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**Southern Agriculture Under the 2002 Farm Bill:
A Representative Farms Approach**

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*Selected Paper prepared for presentation at the Southern Agricultural Economics Association
Annual Meeting, Mobile, Alabama, February 1-5, 2003*

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Southern Agriculture Under the 2002 Farm Bill: A Representative Farms Approach¹

Abstract: The 2002 Farm Bill affects economic activity of farms and ranches in the southern United States. Using stochastic simulation techniques, key financial variables were projected for 39 representative farms and ranches in ten southern states. Results indicate 24 of 39 farms studied have more than a 40 percent likelihood of having annual cash flow deficits during the period 2002 through 2007. Results are largely consistent across commodities and between moderate and large size farms in the same geographic area.

Introduction and Objectives: Passage of the Food Security and Rural Investment Act of 2002 (2002 Farm Bill) affects producers of food and fiber commodities across the South. Changes in direct payment rates and loan rates, accompanied by new counter-cyclical payments, alter the playing field significantly for southern crop and livestock operations during the life of the Farm Bill. The primary objective of this analysis is to use stochastic simulation to project the likely financial performance of 39 representative crop and livestock farms in the southern United States for the duration of the 2002 Farm Bill.

Representative Farms Process: Since the mid-1980s, faculty of the Agricultural and Food Policy Center at Texas A&M University (AFPC), cooperating with land-grant faculty across the nation, have developed and maintained data to simulate economic and financial activity for more than 90 representative crop and livestock farms chosen from major production areas across the United States (39 of these farms are located in the southern United States). The locations of

¹ By James D. Sartwelle, III, Kelly Tiller, James W. Richardson, Joe L. Outlaw, and David P. Anderson. Selected paper prepared for presentation at the Southern Agricultural Economics Association Annual Meeting, Mobile, Alabama, February 1-5, 2003.

these farms have been selected largely through discussions with staff members of the Agriculture committees of each house of the U.S. Congress. Information necessary for the simulation process 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. Generally, one panel 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 the AFPC. Working with a few key assumptions about initial debt levels, the preliminary data are simulated. Each panel member is provided pro-forma financial statements for their representative farm and asked to verify both the accuracy of the simulated results for the current year and the reasonableness of the four or five year projection. Only after each panel has approved the model's ability to reasonably reflect the economic activity on their representative farm is the farm used for policy analyses.

Methodology: Stochastic simulation modeling (using FLIPSIM) was used to analyze the effects of the provisions of the 2002 Farm Bill on the 39 Southern representative farms. Under a set of standard assumptions, each farm's crop acreage base(s) and farm program yield(s) was updated according to the provisions of the new farm legislation. Each of the farms and ranches were analyzed using macro level projections of prices, inflation rates, and yields growth developed in the July 2002 FAPRI Baseline. Point estimates of key economic variables (change in cash receipts, government payments, net cash farm income, and ending cash) were derived. Owing to the power of simulation, the probabilities of within-year cash flow deficits and decreasing real

net worth provide more robust analysis of these farms under significantly different farm legislation.

This analysis relies on several key assumptions to project the financial and economic health of the representative farms through 2007. Crop acreages, dairy, beef cattle, and hog herd sizes are held constant through the analysis period. Farms are structured in a manner that statutory limits on direct, counter-cyclical, and marketing loan/loan deficiency payments are not effective. Minimum family living withdrawals are the minimum of 10 percent of gross receipts or \$20,000 annually. Actual family withdrawals are based on historical consumption patterns. Each farm is structured as a sole proprietorship and is subject to owner/operator federal (income and self employment) and state income taxes according to the most current tax provisions. No off-farm income was included. This analysis only examines each farm's ability to provide for family living and capital replacement.

Additionally, each farm's historical crop yield/livestock production and price variability (for the past ten years) was presumed to prevail through the 2001-2007 planning horizon. Yields and prices for 2001 were held constant based on actual values provided by panel members. Random crop, livestock and dairy prices were obtained from the November 2002 analysis of the Food and Agricultural Policy Research Institute (FAPRI) baseline. Crop yields and livestock production for 2002-2007 were simulated stochastically based on the aforementioned histories. FAPRI's baseline national prices were localized to each farm and used as the average prices to simulate costs and returns for 2002-2007. Thus local prices used in the stochastic simulation reflect both domestic and international markets and production risk. Tables 1, 2, and 3 present

projections of crop and livestock prices, government program payment and loan rates, and macroeconomic assumptions required for this analysis.

