

Cotton Insect Losses - 2009

Compiled for
Cotton Foundation

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Chairman

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COTTON INSECT LOSSES 2009

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Background

This information was provided by state coordinators and was collected from surveys of county agents, extension specialists, private consultants and research entomologists. **All data are averaged over a total reporting unit.** For example, if a unit report represents 100 acres and an 8% loss on 25 of these acres, then in the table summary this shows up as a 2% loss. $((.08 \times 25)/100)$. This type of averaging is used for all data reported including yields and costs of control. Because of averaging and rounding some individual state summary numbers listed as `0' are slightly larger. Costs are averaged to the nearest cent, bales and acres to the nearest whole number, other numbers are rounded to the nearest .001. Bales are calculated at 480 pounds, and a cost of \$0.65 per pound of lint is used in figuring costs.

Highlights

Cotton losses to arthropod pests reduced overall yields by 2.58%. These losses reflect another low estimate, reflecting a trend which began in 2000. Thrips took top ranking at 0.713% loss. . No pest exceeded 1% loss. Lygus were ranked second at 0.614%. The bollworm/budworm complex (0.486%) were third. Stink bugs were 4th at 0.371%; and fall armyworms were 5th at 0.113%. Total cost and loss for insects in 2009 were \$ 502 million. Direct management costs for arthropods were \$43.33 per acre.

Explanation of Tables

In an attempt at capturing as many of the costs of insect management as possible, the Cotton Insect Losses estimates have changed in the last few years. They were begun as a simple attempt to arrive at the `average cost of spraying insecticide` for control of cotton arthropod pests. We still attempt to arrive at the most accurate estimate possible for spray activities, but have also added some of the other costs which are incurred in cotton insect pest management. These `additional` costs increase the bottom line of expenditures for arthropod pest management - but also more accurately reflect true expenditures. We include `at planting insecticide costs`, (an estimate of the cost of systemic insecticides applied at planting for control of thrips and other pests of seedling cotton) `Bt cotton costs`, (an estimate of the technology fee and the seed surcharge) `eradication costs` (which include the maintenance fee in those states which have eradicated the weevil and other eradication projects) and `scouting costs` to the traditional `foliar insecticide costs`. Bales lost are also given a dollar value using 480 pound bales at \$0.65 per pound. Remember these are estimates and may not totally reflect an individual farm or area, but they do reflect trends and serve as a general comparison.

Key to Tables

Table 1	USDA yield estimates	Table 17	Mississippi Summary
Table 1a	USDA/NASS planting and harvest acres	Table 17a	Mississippi Delta
Table 2	At planting insecticide applications	Table 17b	Mississippi Hills
Table 3	Cotton insect eradication costs	Table 18	Missouri Summary
Table 4	<i>Bt</i> cotton costs by state	Table 19	New Mexico summary
Table 5	Types of cotton	Table 20	North Carolina Summary
Table 6	Cotton insect monitoring costs	Table 21	Oklahoma Summary
Table 7	Application Technology	Table 22	South Carolina Summary
Table 8	Summary of All States	Table 23	Tennessee Summary
Table 9	Alabama Summary	Table 24	Texas Summary
Table 9a	North Alabama	Table 24a	Texas Southern Plains
Table 9b	South Alabama	Table 24b	Texas Coastal Bend
Table 10	Arizona Summary	Table 24c	Texas Rolling Plains
Table 11	Arkansas Summary	Table 24d	Texas Wintergarden
Table 11a	Northeast Arkansas	Table 24e	Texas Blackland
Table 11b	Southeast Arkansas	Table 24f	Texas Permian Basin
Table 12	California Summary	Table 24g	Texas Trans-Pecos
Table 13	Florida Summary	Table 24h	Texas Panhandle
Table 14	Georgia Summary	Table 24i	Texas Lower Rio Grande
Table 15	Kansas Summary	Table 25	Virginia Summary
Table 16	Louisiana Summary		

