liquidity, and solvency position AFPC classifies each farm as being in either a good, marginal or poor position. AFPC assumes a farm is in a good financial position when it has less than a 25 percent chance each of a cash flow deficit and a 25 percent chance of losing real net worth. If the probabilities of these events are between 25 and 50 percent the farm is classified as marginal. A probability greater than 50 percent places the farm in a poor financial position.

- **Net Income Adjustment (NIA), 2004-2008 --** NIA is the annual increase or decrease in net cash farm income necessary to insure the farm maintains its real net worth during the 2004-2008 period. A positive NIA indicates the additional annual net income needed to maintain real net worth. A negative NIA indicates the largest possible annual loss in net income the farm can endure and still maintain its real net worth through the period.

- **Annual Change in Real Net Worth, 2004-2008** -- Annualized percentage change in the operator's net worth from January 1, 2004 through December 31, 2008, after adjusting for inflation. This value reflects the real annualized increase or decrease in net worth or equity for the farm over the planning horizon including changes in real estate values.

- **Government Payments/Receipts, 2004-2008 –** Sum of all farm program payments (CCP, direct and loan deficiency payments) divided by total receipts received from the market plus CCP, direct and loan deficiency payments, crop insurance indemnities, and other farm related receipts.

- **Total Cash Receipts --** Sum of cash receipts from all sources, including market sales, CCP and direct payments, loan deficiency payments, crop insurance indemnities, and other farm related receipts. The values in the tables are the average total receipts for each year in the planning horizon.

- **Government Payments** -- Sum of annual counter cyclical payments, direct payments, and marketing loan gains/LDP for crops and the milk program payment for dairy farms. The values in the tables are the averages for each year in the planning horizon.

- **Net Cash Farm Income --** Equals total cash receipts minus all cash expenses. Net cash farm income is used to pay family living expenses, principal payments, income taxes, self employment taxes, and machinery replacement costs. The values in the tables are the averages for each year in the planning horizon.

- **Probability of a Cash Flow Deficit --** Is the number of times out of 100 that the farm's annual net cash farm income does not exceed cash requirements for family living, principal payments, taxes (income and self-employment), and actual machinery replacement expenses (not depreciation). This probability is reported for each year of the planning horizon to indicate whether the cash flow risk for a farm increases or decreases over the planning horizon.

- **Ending Cash Reserves --** Equals total cash on hand at the end of the year. Ending cash equals beginning cash reserves plus net cash farm income and interest earned on cash reserves less principal payments, federal taxes (income and self employment), state income taxes, family living withdrawals, and actual machinery replacement costs (not depreciation).

- **Nominal Net Worth --** Equity at the end of each year equals total assets including land minus total debt from all sources. Net worth is not adjusted for inflation and averages are reported for each year in the planning horizon.

- **Probability of Decreasing Real Net Worth Over 2001-2008 --** Is the number of times out of 100 that real net worth in 2008 is less than the net worth for the farm at the beginning of 2001.

Representative Cotton Farms

The typical California cotton farm (CAC2400) has 1,000 acres of cotton. Cash receipts are projected to range between $2.08 to $2.16 million over the 2004-2008 period. Government payments average $270,330 over the 2004-2008 period and net cash income increases from $315,100 in 2003 to $389,140 in 2008. The farm must pay family living, taxes, principal payments, and replace machinery from net cash income, so the probability of cash flow deficits is between 18 and 24 percent each year. Overall, the farm is classified in good financial condition.

The large California cotton farm (CAC9000) has about 4,500 acres of cotton with the remainder planted to wheat, alfalfa, and vegetables. Net cash farm income increases from $1.65 million in 2002 to $1.88 million in 2008. The probability of a cash flow deficit exceeds 30 percent in all years for this farm, leading to an overall financial rating of marginal.

The moderately-sized Texas Southern High Plains cotton farm (TXSP2239) plants just over 1,600 acres of cotton, with approximately 22 percent of that land under irrigation. Remaining cultivated land is devoted to peanuts with 183 acres enrolled in the CRP program. Average annual cash receipts for the farm range from $633,000 to $662,000 over the 2004-2008 projection period. Likelihood of a cash flow deficit ranges between 9 and 41 percent. An increasingly volatile liquidity position leads to a marginal classification with respect to overall financial condition.

The large Texas Southern High Plains cotton farm (TXSP3745) plants about 2,625 acres of cotton, accounting for almost three-fourths of total cash receipts. Peanuts are planted on the remaining 245 acres of cropland, while 288 acres are in the CRP program. This farm averages 3.21 percent growth in real net worth each year. Probabilities of a cash flow deficit range from 34 to 52 percent. Despite a desirable solvency position, marginal liquidity contributes heavily to this farm's overall marginal classification.

The Texas Panhandle cotton farm (TXPC2500) is located near Hereford, Texas. This farm plants 1,184 acres of cotton annually. Approximately 85 percent of total cotton grown is pivot irrigated, while wheat, grain sorghum, and corn are planted on the remaining cultivated land. Government payments comprise about 28 percent of this farm's total cash receipts. This farm is in a marginal financial condition as the probability of a cash flow deficit increases to 44 percent in the last projected year.

The Texas Eastern Caprock cotton farm (TXEC5000) is located east of Lubbock in Ralls, Texas. Eighty-six percent of this farm's land is planted in cotton, while wheat and grain sorghum are planted on the remaining 700 acres. Average annual cash receipts fluctuate between $1.16 million and $1.2 million for the 2004-2008 period. The probability of a cash flow deficit ranges between 77 and 85 percent during the analysis period, contributing to the poor ranking with respect to overall financial condition.

Table 3. Implications of the August 2004 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Cotton.

	CAC2400	CAC9000	TXSP2239	TXSP3745	TXPC2500	TXEC5000
Overall Financial Position						
2004-2008 Ranking	Good	Marginal	Marginal	Marginal	Marginal	Poor
Change Real Net Worth (%)						
2004-2008 Average	4.00	4.99	5.33	3.21	3.29	0.66
NIA to Maintain Real						
Net Worth (%/Rec.)	-17.28	-12.24	-10.72	-8.35	-10.99	-2.02
NIA for Zero Ending						
Cash Balance (%/Rec.)	-15.40	-10.53	-9.28	-4.21	-11.72	4.54
Govt Payments/Receipts (%)						
2004-2008 Average	13.21	11.82	26.37	26.18	27.52	30.50
Cost to Receipts Ratio (%)						
2004-2008 Average	84.02	85.70	79.86	84.26	81.29	91.32
Total Cash Receipts ($1000)						
2001	2,087.49	10,564.89	469.13	559.30	923.29	898.91
2002	2,203.61	10,995.76	664.88	862.38	1,140.93	1,100.70
2003	2,101.21	10,914.70	633.06	830.09	811.63	1,125.14
2004	2,096.08	10,799.70	656.83	860.22	884.01	1,197.14
2005	2,083.07	10,842.28	644.26	840.33	877.02	1,161.15
2006	2,112.85	10,949.68	647.97	842.31	873.37	1,165.84
2007	2,137.28	11,020.33	650.72	846.97	877.98	1,168.36
2008	2,159.85	11,175.09	661.73	861.22	898.59	1,189.18
2004-2008 Average	2,117.83	10,957.41	652.30	850.21	882.19	1,176.33
Government Payments ($1000)						
2001	470.76	1,583.99	128.90	183.69	358.82	483.96
2002	370.59	1,614.44	213.48	273.32	324.71	408.68
2003	98.81	490.92	96.35	109.42	102.34	131.12
2004	313.16	1,433.19	184.23	240.83	273.78	383.74
2005	283.27	1,297.94	177.08	226.56	251.52	353.94
2006	278.77	1,287.61	170.98	220.88	246.08	349.33
2007	243.15	1,115.46	158.10	199.84	216.48	300.91
2008	233.32	1,074.36	150.90	190.72	210.93	288.44
2004-2008 Average	270.33	1,241.71	168.26	215.77	239.76	335.27
Net Cash Farm Income ($1000)						
2001	422.31	1,965.56	24.66	-47.82	194.61	-77.14
2002	528.78	2,297.14	172.03	185.69	417.10	123.28
2003	315.10	1,653.51	109.55	120.07	86.26	55.24
2004	355.41	1,719.03	144.95	163.65	178.50	155.64
2005	351.14	1,781.34	132.93	145.50	174.83	127.72
2006	377.30	1,861.33	132.96	143.51	168.28	123.84
2007	383.25	1,834.37	133.49	142.61	163.75	107.39
2008	389.14	1,880.12	139.33	149.84	169.02	112.22
2004-2008 Average	371.25	1,815.24	136.73	149.02	170.88	125.36
Prob. of a Cash Flow Deficit (%)						
2004	18	37	9	34	15	82
2005	24	34	32	52	24	85
2006	19	35	28	46	28	85
2007	19	30	32	50	32	82
2008	23	40	41	49	44	77
Ending Cash Reserves ($1000)						
2001	185.39	728.28	-21.20	-134.20	70.09	-196.73
2002	399.04	1,537.79	74.89	-30.21	249.68	-167.70
2003	467.39	1,933.61	81.94	-31.53	170.90	-251.63
2004	606.90	2,321.05	136.06	54.52	241.30	-170.36
2005	729.73	2,778.47	157.81	79.44	283.15	-162.76
2006	845.44	3,305.16	184.56	112.85	310.70	-163.15
2007	967.98	3,748.39	211.79	134.27	340.17	-195.60
2008	1,076.36	4,248.91	227.57	155.86	356.73	-219.56
Nominal Net Worth ($1000)						
2001	3,661.71	11,821.84	509.68	1,060.58	1,143.45	674.73
2002	4,107.45	13,523.62	642.17	1,220.43	1,384.09	733.00
2003	4,395.52	14,745.37	679.06	1,281.89	1,367.39	695.51
2004	4,715.79	15,947.84	751.31	1,391.22	1,462.78	776.14
2005	4,934.58	16,867.62	797.48	1,444.17	1,523.86	788.36
2006	5,161.06	17,858.54	842.87	1,495.50	1,585.25	804.70
2007	5,417.86	18,878.07	902.72	1,553.67	1,653.74	797.41
2008	5,678.50	20,004.19	955.30	1,620.22	1,709.59	809.11
Prob. of Decreasing Real Net Worth						
Over 2001-2008 (%)	1	1	1	6	1	54