Southern Representative Farms: Thirty-nine representative farms and ranches are located in the states of Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Tennessee, and Arkansas. The 30 crop farms include eight farms producing primarily feedgrains and oilseeds, 12 cotton farms, and ten rice farms. Nine livestock operations include one beef cattle ranch, one hog farm, and seven dairy farms. All 39 farm panels were convened during the past 24 months and all information updated. Further descriptions of the farms are found in table 4.

Southern Feedgrain Farms Under the 2002 Farm Bill: Corn and soybean prices are projected to remain relatively stable from 2003 through 2007 at a level near 2002 prices. Fertilizer prices are projected to decrease in 2002 and 2003 (relative to the previous years), and then increase along with the other input prices through 2007. Results for feedgrain/oilseed representative farms are reported in table 5.

Given no significant price recovery and gently increasing costs of production, only the moderate Tennessee farm had less than a 25 percent probability of a cash flow deficit in 2007. Combined with a negligible chance of losing real net worth, TNG900 is the only southern feedgrain/oilseed farm classified in good financial condition through 2007. Conversely, the larger Texas Blackland Prairie farm and both South Carolina farms are classified in poor financial condition. On those farms, the likelihood of a cash flow deficit in 2002 ranged from 66

to 97 percent, and none of the three farms is likely to see much improvement in liquidity during the projection period.

Southern Cotton Farms Under the 2002 Farm Bill: Cotton prices are projected to increase from \$0.3951/lb in 2002 to \$0.5467/lb in 2007. This significant recovery in cotton prices portends well for the financial conditions of most representative cotton farms in the South. Overall financial rankings of the 12 farms reveal six farms in good condition, three in marginal condition, and three in poor condition (table 6). Among the farms in good condition, the large Texas South Plains farm appears most likely to have difficulties meeting cash flow obligations. However, it retains the good ranking by virtue of decreasing probabilities of within-year cash flow deficits and very small likelihood of decreasing real net worth.

The three farms in poor condition bear further examination. The Texas Rolling Plains farm is 100 percent dryland, its average cotton yield is the lowest of all the farms, and its yield variability is significant. Even in good price years, this farm will have a difficult time meeting cash flow requirements. The Louisiana farm and North Carolina farm each benefit from the 2002 Farm Bill by increasing government program base acres; however, each farm's relatively high production costs impair their cash flow ability significantly.

Southern Rice Farms Under the 2002 Farm Bill: Rice prices are projected to remain below \$5.00/cwt through 2007. Depressed prices, combined with increasing production costs, remain a millstone around the ten representative rice farms studied (table 7). Overall financial rankings for 2002 through 2007 indicate only one farm in marginal condition with the rest in poor

condition. Each of those nine farms has a probability of within-year cash flow shortfall of 99 percent by 2007, and each farm has more than a 90 percent chance of decreasing real net worth throughout the same period.

Southern Livestock Operations Under the 2002 Farm Bill: Table 8 summarizes the results of the stochastic analysis of dairies, hog farms, and cattle ranches under the 2002 Farm Bill.

Among the seven dairy farms, three are projected to be in good overall financial condition with four in poor condition. High milk prices in 2001 are followed by significantly lower milk prices in 2002-2007. FAPRI projects slight price recovery by the end of the period, but prices are not likely to recover to 2001 levels. That places a significant financial strain on each of the dairies. The three dairies in good overall financial condition (large central Texas, large East Texas, and northern Florida) appear to have achieved economies of scale necessary to weather a period of low prices.

The North Carolina farrow-to-finish hog operation is projected to be in marginal financial condition through 2007. While the probability of cash flow deficits decreases from 97 percent in 2002 to 65 percent in 1007, the chance of losing real equity decreases also. That farm likely will remain in vulnerable shape into the future. The story is different for the Florida cattle ranch. It is projected in good financial condition through 2007, with probabilities of annual cash flow deficits ranging from four to 22 percent and the likelihood of equity loss negligible.

Implications: Southern agriculture appears to have been dealt a mixed hand with the 2002 Farm Bill. Across the 39 representative farms and ranches in the southern United States, 11 farms

received an overall financial health designation of good for 2002-2007, nine were designated marginal, and 19 were poor. Of particular concern is the projected health of rice farms in the South. FAPRI research indicates the probability that counter-cyclical payments for rice are at their statutory maximum is nearly 100 percent for the life of the bill. Despite that, total receipts are unlikely to cover costs for all six years of the analysis for nearly every farm in the study group. Lack of profitability will remain a hot-button issue for rice producers and their constituency groups in the future.