Table 1

USDA Cotton Production

Cotton Insect Losses -2009

States	Upland cotton		Cotton Yield in Pounds per Acre			
	Acres Planted	Acres Harvested	Est. Yield*	December	January	2008
Alabama	255,000	250,000	548	710	691	836
Arizona	145,000	144,000	1,470	1450	1467	1,444
Arkansas	520,000	500,000	893	893	797	1,022
California	71,000	70,000	1,371	1495	1714	1,518
Florida	82,000	78,000	691	741	646	901
Georgia	1,000,000	990,000	900	873	882	840
Kansas	38,000	34,000	650	615	720	686
Louisiana	230,000	225,000	794	768	725	560
Mississippi	305,000	295,000	758	842	692	920
Missouri	272,000	260,000	949	949	960	1,061
New Mexico	30,500	29,000	1,402	1029	828	988
North Carolina	375,000	370,000	810	921	986	864
Oklahoma	205,000	200,000	830	825	792	805
South Carolina	115,000	114,000	750	737	842	896
Tennessee	300,000	280,000	860	926	857	917
Texas	5,000,000	3,650,000	635	636	644	649
Virginia	64,000	63,000	950	938	990	896
Total US	9,007,500	7,552,000	766	767	763	799
<u>Pima</u>						
Arizona	1,700	1,700		997	1129	960
California	119,000	116,000		1247	1448	1,319
New Mexico	3,000	3,000		789	688	1,108
Texas	18,000	17,800		931	863	768
Total US	141,700	138,500		1205	1352	1,265
TOTAL US	9,149,200	7,690,500		837	774	810

Table 1a

USDA Cotton Production

Cotton Insect Losses -2009

	Acres Planted			Acres harvested		
Upland	2007	2008	2009	2007	2008	2009
Alabama	400,000	290,000	255,000	390,000	285,000	250,000
Arizona	183,000	130,000	145,000	181,000	128,000	144,000
Arkansas	860,000	650,000	520,000	850,000	640,000	500,000
California	455,000	120,000	71,000	451,000	117,000	70,000
Florida	84,000	67,000	82,000	82,000	65,000	78,000
Georgia	1,040,000	950,000	1,000,000	1,010,000	940,000	990,000
Kansas	50,000	35,000	38,000	45,000	28,000	34,000
Louisiana	330,000	290,000	230,000	325,000	260,000	225,000
Mississippi	660,000	365,000	305,000	655,000	360,000	295,000
Missouri	390,000	310,000	272,000	389,000	307,000	260,000
New Mexico	55,000	37,000	30,500	49,000	34,000	29,000
North Carolina	500,000	440,000	375,000	495,000	438,000	370,000
Oklahoma	175,000	170,000	205,000	165,000	155,000	200,000
South Carolina	180,000	135,000	115,000	178,000	134,000	114,000
Tennessee	500,000	285,000	300,000	495,000	280,000	280,000
Texas	4,925,000	4,900,000	5,000,000	4,724,000	3,350,000	3,650,000
Virginia	60,000	65,000	64,000	59,000	64,000	63,000
Total US	10,847,000	9,239,000	9,007,500	10,543,000	7,585,000	7,552,000
Pima						
Arizona	2,500	1,000	1,700	2,500	1,000	1,700
California	260,000	155,000	119,000	257,000	151,000	116,000
New Mexico	4,800	3,000	3,000	4,700	3,000	3,000
Texas	25,000	16,000	18,000	24,000	15,000	17,800
Total US	292,300	175,000	141,700	288,200	170,000	138,500
All US Cotton	11,139,300	9,414,000	9,149,200	10,831,200	7,755,000	7,690,500

Table 2	At Planting Applications		Cotton Insect Losses - 2009	
States	Acres treated	Weighted Cost all acres	Cost/ treated acre	Total Cost
North Alabama	51,570	\$11.31	\$13.31	\$686,390
South Alabama	180,860	\$12.64	\$13.31	\$2,407,247
Arizona	4,408	\$0.62	\$20.83	\$91,819
Southeast Arkansas	154,700	\$9.35	\$11.00	\$1,701,700
Northeast Arkansas	287300	\$9.35	\$11.00	\$3,160,300
California	47,516	\$2.00	\$8.00	\$380,130
Florida	87,900	\$16.30	\$16.30	\$1,432,770
Georgia	891,000	\$9.00	\$10.00	\$8,910,000
Kansas	0	\$0.00	\$0.00	\$0
Louisiana	193,800	\$10.63	\$12.50	\$2,422,500
Mississippi - Delta	198,035	\$8.55	\$9.00	\$1,782,316
Mississippi - Hills	80,855	\$8.28	\$9.00	\$727,696
Missouri	178,750	\$14.30	\$22.00	\$3,932,500
New Mexico	15,922	\$7.05	\$15.00	\$238,833
North Carolina	361,000	\$13.50	\$13.50	\$4,873,500
Oklahoma	123,500	\$9.75	\$15.00	\$1,852,500
South Carolina	115,000	\$15.00	\$15.00	\$1,725,000
Tennessee	297,000	\$8.71	\$8.80	\$2,613,600
Texas Southern Plains	630,310	\$3.90	\$13.00	\$8,194,035
Texas Coastal Bend	114,443	\$6.66	\$9.00	\$1,029,989
Texas Rolling Plains	667,175	\$7.65	\$9.00	\$6,004,574
Texas Winter Garden	16,815	\$10.78	\$11.00	\$184,968
Texas Blacklands	102,833	\$8.50	\$8.50	\$874,081
Texas Permian Basin	7,679	\$0.22	\$11.00	\$84,467
Texas Trans-Pecos	3,259	\$1.10	\$11.00	\$35,853
Texas Panhandle	130,618	\$8.00	\$10.00	\$1,306,176
Texas Lower Rio Grande	22,788	\$4.50	\$9.00	\$205,096
Virginia	65,000	\$12.50	\$12.50	\$812,500
All States	5,030,037	\$7.33	\$11.47	\$57,670,537