Representative Cotton Farms (continued)

The Texas Rolling Plains cotton farm (TXRP2500) plants 1,122 acres of dryland, skip-row cotton. Wheat is planted on the remaining acreage, and the farm maintains a 12 head cow-calf operation. This farm is relatively efficient as its cost to receipts ratio remains just over 72 percent. Government payments comprise an average of over 31 percent of total receipts for this farm throughout the projection period. Overall, this farm is in marginal financial condition due to more than a 34 percent chance of a cash flow deficit after 2004.

The Texas Middle Gulf Coast cotton farm (TXMC3500) plants half of its 3,500 acres to cotton annually, accounting for almost 70 percent of gross receipts. The other 1,750 acres are divided equally between grain sorghum and corn. Probabilities of annual cash flow deficits ranging from 33 to 46 percent drive this farm to an overall marginal classification financially.

Half of the acres on the typical Texas Coastal Bend cotton farm (TXCB1850) are planted to cotton. The farm also grows 775 acres of grain sorghum and 150 acres of corn. The probability of a cash flow deficit fluctuates between 38 and 48 percent for the 2004-2008 period. The farm increases its net worth at an average annual rate of 5.5 percent. This farm is classified in marginal overall condition, largely due to the farm's projected deficits.

The large Texas Coastal Bend cotton farm (TXCB5500) plants half of its 5,500 acres to cotton and the other half to grain sorghum. This farm's average annual cash receipts fall between $1.29 million and $1.32 million throughout the projection period. Just more than 28 percent of these cash receipts are in the form of government payments. An 11 percent chance exists that this farm will lose net worth over the 2001-2008 period. Annual probabilities cash flow deficits exceed 40 percent each year of the analysis, leading to an overall poor financial designation.

The Texas Rio Grande Valley cotton farm (TXVC4500) typically plants 1,888 acres of dryland cotton and 500 acres of row-irrigated cotton. This farm plants grain sorghum on the other half of its dryland acreage along with 225 acres of sugarcane. The farm collects an average of 25.5 percent of its total cash receipts from government payments over the 2004-2008 period. Probability of cash flow deficits remain in the 50 to 60 percent area throughout the analysis period, leading to a marginal overall financial classification for this farm.

The Louisiana cotton farm (LAC2640) is located in Morehouse Parish. Approximately 1,500 acres of cotton are planted annually, while corn and soybeans are planted to the remaining land. This farm suffers from a relatively high cost to receipts ratio (exceeds 88 percent) for the 2004-2008 period. The probability of a cash flow deficit ranges increases from 30 percent in 2004 to 49 percent in 2007, contributing to the marginal overall financial classification.

Table 4. Implications of the August 2004 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Cotton.

	TXRP2500	TXMC3500	TXCB1850	TXCB5500	TXVC4500	LAC2640
Overall Financial Position						
2004-2008 Ranking	Marginal	Marginal	Marginal	Poor	Marginal	Marginal
Change Real Net Worth (%)						
2004-2008 Average	5.60	8.42	5.50	1.75	5.92	1.93
NIA to Maintain Real						
Net Worth (%/Rec.)	-15.00	-11.60	-13.69	-2.84	-12.48	-2.72
NIA for Zero Ending						
Cash Balance (%/Rec.)	-14.38	-12.43	-14.76	-5.10	-3.51	-7.74
Govt Payments/Receipts (%)						
2004-2008 Average	31.44	23.48	23.34	28.32	25.46	26.39
Cost to Receipts Ratio (%)						
2004-2008 Average	72.81	82.29	79.81	90.31	83.69	88.67
Total Cash Receipts ($1000)						
2001	215.26	1,026.63	479.31	1,298.82	817.60	1,095.81
2002	272.20	1,107.73	563.56	1,370.82	949.94	1,088.79
2003	230.41	1,285.66	551.61	1,301.80	1,320.51	1,220.58
2004	258.52	1,300.09	555.96	1,308.80	1,347.34	1,163.74
2005	253.51	1,263.93	540.80	1,294.04	1,327.08	1,161.28
2006	251.48	1,271.17	542.94	1,296.51	1,328.93	1,168.59
2007	254.81	1,298.37	556.12	1,301.22	1,314.52	1,185.81
2008	255.15	1,323.81	565.46	1,311.17	1,343.46	1,198.12
2004-2008 Average	254.69	1,291.48	552.26	1,302.35	1,332.27	1,175.51
Government Payments ($1000)						
2001	94.71	369.84	187.89	481.71	288.60	427.98
2002	92.12	343.11	162.56	487.78	325.53	357.60
2003	35.31	182.68	75.50	221.46	208.80	177.61
2004	85.64	323.47	135.56	407.12	383.49	323.33
2005	81.96	297.74	125.23	380.59	355.38	307.59
2006	81.05	297.09	124.80	376.48	344.24	302.07
2007	71.54	261.29	109.98	328.82	312.77	275.66
2008	68.47	249.02	104.98	319.45	298.43	269.20
2004-2008 Average	77.73	285.72	120.11	362.49	338.86	295.57
Net Cash Farm Income ($1000)						
2001	47.22	80.05	88.24	229.11	-59.18	138.60
2002	99.44	187.54	167.17	276.68	68.40	112.27
2003	57.81	259.02	138.19	150.26	237.15	213.91
2004	86.26	293.58	142.70	181.32	296.53	163.07
2005	80.28	251.43	131.27	164.87	277.72	144.61
2006	78.61	253.93	133.41	153.85	273.71	143.45
2007	77.90	270.63	143.52	146.12	252.32	151.67
2008	78.62	289.37	150.22	128.75	262.58	153.45
2004-2008 Average	80.33	271.79	140.23	154.98	272.57	151.25
Prob. of a Cash Flow Deficit (%)						
2004	14	33	38	40	47	30
2005	38	46	45	49	55	35
2006	35	42	45	53	62	35
2007	51	41	42	56	54	44
2008	34	38	48	61	52	49
Ending Cash Reserves ($1000)						
2001	-5.71	-22.16	40.60	122.64	-151.64	43.05
2002	29.32	54.55	118.01	263.78	-174.79	60.45
2003	35.17	148.46	150.64	262.65	-63.40	180.40
2004	70.95	271.73	188.88	328.20	19.32	244.67
2005	95.53	317.67	218.72	349.74	85.14	288.34
2006	117.67	391.82	248.96	339.56	92.40	327.24
2007	132.12	480.72	287.89	337.35	125.69	353.42
2008	152.67	586.85	326.64	291.02	169.80	371.47
Nominal Net Worth ($1000)						
2001	301.36	642.93	632.16	862.65	1,285.14	783.57
2002	347.03	737.73	778.47	1,021.31	1,341.75	806.96
2003	373.42	860.66	845.57	1,052.68	1,550.70	940.93
2004	413.93	985.95	901.21	1,116.62	1,715.61	972.96
2005	442.89	1,054.69	953.58	1,158.58	1,837.00	984.69
2006	470.33	1,152.16	1,011.94	1,175.44	1,949.19	1,014.45
2007	498.32	1,274.05	1,085.11	1,220.94	2,084.83	1,046.78
2008	532.61	1,409.45	1,155.31	1,220.69	2,227.01	1,073.61
Prob. of Decreasing Real Net Worth						
Over 2001-2008 (%)	3	1	1	11	4	15

Representative Cotton Farms (continued)

The Arkansas cotton farm (ARC5000) plants 36 percent of its 5,000 acres to cotton. The remaining land is utilized for rice, soybean, and corn production. Average annual cash receipts are between $2.49 and $2.57 million for the projection period. An average of 27.3 percent of total cash receipts are in the form of government payments. This farm is in marginal overall financial condition, due chiefly to the fact the probability of a cash flow deficit increases to 49 percent in 2007 and 40 percent in 2008.

The moderately-sized Tennessee cotton farm (TNC1900) plants 915 acres of cotton. Cotton sales make up just under 73 percent of total cash receipts; the remaining land is planted to soybeans, corn, grain sorghum, and wheat. With a cost to receipts ratio of 60.4 percent, this is the most efficient cotton farm in the national representative set. Consistently low probabilities of cash flow deficits and an excellent solvency position result in a good overall financial ranking.