Cash flow difficulties are not limited to rice producers, however. Seven of eight representative feedgrain farms have greater than a one-third chance of cash flow deficits by 2007. Seven of twelve representative cotton farms fall into the same position. Four of seven representative dairy farms have greater than a 70 percent chance of a cash flow deficit. Persistent operating debts erode real net worth. That double-whammy spells doom for many producers in areas similar to those covered by some of our representative farms unless steps are taken at the policy level or at the farm level to alter the downward spiral.

Producers must accurately assess the health of their farm/ranch businesses and take steps to manage the myriad risks facing them. Regular updates of the AFPC representative farms and ranches aid policy makers and educators in maintaining a constant pulse on production agriculture at the farm level.

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Table 1. Annual Crop and Livestock Prices.

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Crop Prices | | | | | | | |
| Corn (\$/bu.) | 1.97 | 2.45 | 2.23 | 2.24 | 2.29 | 2.34 | 2.39 |
| Wheat (\$/bu.) | 2.78 | 3.79 | 3.15 | 3.26 | 3.33 | 3.37 | 3.49 |
| Cotton (\$/lb.) | 0.3150 | 0.3951 | 0.4566 | 0.4883 | 0.5118 | 0.5204 | 0.5467 |
| Sorghum (\$/bu.) | 1.95 | 2.45 | 2.08 | 2.12 | 2.18 | 2.24 | 2.29 |
| Soybeans (\$/bu.) | 4.35 | 5.45 | 5.18 | 5.21 | 5.45 | 5.59 | 5.62 |
| Barley (\$/bu.) | 2.22 | 2.60 | 2.46 | 2.40 | 2.44 | 2.48 | 2.51 |
| Oats (\$/bu.) | 1.59 | 1.80 | 1.63 | 1.57 | 1.58 | 1.60 | 1.62 |
| Rice (\$/cwt.) | 4.17 | 3.90 | 4.66 | 4.79 | 4.78 | 4.82 | 4.98 |
| Soybean Meal (\$/ton) | 148.46 | 155.00 | 146.63 | 147.88 | 154.27 | 158.46 | 159.79 |
| All Hay (\$/ton) | 97.30 | 99.02 | 89.98 | 88.62 | 88.76 | 89.54 | 90.49 |
| Peanuts (\$/ton) | 468.00 | 364.00 | 393.80 | 373.20 | 383.80 | 371.00 | 373.00 |
| Cattle Prices (\$/cwt.) | | | | | | | |
| Feeder Cattle | 95.29 | 86.75 | 92.22 | 97.83 | 99.20 | 94.96 | 87.71 |
| Fed Cattle | 72.71 | 66.77 | 72.39 | 75.69 | 76.83 | 75.25 | 72.47 |
| Culled Cows | 44.39 | 39.94 | 42.98 | 45.51 | 45.93 | 44.20 | 41.56 |
| Hog Prices (\$/cwt.) | | | | | | | |
| Barrows/Gilts | 45.81 | 34.08 | 38.94 | 44.52 | 47.56 | 43.63 | 41.31 |
| Culled Sows | 33.98 | 22.46 | 27.38 | 30.89 | 33.88 | 30.35 | 27.85 |
| Milk Prices (\$/cwt.) | | | | | | | |
| All Milk Price | 15.05 | 11.35 | 11.87 | 11.86 | 12.08 | 12.95 | 13.08 |
| Florida | 17.80 | 15.25 | 15.44 | 15.48 | 15.68 | 15.98 | 16.13 |
| Texas | 15.80 | 12.82 | 13.19 | 13.20 | 13.40 | 13.70 | 13.84 |

Source: Food and Agricultural Policy Research Institute at the University of Missouri-Columbia and Iowa State University, November 2002.

Table 2. Annual Loan Rates, Counter Cyclical Payment Prices, and Fixed/Direct Payment Rates.

