

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

James D. Sartwelle, III

Extension Economist
Department of Agricultural Economics
Texas A&M University
College Station, Texas 77843-2124

Kelly J. Tiller

Research Assistant Professor
Department of Agricultural Economics
University of Tennessee
Knoxville, Tennessee 37996-4519

James W. Richardson

Regents Professor and TAES Faculty Fellow
Department of Agricultural Economics
Texas A&M University
College Station, Texas 77843-2124

Joe L. Outlaw

Associate Professor and Extension Economist
Department of Agricultural Economics
Texas A&M University
College Station, Texas 77843-2124

David P. Anderson

Associate Professor and Extension Economist
Department of Agricultural Economics
Texas A&M University
College Station, Texas 77843-2124

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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

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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