The larger Tennessee cotton farm (TNC4050) plants about 61 percent of its land to cotton, comprising nearly 81 percent of total cash receipts. Soybeans, corn, and wheat are planted on the remaining cultivated land. Forty percent of the soybeans are double-cropped after wheat. Average annual cash receipts fall between $1.73 million and $1.78 million for the 2004-2008 period. While a favorable solvency condition is projected for this large Tennessee cotton farm, the probability of an annual cash flow deficit in 2008 is 37 percent. Thus, this farm is classified in marginal overall financial condition.

The Alabama cotton farm (ALC3000) typically grows 2,075 acres of cotton annually, making up about 80 percent of total cash receipts. Additional crops grown include corn and soybeans. Average annual cash income for the projected period ranges from $205,000 to $229,000. Persistent cash flow problems result in a poor overall ranking.

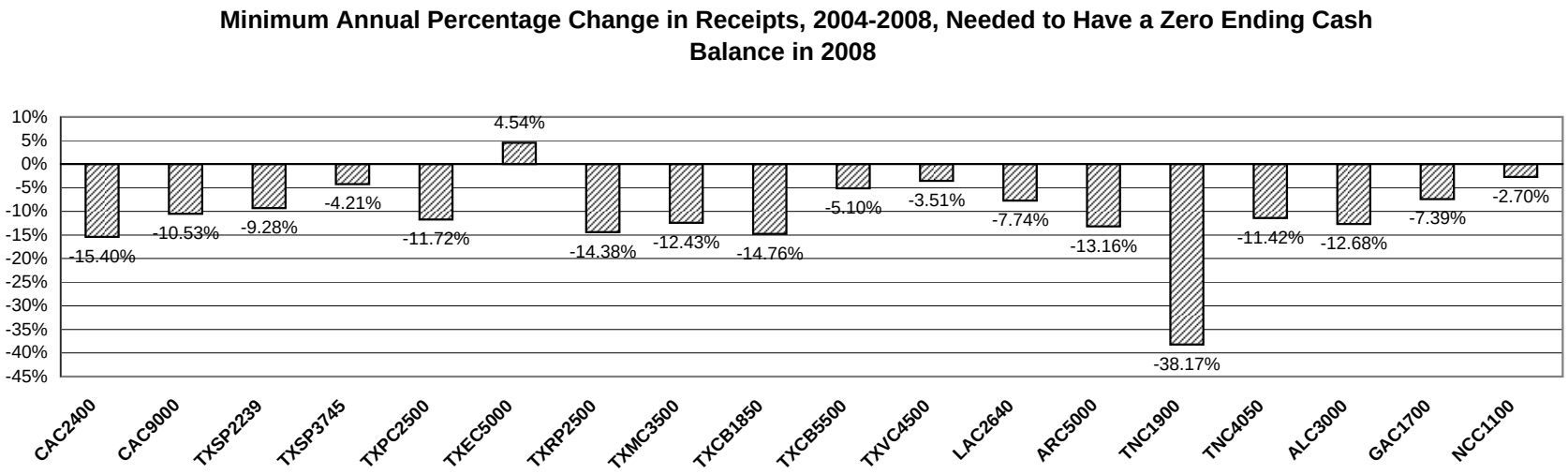
Decatur, Georgia is the location of the 1,700 acre Georgia representative cotton farm (GAC1700). This farm plants 60 percent of its land in cotton, 30 percent in peanuts, and 10 percent in soybeans. Average annual gross receipts for the 2004-2008 period range from $1.26 to $1.3 million. Probability of a cash flow deficit for this farm decreases from 54 percent in 2005 to 8 percent in 2008, indicating that this farm is in good liquidity condition. The probability of losing real net worth by 2008 is virtually nil. This farm has a good financial condition rating.

Two thirds of the North Carolina cotton farm's (NCC1500) acres are planted to cotton, making up approximately 75 percent of total cash receipts. Wheat and double-cropped soybeans are grown on the remaining 500 acres. This farm has a relatively high cost to receipts ratio (86.6 percent), indicating it may not be operating efficiently. Probability of a cash flow deficit never drops below 37 percent and reaches a high of 65 percent in 2007. A poor liquidity condition results in this farm's poor overall financial condition rating.

Table 5. Implications of the August 2004 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Cotton.

	ARC5000	TNC1900	TNC4050	ALC3000	GAC1700	NCC1100
Overall Financial Position						
2004-2008 Ranking	Marginal	Good	Marginal	Poor	Good	Poor
Change Real Net Worth (%)						
2004-2008 Average	4.28	6.62	3.75	2.71	5.17	1.09
NIA to Maintain Real						
Net Worth (%/Rec.)	-12.33	-33.40	-12.29	-4.42	-12.64	-5.41
NIA for Zero Ending						
Cash Balance (%/Rec.)	-13.16	-38.17	-11.42	-12.68	-7.39	-2.70
Govt Payments/Receipts (%)						
2004-2008 Average	27.28	22.03	22.06	27.95	25.63	23.22
Cost to Receipts Ratio (%)						
2004-2008 Average	79.24	60.43	83.63	83.27	81.55	86.60
Total Cash Receipts ($1000)						
2001	2,350.94	754.13	1,500.96	1,182.34	1,181.06	583.25
2002	2,594.95	722.39	1,722.33	1,043.07	1,316.88	414.13
2003	2,764.13	708.08	1,698.34	1,450.01	1,241.87	576.32
2004	2,566.52	712.96	1,764.84	1,142.24	1,275.77	545.72
2005	2,498.45	703.37	1,734.61	1,121.78	1,263.46	533.01
2006	2,498.72	706.57	1,740.86	1,128.54	1,276.89	537.01
2007	2,513.27	717.38	1,748.43	1,127.98	1,280.44	540.53
2008	2,543.13	730.32	1,776.38	1,155.87	1,301.21	550.12
2004-2008 Average	2,524.02	714.12	1,753.03	1,135.28	1,279.56	541.28
Government Payments ($1000)						
2001	1,150.37	156.06	331.41	485.53	268.91	240.35
2002	981.24	183.49	441.91	318.78	413.97	129.08
2003	543.43	62.40	131.18	129.54	177.15	42.87
2004	696.10	170.04	428.81	333.90	356.69	134.69
2005	697.38	157.93	393.21	310.95	340.56	126.19
2006	705.67	154.60	387.41	306.18	330.35	124.16
2007	658.95	138.74	345.01	266.74	301.53	108.90
2008	653.50	135.95	323.41	255.76	290.85	104.50
2004-2008 Average	682.32	151.45	375.57	294.71	324.00	119.69
Net Cash Farm Income ($1000)						
2001	464.26	334.11	193.84	324.09	105.77	141.27
2002	698.72	311.58	419.27	194.84	322.47	4.83
2003	768.47	271.93	323.93	499.07	194.54	116.11
2004	611.17	294.96	414.17	236.88	242.82	95.30
2005	538.75	282.78	376.62	207.61	228.27	82.02
2006	527.10	287.33	381.17	213.50	239.55	78.88
2007	507.53	288.71	375.00	205.97	234.52	76.07
2008	513.36	301.01	393.95	228.73	246.15	77.44
2004-2008 Average	539.58	290.96	388.18	218.54	238.26	81.94
Prob. of a Cash Flow Deficit (%)						
2004	7	1	25	50	23	37
2005	25	5	39	50	54	44
2006	23	2	37	47	13	57
2007	49	6	37	51	8	65
2008	40	5	37	52	8	60
Ending Cash Reserves ($1000)						
2001	230.10	156.60	37.10	168.11	-6.77	71.28
2002	527.56	271.51	259.58	191.32	125.95	-11.05
2003	747.15	360.73	297.71	470.70	113.98	27.76
2004	926.24	498.35	455.96	488.43	145.87	57.27
2005	1,032.07	590.71	529.64	512.55	145.10	80.99
2006	1,124.89	707.05	620.99	550.07	190.83	82.26
2007	1,141.01	819.58	693.03	566.19	243.75	74.46
2008	1,177.47	930.39	777.27	594.85	308.03	57.46
Nominal Net Worth ($1000)						
2001	2,721.03	1,299.36	2,665.09	1,180.16	1,368.73	1,210.21
2002	3,135.11	1,483.16	3,028.69	1,221.82	1,592.37	1,181.01
2003	3,519.29	1,638.84	3,221.08	1,528.04	1,673.08	1,273.59
2004	3,799.07	1,816.83	3,453.90	1,521.12	1,812.27	1,327.44
2005	4,004.29	1,953.67	3,578.13	1,548.50	1,903.59	1,354.68
2006	4,228.73	2,102.60	3,756.08	1,615.11	2,062.93	1,367.25
2007	4,404.64	2,259.24	3,917.25	1,669.45	2,163.26	1,384.51
2008	4,630.56	2,427.78	4,105.81	1,730.83	2,291.11	1,404.67
Prob. of Decreasing Real Net Worth						
Over 2001-2008 (%)	1	1	2	1	1	2