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Loan Rates | | | | | | | |
| Corn (\$/bu.) | 1.89 | 1.98 | 1.98 | 1.95 | 1.95 | 1.95 | 1.95 |
| Wheat (\$/bu.) | 2.58 | 2.80 | 2.80 | 2.75 | 2.75 | 2.75 | 2.75 |
| Cotton (\$/lb.) | 0.5192 | 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 |
| Soybeans (\$/bu.) | 5.26 | 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 |
| Oats (\$/bu.) | 1.21 | 1.35 | 1.35 | 1.33 | 1.33 | 1.33 | 1.33 |
| Rice (\$/cwt.) | 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 |
| Target Prices | | | | | | | |
| Corn (\$/bu.) | 0.00 | 2.60 | 2.60 | 2.63 | 2.63 | 2.63 | 2.63 |
| Wheat (\$/bu.) | 0.00 | 3.86 | 3.86 | 3.92 | 3.92 | 3.92 | 3.92 |
| Cotton (\$/lb.) | 0.0000 | 0.7240 | 0.7240 | 0.7240 | 0.7240 | 0.7240 | 0.7240 |
| Sorghum (\$/bu.) | 0.00 | 2.54 | 2.54 | 2.57 | 2.57 | 2.57 | 2.57 |
| Soybeans (\$/bu.) | 0.00 | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| Barley (\$/bu.) | 0.00 | 2.21 | 2.21 | 2.24 | 2.24 | 2.24 | 2.24 |
| Oats (\$/bu.) | 0.00 | 1.40 | 1.40 | 1.44 | 1.44 | 1.44 | 1.44 |
| Rice (\$/cwt.) | 0.00 | 10.50 | 10.50 | 10.50 | 10.50 | 10.50 | 10.50 |
| Peanuts (\$/ton) | 0.00 | 495.00 | 495.00 | 495.00 | 495.00 | 495.00 | 495.00 |
| Fixed/Direct Payment Rates | | | | | | | |
| Corn (\$/bu.) | 0.5670 | 0.2800 | 0.2800 | 0.2800 | 0.2800 | 0.2800 | 0.2800 |
| Wheat (\$/bu.) | 0.9952 | 0.4400 | 0.4400 | 0.4400 | 0.4400 | 0.4400 | 0.4400 |
| Cotton (\$/lb.) | 0.1209 | 0.0667 | 0.0667 | 0.0667 | 0.0667 | 0.0667 | 0.0667 |
| Sorghum (\$/bu.) | 0.6795 | 0.3500 | 0.3500 | 0.3500 | 0.3500 | 0.3500 | 0.3500 |
| Soybeans (\$/bu.) | 0.1195 | 0.5200 | 0.5200 | 0.5200 | 0.5200 | 0.5200 | 0.5200 |
| Barley (\$/bu.) | 0.4268 | 0.2400 | 0.2400 | 0.2400 | 0.2400 | 0.2400 | 0.2400 |
| Oats (\$/bu.) | 0.0453 | 0.0240 | 0.0240 | 0.0240 | 0.0240 | 0.0240 | 0.0240 |
| Rice (\$/cwt.) | 4.4323 | 2.3500 | 2.3500 | 2.3500 | 2.3500 | 2.3500 | 2.3500 |
| Peanuts (\$/ton) | 0.00 | 36.00 | 36.00 | 36.00 | 36.00 | 36.00 | 36.00 |

Source: Food and Agricultural Policy Research Institute at the University of Missouri-Columbia and Iowa State University, November 2002.

Table 3. Assumed Rates of Change in Input Prices and Annual Interest Rates.

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|--------|-------|-------|------|------|------|
| Annual Rate of Change for Input Prices Paid (%) | | | | | | |
| Seed Prices | 2.20 | 1.68 | 1.62 | 1.30 | 1.19 | 1.09 |
| Fertilizer Prices | -17.25 | -2.61 | 2.86 | 0.70 | 1.59 | 1.13 |
| Chemical Prices | -0.64 | 2.98 | 2.64 | 1.64 | 1.29 | 1.10 |
| Machinery Prices | -1.01 | 1.33 | 2.26 | 1.95 | 1.55 | 1.08 |
| Fuel and Lube Prices | -7.27 | 4.77 | -2.88 | 0.14 | 2.26 | 1.71 |
| Labor | 4.18 | 3.72 | 4.52 | 4.38 | 3.45 | 3.07 |
| Other Input Prices | 1.02 | 1.04 | -1.59 | 0.56 | 1.24 | 1.18 |
| | | | | | | |
| Annual Change in Consumer Price Index (%) | 1.70 | 2.90 | 2.90 | 2.90 | 2.60 | 2.40 |
| | | | | | | |
| Annual Interest Rates (%) | | | | | | |
| Long-Term | 6.97 | 6.53 | 6.27 | 6.50 | 7.54 | 7.99 |
| Intermediate-Term | 4.53 | 4.09 | 4.85 | 6.09 | 6.47 | 6.37 |
| Savings Rate | 1.66 | 1.96 | 3.24 | 3.95 | 4.62 | 4.68 |
| | | | | | | |
| Annual Rate of Change for U.S. Land Prices (%) | 5.22 | 4.20 | 3.80 | 2.50 | 2.48 | 2.45 |

Source: Food and Agricultural Policy Research Institute at the University of Missouri-Columbia and Iowa State University, November 2002.