Figure 2. Cotton Farms



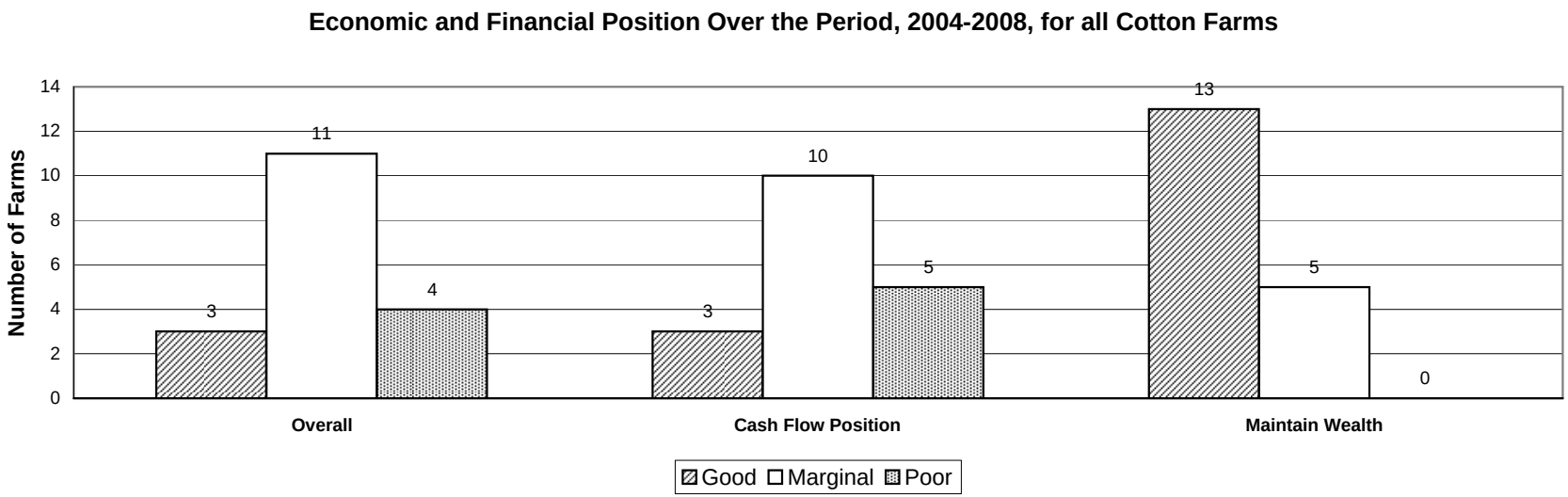


Figure 3. Net Cash Farm Income and Probabilities of a Cash Flow Deficit: Cotton Farms

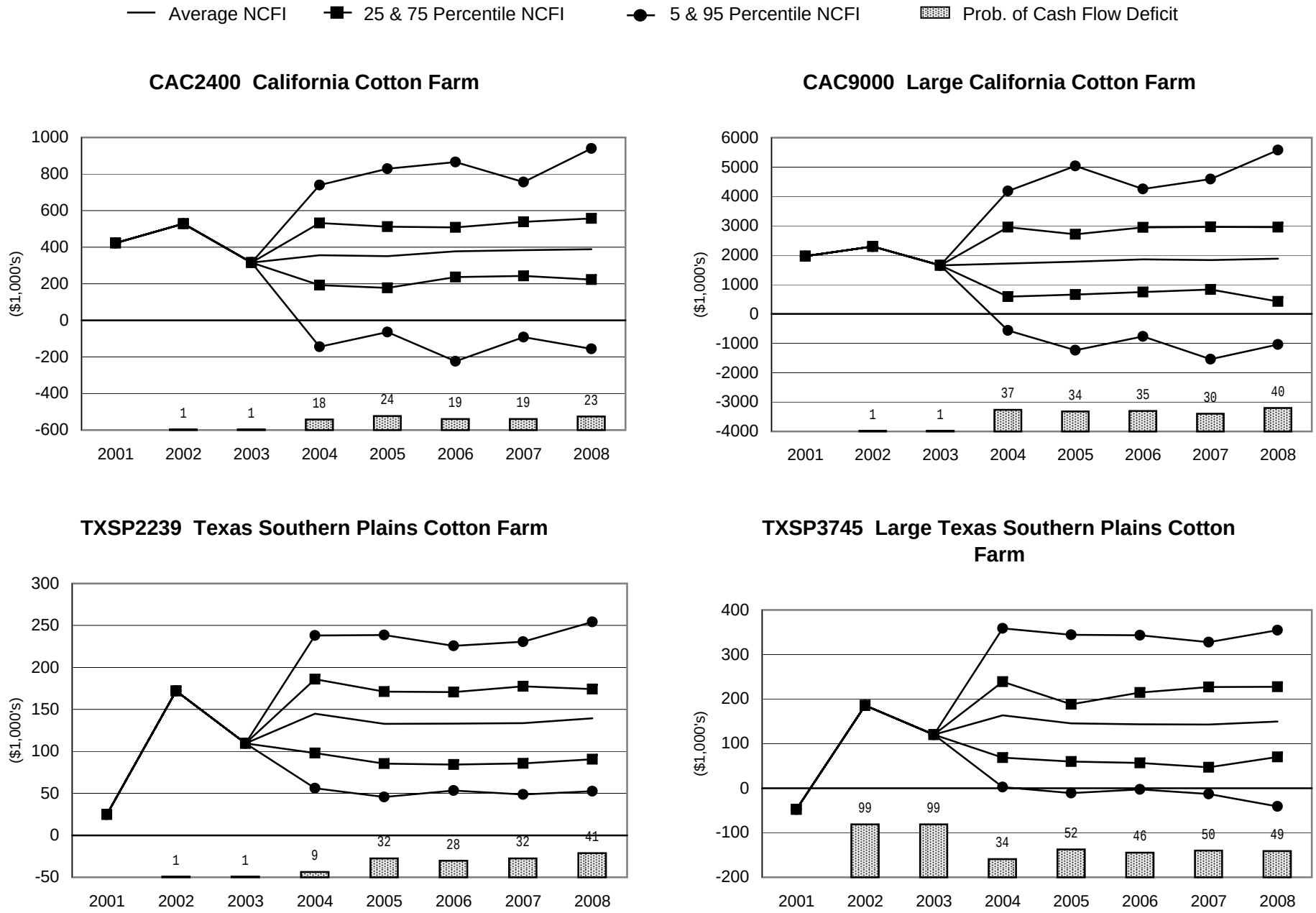
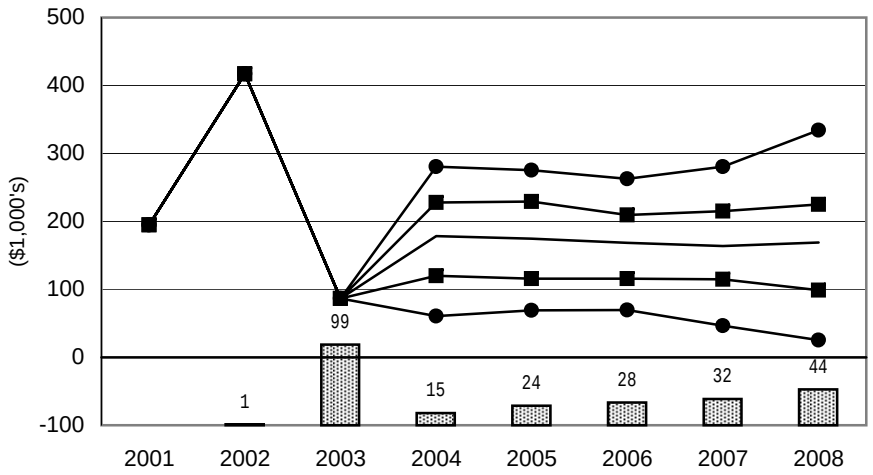


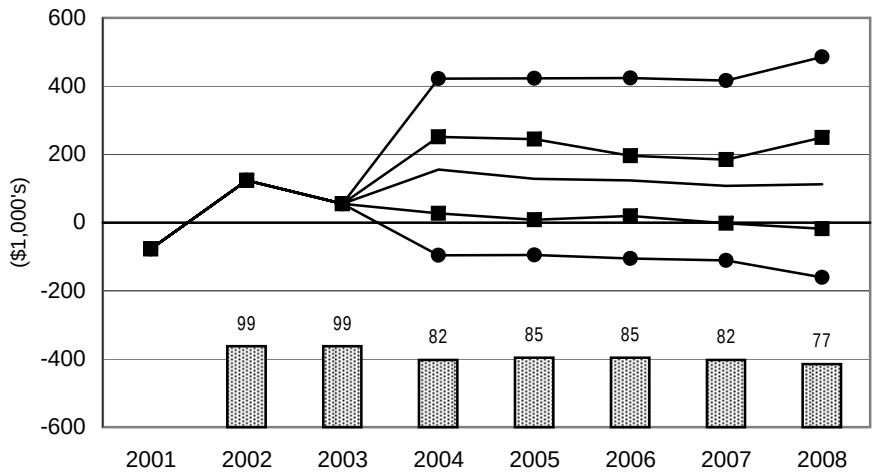
Figure 4. Net Cash Farm Income and Probabilities of a Cash Flow Deficit: Cotton Farms

Average NCFI | 25 & 75 Percentile NCFI | 5 & 95 Percentile NCFI | Prob. of Cash Flow Deficit

TXPC2500 Texas Panhandle Cotton Farm



TXEC5000 Texas Eastern Caprock Cotton Farm



TXRP2500 Texas Rolling Plains Cotton Farm

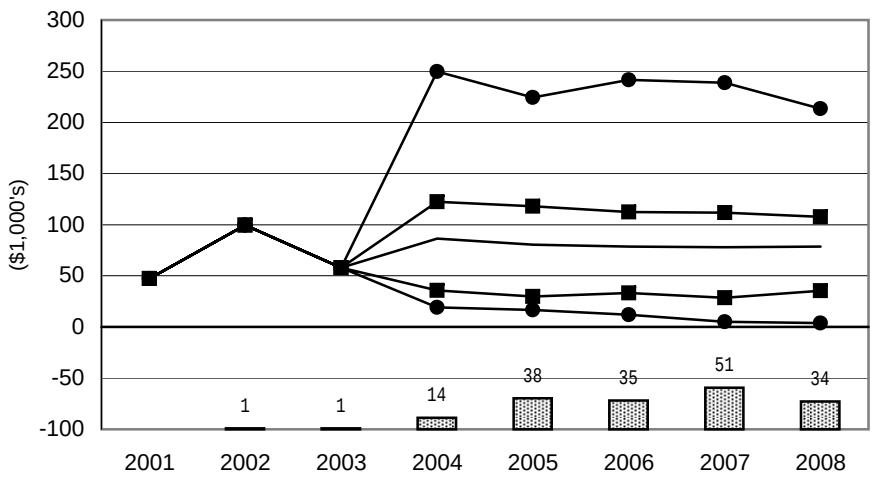


Figure 5. Net Cash Farm Income and Probabilities of a Cash Flow Deficit: Cotton Farms

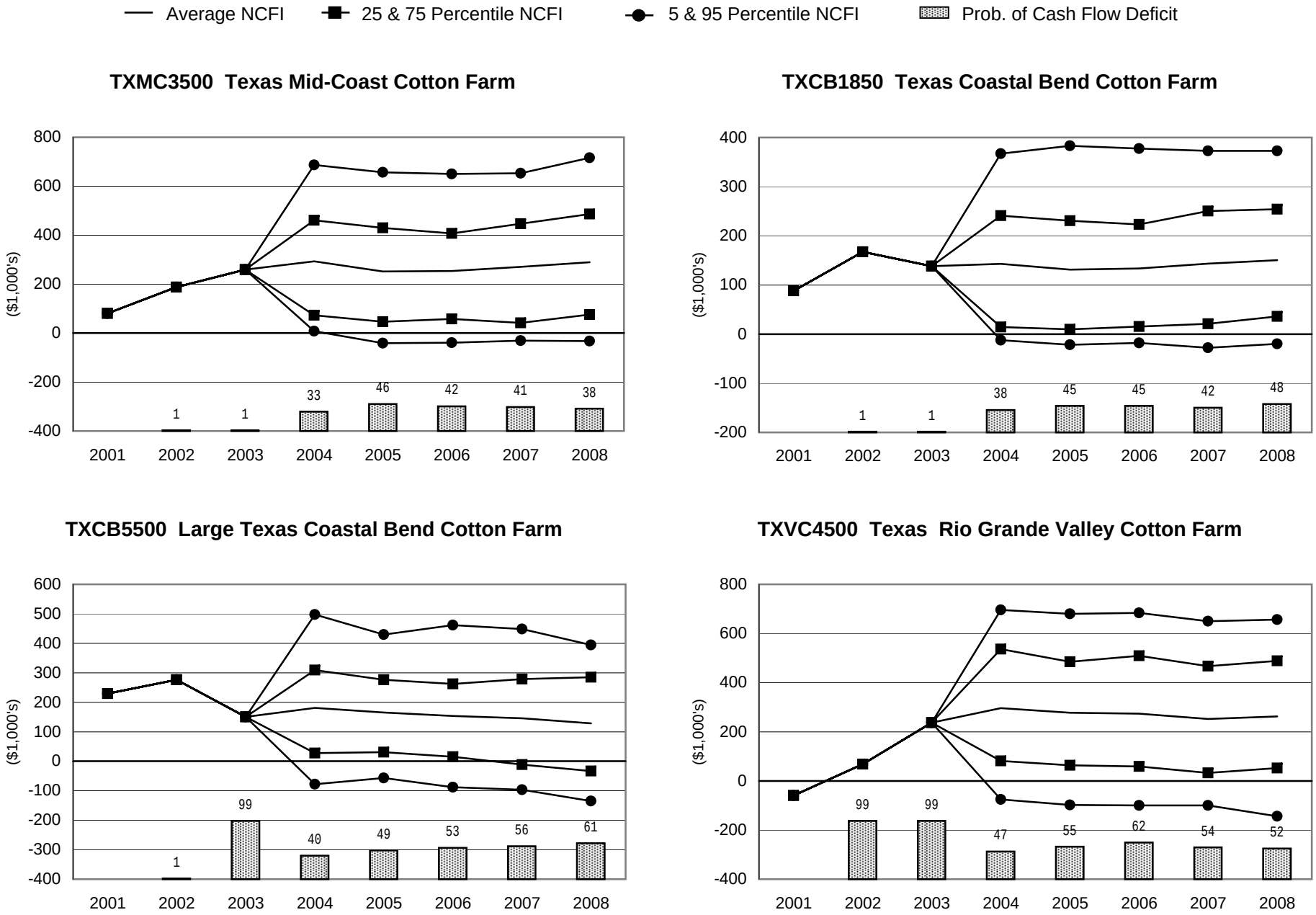


Figure 6. Net Cash Farm Income and Probabilities of a Cash Flow Deficit: Cotton Farms

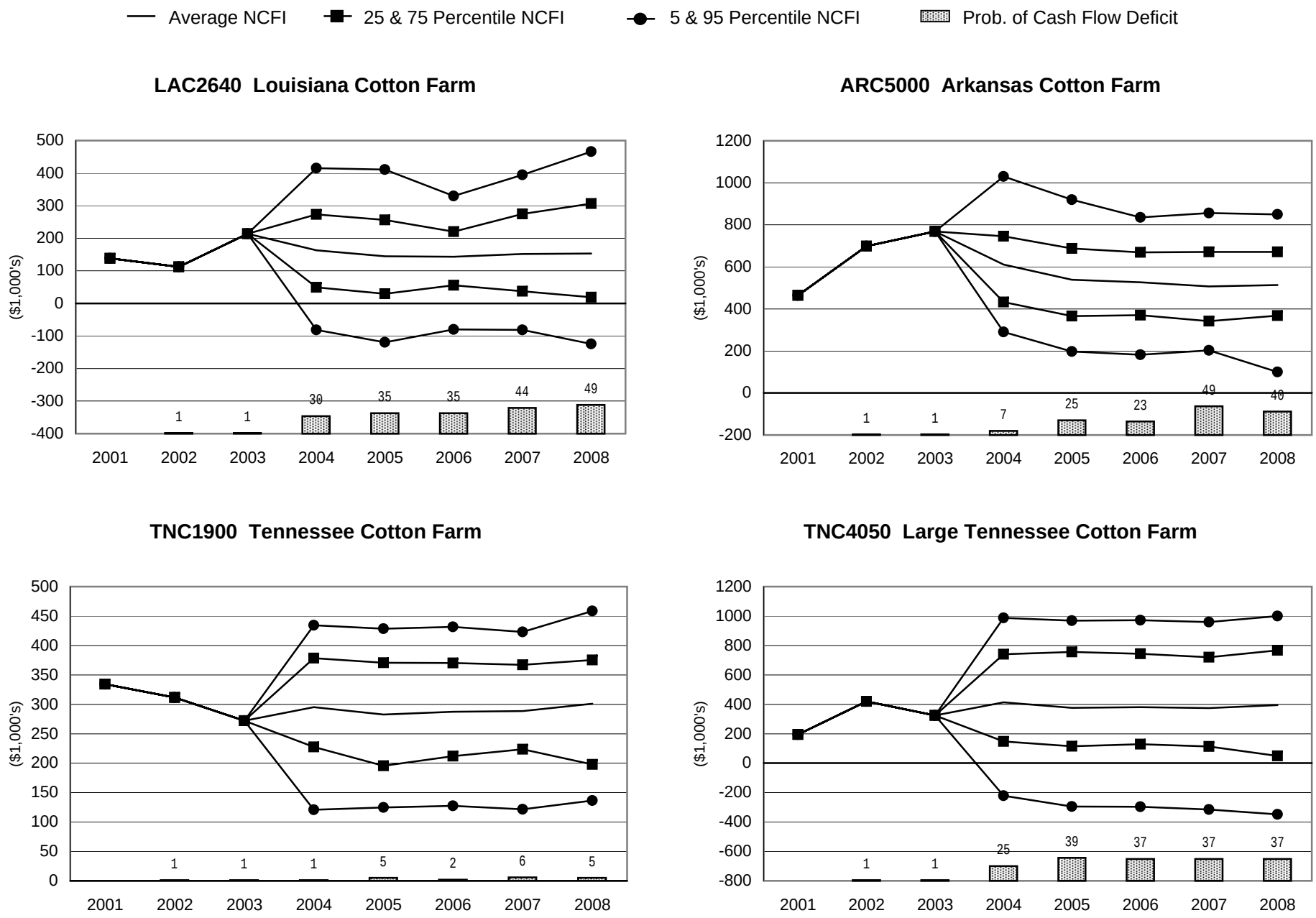
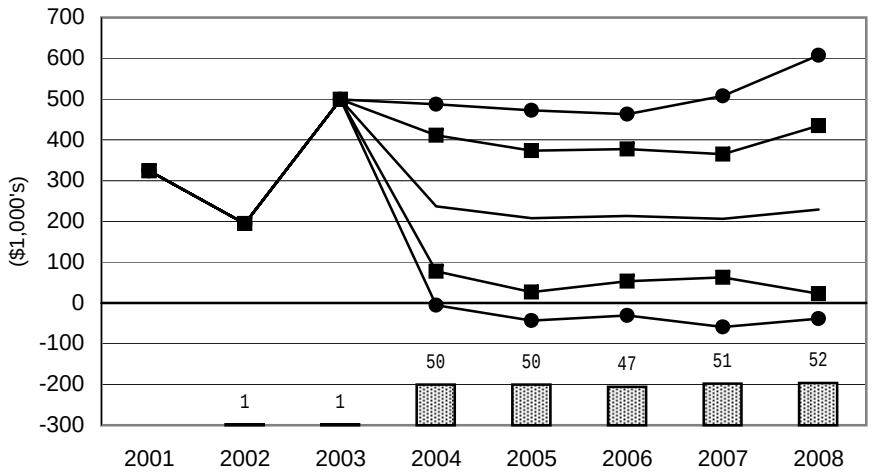