Table 4. Descriptions of Southern Representative Farms and Ranches

Feedgrain Farms (8)

| | |
|----------|--|
| TXNP1750 | 1,750 acre corn, sorghum, and wheat farm in Moore County, Texas |
| TXNP7000 | 7,000 acre irrigated corn, irrigated sorghum, irrigated wheat, and dryland wheat farm in Moore County, Texas |
| TXBG2000 | 2,000 acre corn, sorghum, cotton, wheat, and beef cattle farm in Hill County, Texas. |
| TXBG2700 | 2,700 acre corn, sorghum, wheat, and oat farm in Falls County, Texas. |
| TNG900 | 900 acre corn, soybean, and double-cropped wheat farm in Henry County, Tennessee. |
| TNG2400 | 2,400 acre corn, soybean, and double-cropped wheat farm in Henry County, Tennessee. |
| SCG1500 | 1,500 acre corn, soybean, and double-cropped wheat farm in Clarendon County, South Carolina. |
| SCG3500 | 3,500 acre corn, soybean, and double-cropped wheat farm in Clarendon County, South Carolina. |

Cotton Farms (12)

| | |
|----------|--|
| TXSP2239 | 2,239 acre cotton (dryland and irrigated) and irrigated peanut farm in Dawson County, Texas. |
| TXSP3745 | 3,745 acre cotton (dryland and irrigated) and irrigated peanut farm in Dawson County, Texas. |
| TXRP2500 | 2,500 acre cotton, wheat, and beef cattle operation in Jones County, Texas. |
| TXBC1400 | 1,400 acre cotton, corn, sorghum, wheat, and beef cattle farm in Williamson County, Texas. |
| TXCB1850 | 1,850 acre cotton, sorghum, and corn farm in San Patricio County, Texas. |
| LAC2640 | 2,640 acre cotton, corn, and soybean farm in Morehouse Parish, Louisiana. |
| ARC5000 | 5,000 acre cotton, rice, soybean, and corn farm in Desha County, Arkansas. |
| TNC1900 | 1,900 acre cotton, sorghum, soybean, corn, and wheat farm in Fayette County, Tennessee. |
| TNC4050 | 4,050 acre cotton, soybean, corn, and wheat farm in Haywood County, Tennessee. |
| ALC3000 | 3,000 acre cotton, corn, and soybean farm in Lawrence County, Alabama. |
| GAC1700 | 1,700 acre cotton, wheat, soybean, and corn farm in Decatur County, Georgia. |
| NCC1500 | 1,500 acre cotton, wheat, and double-cropped soybean farm in Wayne County, North Carolina. |

Rice Farms (10)

| | |
|----------|--|
| TXR1553 | 1,553 acre rice farm in Colorado County, Texas. |
| TXR3774 | 3,774 acre rice farm in Colorado County, Texas. |
| TXBR1650 | 1,650 acre rice farm in Matagorda County, Texas. |
| TXER3200 | 3,200 acre rice, sorghum, and soybean farm in Wharton County, Texas. |
| LASR1200 | 1,200 acre rice and soybean farm in Acadia, Vermilion, and Jeff Davis parishes, Louisiana. |
| LANR2500 | 2,500 acre rice, soybean, cotton, corn, and sorghum farm in Madison Parish, Louisiana. |
| ARSR3640 | 3,640 acre rice, soybean, and wheat farm in Arkansas County, Arkansas. |
| ARWR1200 | 1,200 acre rice, soybean, and double-cropped wheat farm in Cross County, Arkansas. |
| ARHR3000 | 3,000 acre rice, soybean, and corn farm in Lawrence County, Arkansas. |
| MSR4735 | 4,725 acre rice, soybean, and cotton farm in Tunica County, Mississippi. |