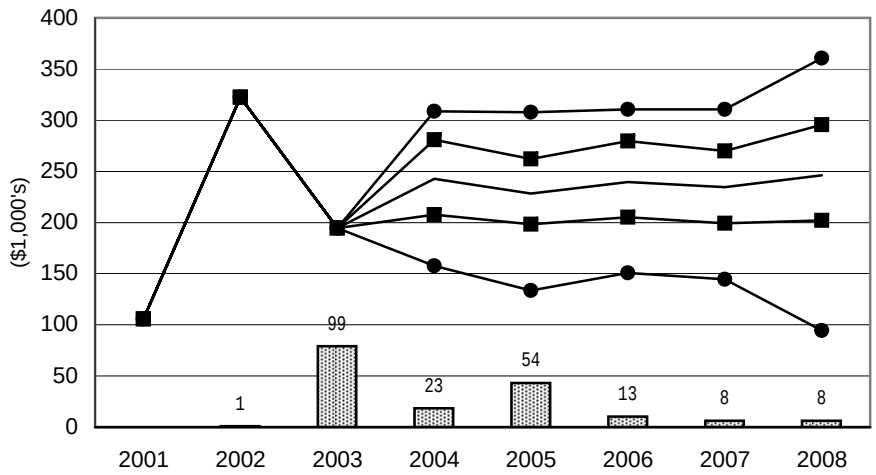
Figure 7. Net Cash Farm Income and Probabilities of a Cash Flow Deficit: Cotton Farms

Average NCFI | 25 & 75 Percentile NCFI | 5 & 95 Percentile NCFI | Prob. of Cash Flow Deficit

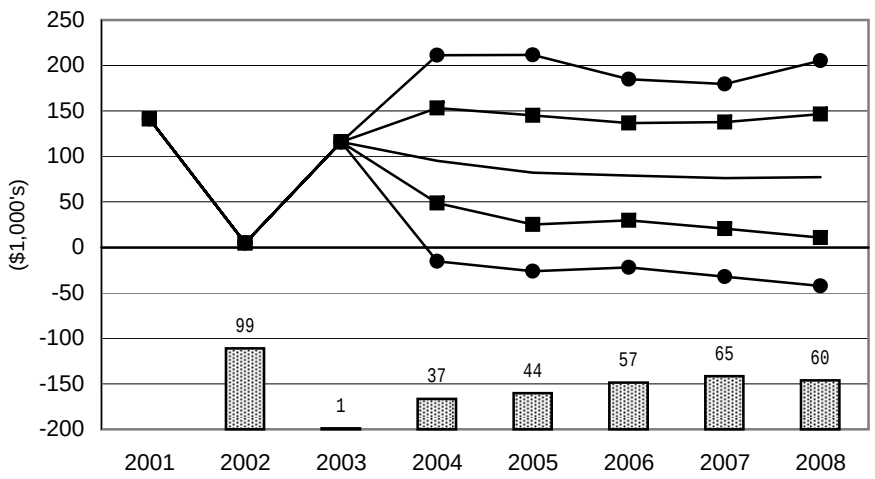
ALC3000 Alabama Cotton Farm



GAC1700 Georgia Cotton Farm



NCC1500 North Carolina Cotton Farm



APPENDIX A.

CHARACTERISTICS OF REPRESENTATIVE COTTON FARMS

2003 CHARACTERISTICS OF PANEL FARMS PRODUCING COTTON

CAC2400 CAC2400 is a 2,400-acre, moderate-sized cotton farm located in the central San Joaquin Valley of California (Kings County). This farm plants 1,000 acres of cotton and 1,400 acres of hay. During 2003, CAC2000 generated 58 percent of total receipts from cotton and 42 percent from hay.

CAC9000 California's central San Joaquin Valley (Kings County) is home to this 9,000-acre farm. Cotton is planted on 4,500 acres, 1,260 acres to wheat, 720 acres of hay, and 2,520 acres of vegetables. Fifty-five percent of 2003 receipts were generated from cotton and 36 percent came from vegetable sales.

TXSP2239 A 2,239-acre Texas South Plains (Dawson County) cotton farm that is moderate-sized for the area. TXSP2239 plants 1,616 acres of cotton (1,250 dryland, 366 irrigated), 270 acres of peanuts, and has 183 acres in CRP. For 2003, 59 percent of receipts came from cotton.

TXSP3745 The Texas South Plains (Dawson County) is home to this 3,745-acre, large-sized cotton farm that grows 2,625 acres of cotton (2,120 dryland, 505 irrigated), 245 acres of peanuts, and has 288 acres in CRP. Cotton sales comprised 75 percent of 2003 receipts.

TXPC2500 The Texas Panhandle is home to this 2,500-acre farm (Deaf Smith County). Annually, cotton is planted on 1,184 acres (1,000 irrigated and 184 dryland), 308 acres to sorghum (125 irrigated and 183 dryland), 883 acres planted to wheat (700 irrigated and 183 dryland), and 125 irrigated acres are planted to corn. Sixty-four percent of 2003 cash receipts were generated by cotton sales.

TXEC5000 This 5,000-acre farm is located on the Eastern Caprock of the Texas South Plains (Crosby County). Annually, 4,300 acres are planted to cotton (2,800 irrigated and 1,500 dryland), 400 acres of wheat (100 irrigated and 300 dryland), and 300 acres of dryland sorghum. In 2003, cotton sales accounted for 96 percent of gross receipts.

Appendix Table A1. Characteristics of Panel Farms Producing Cotton.

	CAC2400	CAC9000	TXSP2239	TXSP3745	TXPC2500	TXEC5000
County	Kings	Kings	Dawson	Dawson	Deaf Smtih	Crosby
Total Cropland	2,000.00	9,000.00	2,239.00	3,745.00	2,500.00	5,000.00
Acres Owned	1,000.00	6,750.00	670.00	1,650.00	1,250.00	640.00
Acres Leased	1,000.00	2,250.00	1,569.00	2,095.00	1,250.00	4,360.00
Assets ($1000)						
Total	5,059.00	17,159.00	765.00	1,455.00	1,628.00	1,134.00
Real Estate	4,148.00	15,217.00	354.00	868.00	681.00	343.00
Machinery	444.00	8.00	329.00	587.00	776.00	792.00
Other & Livestock	467.00	1,934.00	82.00	0.00	171.00	0.00
Debt/Asset Ratios						
Total	0.13	0.14	0.11	0.12	0.16	0.39
Intermediate	0.00	0.00	0.09	0.09	0.16	0.50
Long Run	0.16	0.16	0.14	0.14	0.16	0.14
2003 Gross Receipts ($1,000)*						
Total	2,101.20	10,914.70	633.10	830.10	811.60	1,125.10
Cotton	1,210.40	5,959.60	375.90	618.10	516.70	1,079.70
	0.58	0.55	0.59	0.75	0.64	0.96
Sorghum	0.00	0.00	0.00	0.00	36.60	0.00
	0.00	0.00	0.00	0.00	0.05	0.00
Wheat	0.00	430.40	0.00	0.00	116.00	20.10
	0.00	0.04	0.00	0.00	0.14	0.02
Corn	0.00	0.00	0.00	0.00	74.70	0.00
	0.00	0.00	0.00	0.00	0.09	0.00
Hay	890.80	553.40	0.00	0.00	0.00	0.00
	0.42	0.05	0.00	0.00	0.00	0.00
Peanuts	0.00	0.00	252.00	202.50	0.00	0.00
	0.00	0.00	0.40	0.24	0.00	0.00
Sorghum	0.00	0.00	0.00	0.00	0.00	25.30
	0.00	0.00	0.00	0.00	0.00	0.02
Other Receipts	0.00	3,971.40	5.10	9.50	67.70	0.00
	0.00	0.36	0.01	0.01	0.08	0.00
2003 Planted Acres**						
Total	2,400.00	9,000.00	2,069.00	3,158.00	2,500.00	5,000.00
Cotton	1,000.00	4,500.00	1,616.00	2,625.00	1,184.00	4,300.00
	0.42	0.50	0.78	0.83	0.47	0.86
Sorghum	0.00	0.00	0.00	0.00	308.00	0.00
	0.00	0.00	0.00	0.00	0.12	0.00
Wheat	0.00	1,260.00	0.00	0.00	883.00	400.00
	0.00	0.14	0.00	0.00	0.35	0.08
Corn	0.00	0.00	0.00	0.00	125.00	0.00
	0.00	0.00	0.00	0.00	0.05	0.00
Hay	1,400.00	720.00	0.00	0.00	0.00	0.00
	0.58	0.08	0.00	0.00	0.00	0.00
Peanuts	0.00	0.00	270.00	245.00	0.00	0.00
	0.00	0.00	0.13	0.08	0.00	0.00
Sorghum	0.00	0.00	0.00	0.00	0.00	300.00
	0.00	0.00	0.00	0.00	0.00	0.06
Vegetables	0.00	2,520.00	0.00	0.00	0.00	0.00
	0.00	0.28	0.00	0.00	0.00	0.00
CRP	0.00	0.00	183.00	288.00	0.00	0.00
	0.00	0.00	0.09	0.09	0.00	0.00

*Receipts for 2003 are included to indicate the relative importance of each enterprise to the farm. Percents indicate the percentage of the total receipts accounted for by the livestock categories and the crops.

**Acreages for 2003 are included to indicate the relative importance of each enterprise to the farm. Total planted acreage may exceed total cropland available due to double cropping. Percents indicate the percentage of total planted acreage accounted for by the crop.

2003 CHARACTERISTICS OF PANEL FARMS PRODUCING COTTON (continued)

TXRP2500 TXRP2500 is a 2,500-acre cotton farm located in the Rolling Plains of Texas (Jones County). This farm plants 1,122 acres of cotton and 825 acres of winter wheat each year. Eighty percent of 2003 farm receipts came from cotton sales. Twelve head of beef cows generated approximately two percent of farm receipts.

TXMC3500 A 3,500-acre cotton farm located on the middle Texas Gulf Coast (Jackson County) that farms 1,750 acres of cotton and 875 acres each of sorghum and corn. In 2003, cotton sales comprised 72 percent of total cash receipts on this operation.

TXCB1850 A 1,850-acre cotton farm located on the Texas Coastal Bend (San Patricio County) that farms 925 acres of cotton, 775 acres of sorghum, and 150 acres of corn annually. Seventy-three percent of 2003 cash receipts were generated by cotton.

TXCB5500 Nueces County, Texas is home to this 5,500-acre farm. Annually, 2,750 acres are planted to cotton and 2,750 acres to sorghum. Cotton sales accounted for 75 percent of 2003 receipts.

TXVC4500 This 4,500-acre farm is located in the lower Rio Grande Valley of Texas (Willacy County) and plants 2,388 acres to cotton (500 irrigated and 1,888 acres dryland), 1,887 acres to sorghum, and 225 acres of sugarcane. In 2003, 72 percent of TXVC4500's cash receipts were generated by cotton sales.

LAC2640 This is a 2,640 cotton farm located in north Louisiana (Morehouse Parish). LAC2640 plants 924 acres of cotton, 1,056 acres of corn, and 660 acres of soybeans each year. During 2003, 53 percent of farm receipts were generated from cotton sales.

Appendix Table A2. Characteristics of Panel Farms Producing Cotton.

	TXRP2500	TXMC3500	TXCB1850	TXCB5500	TXVC4500	LAC2640
County	Jones	Jackson	San Patricio	Nueces	Willacy	Morehouse
Total Cropland	2,500.00	3,500.00	1,850.00	5,500.00	4,500.00	2,640.00
Acres Owned	400.00	350.00	360.00	225.00	900.00	0.00
Acres Leased	2,100.00	3,150.00	1,490.00	5,275.00	3,600.00	2,640.00
Pastureland						
Acres Leased	500.00	0.00	0.00	0.00	0.00	0.00
Assets ($1000)						
Total	427.00	1,006.00	965.00	1,265.00	2,031.00	966.00
Real Estate	195.00	313.00	496.00	248.00	1,416.00	100.00
Machinery	188.00	545.00	277.00	754.00	615.00	619.00
Other & Livestock	44.00	148.00	192.00	263.00	0.00	247.00
Debt/Asset Ratios						
Total	0.12	0.14	0.12	0.17	0.24	0.03
Intermediate	0.10	0.14	0.09	0.17	0.43	0.01
Long Run	0.15	0.15	0.16	0.16	0.15	0.11
Number of Livestock						
Beef Cows	12.00	0.00	0.00	0.00	0.00	0.00
2003 Gross Receipts ($1,000)*						
Total	230.40	1,285.70	551.60	1,301.80	1,320.50	1,220.60
Cattle	4.40	0.00	0.00	0.00	0.00	0.00
	0.02	0.00	0.00	0.00	0.00	0.00
Cotton	183.10	923.00	403.00	971.30	954.50	643.20
	0.80	0.72	0.73	0.75	0.72	0.53
Sorghum	0.00	169.10	128.10	330.50	243.60	0.00
	0.00	0.13	0.23	0.25	0.18	0.00
Wheat	42.90	0.00	0.00	0.00	0.00	0.00
	0.19	0.00	0.00	0.00	0.00	0.00
Soybeans	0.00	0.00	0.00	0.00	0.00	162.00
	0.00	0.00	0.00	0.00	0.00	0.13
Corn	0.00	187.90	20.40	0.00	0.00	366.60
	0.00	0.15	0.04	0.00	0.00	0.30
Rice	0.00	5.70	0.00	0.00	0.00	48.80
	0.00	0.00	0.00	0.00	0.00	0.04
Sugar Cane	0.00	0.00	0.00	0.00	122.40	0.00
	0.00	0.00	0.00	0.00	0.09	0.00
2003 Planted Acres**						
Total	1,947.00	3,500.00	1,850.00	5,500.00	4,500.00	2,640.00
Cotton	1,122.00	1,750.00	925.00	2,750.00	2,387.50	924.00
	0.58	0.50	0.50	0.50	0.53	0.35
Sorghum	0.00	875.00	775.00	2,750.00	1,887.50	0.00
	0.00	0.25	0.42	0.50	0.42	0.00
Wheat	825.00	0.00	0.00	0.00	0.00	0.00
	0.42	0.00	0.00	0.00	0.00	0.00
Soybeans	0.00	0.00	0.00	0.00	0.00	660.00
	0.00	0.00	0.00	0.00	0.00	0.25
Corn	0.00	875.00	150.00	0.00	0.00	1,056.00
	0.00	0.25	0.08	0.00	0.00	0.40
Sugar Cane	0.00	0.00	0.00	0.00	225.00	0.00
	0.00	0.00	0.00	0.00	0.05	0.00

*Receipts for 2003 are included to indicate the relative importance of each enterprise to the farm. Percents indicate the percentage of the total receipts accounted for by the livestock categories and the crops.

**Acreages for 2003 are included to indicate the relative importance of each enterprise to the farm. Total planted acreage may exceed total cropland available due to double cropping. Percents indicate the percentage of total planted acreage accounted for by the crop.

2003 CHARACTERISTICS OF PANEL FARMS PRODUCING COTTON (continued)

ARC5000 ARC5000 is a 5,000-acre cotton farm in northeast Arkansas (Desha County) that plants 1,800 acres of cotton, 1,500 acres of rice, 1,400 acres of soybeans, and 300 acres of corn. For 2003, 51 percent of gross receipts came from cotton sales, 34 percent from rice sales, and 14 percent from soybean sales.

TNC1900 A 1,900-acre, moderate-sized West Tennessee (Fayette County) cotton farm. TNC1900 consists of 915 acres of cotton, 370 acres each of soybeans and corn, 150 acres of sorghum, 65 acres of wheat, and 30 acres enrolled in CRP. Cotton accounted for 71 percent of 2003 gross receipts, with corn and soybeans contributing 12 percent and 11 percent, respectively.

TNC4050 TNC4050 is a 4,050-acre, large-sized West Tennessee (Haywood County) cotton farm. This farm plants 2,670 acres of cotton, 820 acres of soybeans, 560 acres of corn, and 328 acres of wheat each year. During 2003, cotton sales generated 80 percent of gross receipts.

ALC3000 A 3,000-acre cotton farm located in north central Alabama (Lawrence County) that plants 2,100 acres to cotton, 750 acres to corn, and 150 acres to soybeans annually. ALC3000 has been under a no-till regime for several years. Additionally, cotton produced on this farm is marketed through a cooperative gin. This gin has implemented ginning and marketing innovations that return a higher lint price than would be realized through conventional marketing channels. Cotton sales accounted for 83 percent of total farm receipts during 2003.

GAC1700 Southwest Georgia (Decatur County) is home to a 1,700-acre cotton farm that plants 1,020 acres to cotton, 510 acres to peanuts, and 170 acres to soybeans. This farm was added during 2001 to represent resurgent cotton production in the Deep South. In 2003, farm receipts were comprised largely of cotton sales (56 percent) and peanut sales (38 percent).

NCC1100 This is a 1,100-acre cotton farm located on the upper coastal plain of North Carolina (Wayne County). NCC1100 plants 700 acres of cotton, 110 acres of wheat, and 400 acres of soybeans (110 acres of which are double-cropped) annually. This farm was added during 2001 to reflect the return of large-scale cotton production to North Carolina. Cotton accounted for 72 percent of this farm's 2003 receipts with 16 percent coming from soybean sales.