Livestock Operations (9)

| | |
|----------|--|
| FLB1155 | 1,155 head beef cattle ranch in Osceola County, Florida. |
| NCH350 | 350 head farrow-to-finish hog operation in Wayne County, North Carolina. |
| TXND2400 | 2,400 cow dairy in Bailey County, Texas. |
| TXCD500 | 500 cow dairy in Erath County, Texas. |
| TXCD1300 | 1,300 cow dairy in Erath County, Texas. |
| TXED330 | 330 cow dairy in Hopkins County, Texas. |
| TXED750 | 750 cow dairy in Lamar County, Texas. |
| FLND500 | 500 cow dairy in Lafayette County, Florida. |
| FLSD1800 | 1,800 cow dairy in Okeechobee County, Florida. |

Table 5. Impact of 2002 Farm Bill on Southern Feedgrain Farms.

| | TXNP1750 | TXNP7000 | TXBG2000 | TXBG2700 | TNG900 | TNG2400 | SCG1500 | SCG3500 |
|--|----------|----------|----------|----------|---------|----------|----------|----------|
| Overall Financial Position, 2002-2007 | Marginal | Marginal | Marginal | Poor | Good | Marginal | Poor | Poor |
| Total Cash Receipts (\$1000), 2002-2007 Average | 642.646 | 2117.031 | 419.407 | 423.718 | 261.017 | 760.038 | 479.834 | 1351.576 |
| Government Payments (\$1000), 2002-2007 Average | 78.700 | 270.980 | 73.050 | 38.200 | 35.590 | 104.170 | 70.100 | 246.060 |
| Net Cash Farm Income (\$1000), 2002-2007 Average | 173.231 | 594.351 | 91.512 | 24.534 | 98.466 | 260.211 | 53.243 | 140.107 |
| Ending Cash Reserves (\$1000), 2007 | 294.390 | 931.910 | 84.600 | -216.800 | 183.510 | 497.590 | -186.400 | -415.420 |
| Nominal Net Worth (\$1000), 2007 | 716.640 | 3110.820 | 635.320 | 524.010 | 635.590 | 2181.150 | 830.190 | 3020.380 |
| Average Change, Real Net Worth (%), 2002-2007 | 13.98 | 7.221 | 3.905 | -2.101 | 7.087 | 4.993 | 0.545 | 1.134 |
| Probability of a Cash Flow Deficit (%) | | | | | | | | |
| 2002 | 20 | 1 | 10 | 97 | 1 | 1 | 88 | 66 |
| 2003 | 31 | 31 | 54 | 96 | 27 | 34 | 90 | 76 |
| 2004 | 37 | 17 | 37 | 94 | 17 | 18 | 93 | 80 |
| 2005 | 48 | 31 | 66 | 94 | 17 | 31 | 92 | 83 |
| 2006 | 45 | 34 | 47 | 95 | 22 | 28 | 89 | 88 |
| 2007 | 38 | 36 | 45 | 94 | 11 | 33 | 90 | 83 |
| Probability of Decreasing Real Net Worth (%) | | | | | | | | |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 30 | 20 | 33 | 50 | 13 | 18 | 60 | 50 |
| 2004 | 20 | 5 | 26 | 47 | 5 | 4 | 49 | 45 |
| 2005 | 17 | 4 | 27 | 46 | 4 | 1 | 49 | 44 |
| 2006 | 11 | 3 | 13 | 53 | 1 | 2 | 38 | 36 |
| 2007 | 8 | 3 | 15 | 61 | 3 | 1 | 38 | 37 |

Table 6. Impact of 2002 Farm Bill on Southern Cotton Farms.