Appendix Table A3. Characteristics of Panel Farms Producing Cotton.

	ARC5000	TNC1900	TNC4050	ALC3000	GAC1700	NCC1100
County	Desha	Fayette	Haywood	Lawrence	Decatur	Wayne
Total Cropland	5,000.00	1,900.00	4,050.00	3,000.00	1,700.00	1,100.00
Acres Owned	1,000.00	225.00	1,000.00	0.00	510.00	165.00
Acres Leased	4,000.00	1,675.00	3,050.00	3,000.00	1,190.00	935.00
Pastureland						
Acres Owned	0.00	0.00	0.00	0.00	90.00	0.00
Assets ($1000)						
Total	4,254.00	1,750.00	3,741.00	1,652.00	2,176.00	1,453.00
Real Estate	1,779.00	733.00	1,854.00	200.00	1,320.00	895.00
Machinery	1,714.00	323.00	1,367.00	941.00	742.00	530.00
Other & Livestock	762.00	694.00	520.00	511.00	114.00	28.00
Debt/Asset Ratios						
Total	0.17	0.06	0.14	0.08	0.23	0.12
Intermediate	0.19	0.02	0.14	0.06	0.34	0.07
Long Run	0.14	0.09	0.14	0.15	0.16	0.16
2003 Gross Receipts ($1,000)*						
Total	2,764.10	708.10	1,698.30	1,450.00	1,241.90	576.30
Cotton	1,402.30	505.40	1,353.70	1,204.50	696.60	414.20
	0.51	0.71	0.80	0.83	0.56	0.72
Sorghum	0.00	27.30	0.00	0.00	0.00	0.00
	0.00	0.04	0.00	0.00	0.00	0.00
Wheat	0.00	12.90	63.30	0.00	0.00	15.20
	0.00	0.02	0.04	0.00	0.00	0.03
Soybeans	384.20	79.60	156.40	26.80	77.60	94.20
	0.14	0.11	0.09	0.02	0.06	0.16
Corn	36.70	81.60	120.90	218.70	0.00	1.80
	0.01	0.12	0.07	0.15	0.00	0.00
Peanuts	0.00	0.00	0.00	0.00	467.70	0.00
	0.00	0.00	0.00	0.00	0.38	0.00
Rice	941.00	0.00	0.00	0.00	0.00	0.00
	0.34	0.00	0.00	0.00	0.00	0.00
Other Receipts	0.00	1.40	4.00	0.00	0.00	51.00
	0.00	0.00	0.00	0.00	0.00	0.09
2003 Planted Acres**						
Total	5,000.50	1,900.00	4,378.00	3,000.00	1,700.00	1,210.00
Cotton	1,800.50	915.00	2,670.00	2,100.00	1,020.00	700.00
	0.36	0.48	0.61	0.70	0.60	0.58
Sorghum	0.00	150.00	0.00	0.00	0.00	0.00
	0.00	0.08	0.00	0.00	0.00	0.00
Wheat	0.00	65.00	328.00	0.00	0.00	110.00
	0.00	0.03	0.08	0.00	0.00	0.09
Soybeans	1,400.00	370.00	820.00	150.00	170.00	400.00
	0.28	0.20	0.19	0.05	0.10	0.33
Corn	300.00	370.00	560.00	750.00	0.00	0.00
	0.06	0.20	0.13	0.25	0.00	0.00
Peanuts	0.00	0.00	0.00	0.00	510.00	0.00
	0.00	0.00	0.00	0.00	0.30	0.00
CRP	0.00	30.00	0.00	0.00	0.00	0.00
	0.00	0.02	0.00	0.00	0.00	0.00
Rice	1,500.00	0.00	0.00	0.00	0.00	0.00
	0.30	0.00	0.00	0.00	0.00	0.00

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APPENDIX B.

LIST OF PANEL FARM COOPERATORS

COTTON FARMS

Alabama

Panel Participants

Mr. James Blythe
Dr. Steve Ford
Ms. Larkin Martin
Mr. Paul Clark
Mr. William Lee
Mr. Ron Terry

Arkansas

Panel Participants

Mr. Phillip Baugh
Mr. Jeff Keeter
Mr. Jim Whitaker
Mr. Gregg Day
Mr. Joe Mencer
Mr. Sam Whitaker

California

Facilitators

Mr. Bruce Roberts - County Extension Director and Farm Advisor, Kings County

Panel Participants

Mr. Bo Champlin
Mr. Matt Gilkey
Mr. John Newton
Mr. Bob Prys
Mr. Dave Smith
Mr. Bill Tos
Mr. Carlton Duty
Mr. Kevin Lehar
Mr. Craig Pedersen
Mr. Ted Sheely
Mr. Bill Stone
Mr. Mark Watte

Georgia - Southwest

Facilitators

Mr. Eddie McGriff - County Extension Coordinator, Decatur County
Mr. Brad Mitchell - County Extension Coordinator, Mitchell County
Dr. Don Shurley - Professor, University of Georgia

Panel Participants

Mr. John Bridges, Jr.
Mr. Charles A. Collins
Mr. Scott E. Vann
Mr. Bryant Collins
Mr. Keith Griffin

Louisiana

Facilitators

Mr. John Barnett - Director, LSU Ag Center, Central Region
Dr. Gene Johnson - Professor, Agricultural Marketing, Louisiana State University

Panel Participants

Mr. Jess Barr
Mr. J. Macon LaFoe, Sr.
Mr. Buddy Page
Mr. Buddy Davis
Mr. Randy Miller
Mr. Jerry Stutts

North Carolina

Facilitators

Mr. R. H. "Bob" Pleasants - County Extension Agent, Wayne County

Panel Participants

Mr. Daryl Anderson
Mr. Willie Howell
Mr. Danny C. Pierce
Mr. Bryant Worley
Mr. Landis Brantham, Jr.
Mr. David B. Mitchell, Sr.
Mr. Craig West

COTTON FARMS (CONTINUED)

Tennessee

Facilitators

Mr. Jim Castellaw - Extension Area Specialist, Farm Management, Fayette County
Mr. Chuck Danehower - Extension Area Specialist, Farm Management, Lauderdale County
Mr. Jamie H. Jenkins - County Extension Director, Fayette County
Mr. Tim Roberts - County Extension Director, Crockett County
Dr. Kelly Tiller - Agricultural Policy Analysis Center, University of Tennessee

Panel Participants

Mr. Harris Armour, III
Mr. Tom Karcher
Mr. Travis Lonon
Mr. Dewayne Hendrix
Mr. Allen King
Mr. Eugene McFerren

Texas - Coastal Bend

Facilitators

Dr. Larry Falconer - Extension Economist - Management, Texas A&M University
Mr. Mark Miller - Chief Operations Officer, Texas AgFinance
Mr. Jeffrey Stapper - County Extension Agent, San Patricio County and Aransas County

Panel Participants

Mr. Marvin Beyer, Jr.
Mr. Clarence Chopelas
Mr. Joel Hoskinson
Mr. Larry McNair
Mr. Darby Salge
Mr. Brad Bickham
Mr. Jimmy Dodson
Mr. Wayne Lambert
Mr. Mark Morris

Texas - Eastern Caprock

Facilitators

Mr. Jason Cox - Vice President, Ag Texas Farm Credit Services

Panel Participants

Mr. Lloyd Arthur
Mr. Edwin Moore
Mr. Brooks Ellison
Mr. Marvin Schoepf

Texas - Mid Coast

Facilitators

Mr. Jeff Nunley - Executive Director, South Texas Cotton & Grain Assn.

Panel Participants

Mr. Daniel Gavaronic
Mr. Keith Johnson
Mr. Mark Malaer
Mr. Joe Jenkins
Mr. Rob Kainer
Mr. Dwain Nunley

Texas - Panhandle

Facilitators

Mr. Sean Smith - Credit Office President, First Ag Credit

Panel Participants

Mr. Michael Carlson
Mr. Steve Hoffman
Mr. Roy Carlson
Mr. Harold Sides

Texas - Rio Grande Valley

Facilitators

Mr. Reagan Florence - Exec. VP - Chief Lending Officer, Ag Credit of South Texas

Panel Participants

Mr. Derrick Swanberg
Ms. Mitzi Swanberg-Anzaldua
Mr. Marshall Swanberg
Mr. Mark Willis

COTTON FARMS (CONTINUED)

Texas - Rolling Plains

Facilitators

Mr. Stan Bevers - Extension Economist - Management, Texas A&M University
Mr. Mike Sloan - Regional Vice President, First Ag Credit
Mr. Todd Vineyard - County Extension Agent, Jones County

Panel Participants

Mr. Dennis Olson
Mr. Ronnie Riddle
Mr. Ferdie Walker
Mr. Ronnie Richmond
Mr. Dale Spurgin

Texas - Southern High Plains

Facilitators

Mr. John Farris - County Extension Agent, Dawson County
Dr. Jackie Smith - Extension Economist - Management, Texas A&M University

Panel Participants

Mr. Steven Archer
Mr. Jerry Chapman
Mr. Kent Nix
Mr. Brad Boyd
Mr. Mark Furlow
Mr. Donald Vogler

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