| | TXSP2239 | TXSP3745 | TXRP2500 | TXBC1400 | TXCB1850 | LAC2640 | ARC5000 | TNC1900 | TNC4050 | ALC3000 | GAC1700 | NCC1500 |
|--|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|
| Overall Financial Position, 2002-2007 | Good | Good | Poor | Good | Marginal | Poor | Marginal | Good | Good | Marginal | Good | Poor |
| Total Cash Receipts (\$1000), 2002-2007 Average | 674.251 | 876.267 | 285.194 | 298.143 | 556.477 | 938.390 | 2489.767 | 723.365 | 1777.738 | 1365.523 | 1310.145 | 714.224 |
| Government Payments (\$1000), 2002-2007 Average | 177.030 | 219.640 | 81.650 | 58.190 | 117.150 | 188.370 | 724.910 | 151.550 | 347.190 | 303.210 | 332.050 | 147.490 |
| Net Cash Farm Income (\$1000), 2002-2007 Average | 187.076 | 205.204 | 70.680 | 104.346 | 158.484 | 99.369 | 595.939 | 344.369 | 652.553 | 435.599 | 314.054 | 94.974 |
| Ending Cash Reserves (\$1000), 2007 | 362.780 | 307.270 | 20.280 | 217.790 | 347.320 | -33.060 | 1024.570 | 915.910 | 1611.330 | 1261.510 | 409.410 | -41.580 |
| Nominal Net Worth (\$1000), 2007 | 982.140 | 1594.180 | 388.200 | 700.340 | 1082.320 | 627.33 | 4010.820 | 2251.730 | 4542.550 | 2114.050 | 2124.560 | 1409.240 |
| Average Change, Real Net Worth (%), 2002-2007 | 9.572 | 6.453 | 3.434 | 7.033 | 7.255 | -0.604 | 5.403 | 11.057 | 7.993 | 9.381 | 7.106 | 0.226 |
| Probability of a Cash Flow Deficit (%) | | | | | | | | | | | | |
| 2002 | 1 | 99 | 1 | 1 | 1 | 95 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 3 | 39 | 59 | 12 | 38 | 74 | 15 | 1 | 23 | 23 | 3 | 51 |
| 2004 | 1 | 23 | 52 | 13 | 39 | 69 | 11 | 1 | 22 | 13 | 7 | 36 |
| 2005 | 15 | 31 | 63 | 15 | 43 | 72 | 24 | 2 | 25 | 21 | 21 | 59 |
| 2006 | 13 | 33 | 73 | 15 | 42 | 78 | 23 | 1 | 25 | 29 | 3 | 67 |
| 2007 | 14 | 41 | 73 | 16 | 41 | 61 | 54 | 1 | 24 | 39 | 2 | 92 |
| Probability of Decreasing Real Net Worth (%) | | | | | | | | | | | | |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 1 | 15 | 50 | 5 | 35 | 60 | 8 | 1 | 21 | 28 | 1 | 41 |
| 2004 | 1 | 3 | 36 | 6 | 17 | 61 | 1 | 1 | 8 | 8 | 1 | 23 |
| 2005 | 1 | 1 | 33 | 3 | 13 | 66 | 1 | 1 | 4 | 3 | 1 | 24 |
| 2006 | 1 | 1 | 37 | 2 | 8 | 65 | 1 | 1 | 2 | 1 | 1 | 22 |
| 2007 | 1 | 1 | 36 | 1 | 8 | 52 | 1 | 1 | 1 | 2 | 1 | 44 |

Table 7. Impact of 2002 Farm Bill on Southern Rice Farms.

| | TXR1553 | TXR3774 | TXBR1650 | TXER3200 | LASR1200 | LANR2500 | ARSR3640 | ARWR1200 | ARHR3000 | MSR4735 |
|--|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| Overall Financial Position, 2002-2007 | Poor | Poor | Poor | Poor | Poor | Poor | Marginal | Poor | Poor | Poor |
| Total Cash Receipts (\$1000), 2002-2007 Average | 355.155 | 864.322 | 436.196 | 1003.314 | 349.476 | 951.778 | 1213.983 | 483.039 | 1182.459 | 1699.853 |
| Government Payments (\$1000), 2002-2007 Average | 162.500 | 409.220 | 216.760 | 464.900 | 139.510 | 325.550 | 476.480 | 188.590 | 471.870 | 534.270 |
| Net Cash Farm Income (\$1000), 2002-2007 Average | 1.128 | 72.613 | -32.355 | 37.317 | 25.792 | -8.666 | 334.888 | 37.166 | 62.073 | 44.977 |
| Ending Cash Reserves (\$1000), 2007 | -361.100 | -324.05 | -518.210 | -391.530 | -184.780 | -908.27 | 513.790 | -495.870 | -763.45 | -962.940 |
| Nominal Net Worth (\$1000), 2007 | -4.160 | 257.750 | -88.950 | 375.250 | 70.800 | 1165.010 | 4359.640 | 982.360 | 2289.750 | 173.590 |
| Average Change, Real Net Worth (%), 2002-2007 | -16.880 | -8.446 | -19.860 | -7.455 | -12.062 | -5.358 | 3.293 | -4.066 | -1.794 | -14.165 |
| Probability of a Cash Flow Deficit (%) | | | | | | | | | | |
| 2002 | 99 | 99 | 99 | 99 | 33 | 99 | 1 | 99 | 87 | 90 |
| 2003 | 99 | 76 | 99 | 99 | 86 | 99 | 36 | 99 | 98 | 95 |
| 2004 | 99 | 74 | 99 | 98 | 90 | 99 | 16 | 99 | 98 | 95 |
| 2005 | 99 | 95 | 99 | 99 | 99 | 99 | 20 | 99 | 99 | 98 |
| 2006 | 99 | 95 | 99 | 99 | 99 | 99 | 25 | 99 | 99 | 98 |
| 2007 | 99 | 99 | 99 | 99 | 99 | 99 | 33 | 99 | 99 | 99 |
| Probability of Decreasing Real Net Worth (%) | | | | | | | | | | |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 99 | 67 | 93 | 67 | 86 | 96 | 11 | 90 | 58 | 92 |
| 2004 | 99 | 77 | 99 | 95 | 95 | 98 | 3 | 96 | 66 | 94 |
| 2005 | 99 | 86 | 99 | 97 | 99 | 99 | 2 | 99 | 87 | 98 |
| 2006 | 99 | 89 | 99 | 99 | 99 | 99 | 1 | 99 | 87 | 98 |
| 2007 | 99 | 92 | 99 | 99 | 99 | 99 | 1 | 99 | 94 | 98 |

Table 8. Impact of 2002 Farm Bill on Southern Dairy Farms, Hog Farms, and Cattle Ranches.

| | TXND2400 | TXCD500 | TXCD1300 | TXED330 | TXED750 | FLND500 | FLSD1800 | NCH350 | FLB1155 |
|--|----------|----------|----------|-----------|----------|----------|-----------|----------|-----------|
| Overall Financial Position, 2002-2007 | Poor | Poor | Good | Poor | Good | Good | Poor | Marginal | Good |
| Total Cash Receipts (\$1000), 2002-2007 Average | 6902.770 | 1367.332 | 4417.239 | 782.049 | 2247.281 | 1890.658 | 4422.495 | 688.835 | 471.094 |
| Government Payments (\$1000), 2002-2007 Average | 17.830 | 17.830 | 17.830 | 17.830 | 17.830 | 17.830 | 17.830 | 0.000 | 0.000 |
| Net Cash Farm Income (\$1000), 2002-2007 Average | 238.557 | -59.663 | 667.744 | -91.043 | 447.597 | 508.522 | -92.613 | 94.748 | 140.429 |
| Ending Cash Reserves (\$1000), 2007 | -714.080 | -892.820 | 1777.36 | -1047.460 | 1218.270 | 1336.700 | -2244.680 | -15.590 | 464.480 |
| Nominal Net Worth (\$1000), 2007 | 6827.480 | 785.880 | 5983.850 | 584.840 | 4327.060 | 3679.620 | 3568.080 | 801.650 | 11285.980 |
| Average Change, Real Net Worth (%), 2002-2007 | 0.543 | -6.967 | 6.755 | -8.038 | 7.783 | 11.537 | -2.623 | 5.663 | 2.973 |
| Probability of a Cash Flow Deficit (%) | | | | | | | | | |
| 2002 | 80 | 98 | 71 | 99 | 72 | 24 | 98 | 97 | 15 |
| 2003 | 74 | 99 | 51 | 99 | 62 | 25 | 99 | 97 | 10 |
| 2004 | 76 | 98 | 20 | 99 | 16 | 5 | 98 | 75 | 4 |
| 2005 | 77 | 98 | 22 | 99 | 14 | 5 | 96 | 57 | 6 |
| 2006 | 80 | 98 | 17 | 99 | 13 | 9 | 96 | 61 | 12 |
| 2007 | 73 | 98 | 20 | 99 | 16 | 13 | 99 | 65 | 22 |
| Probability of Decreasing Real Net Worth (%) | | | | | | | | | |
| 2002 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2003 | 54 | 73 | 21 | 72 | 15 | 5 | 55 | 38 | 3 |
| 2004 | 38 | 75 | 12 | 79 | 7 | 1 | 54 | 25 | 1 |
| 2005 | 35 | 81 | 3 | 88 | 1 | 1 | 57 | 19 | 1 |
| 2006 | 40 | 81 | 2 | 91 | 1 | 1 | 61 | 18 | 1 |
| 2007 | 42 | 87 | 2 | 95 | 1 | 1 | 64 | 17 | 1 |