States	Cotton Insect Eradication		Cotton Insect Losses - 2009	
	Acres	Cost/ Treated Acre	Cost/ All acres	Total Cost
North Alabama	60,670	\$2.50	\$2.50	\$151,675
South Alabama	190,379	\$3.50	\$3.50	\$666,327
Arizona	147,057	\$2.09	\$2.09	\$307,349
Southeast Arkansas	182,000	\$12.00	\$12.00	\$2,184,000
Northeast Arkansas	338,000	\$13.00	\$13.00	\$4,394,000
California	0	\$0.00	\$0.00	\$0
Florida	87,900	\$1.50	\$1.50	\$131,850
Georgia	990,000	\$2.00	\$2.00	\$1,980,000
Kansas	0	\$0.00	\$0.00	\$0
Louisiana	193,800	\$6.00	\$5.10	\$1,162,800
Mississippi - Delta	208,458	\$3.00	\$3.00	\$625,374
Mississippi - Hills	87,886	\$3.00	\$3.00	\$263,658
Missouri	275,000	\$5.00	\$5.00	\$1,375,000
New Mexico	33,877	\$5.95	\$5.95	\$201,568
North Carolina	361,000	\$1.25	\$1.25	\$451,250
Oklahoma	0	\$0.00	\$0.00	\$0
South Carolina	115,000	\$1.25	\$1.25	\$143,750
Tennessee	300,000	\$5.00	\$5.00	\$1,500,000
Texas Southern Plains	2,101,035	\$2.50	\$2.50	\$5,252,586
Texas Coastal Bend	154,653	\$22.41	\$22.41	\$3,465,774
Texas Rolling Plains	784,912	\$4.50	\$4.50	\$3,532,102
Texas Winter Garden	17,158	\$13.25	\$13.25	\$227,349
Texas Blacklands	102,833	\$13.25	\$13.25	\$1,362,537
Texas Permian Basin	383,940	\$7.00	\$7.00	\$2,687,577
Texas Trans-Pecos	32,593	\$10.00	\$10.00	\$325,934
Texas Panhandle	163,272	\$7.22	\$7.22	\$1,178,824
Texas Lower Rio Grande	45,577	\$17.16	\$17.16	\$782,098
Virginia	65,000	\$2.50	\$2.50	\$162,500
All States - Boll Weevil	7,422,000	\$4.65	\$4.39	\$34,515,881
Arizona Pink Bollworm	147,057	\$8.58	\$8.58	\$1,261,749
California Pink Bollworm	190,065	\$2.00	\$2.00	\$380,130
New Mexico Pink Bollworm	9,689	\$6.98	\$2.00	\$67,628
West Texas Pink Bollworm	32,594	\$10.00	\$0.09	\$325,934
Total US - Pink Bollworm	379,405	\$5.36	\$0.26	\$2,035,441
Total US – Insect Eradication*	7,801,405	\$4.69	\$4.64	\$36,551,322

Table 4

Bt Cotton Costs

Cotton Insect losses - 2009

States	Acres	Bt cost/ Acre	Average All Acres	Total Cost	% Pop Bollworm	Acres Bt sprayed	Average # Apps To Bt
North Alabama	60,670	\$16.18	\$16.18	\$981,824	80.0%	60,367	2.34
South Alabama	161,822	\$25.42	\$21.61	\$4,114,090	97.0%	125,650	1.95
Arizona	144,043	\$34.02	\$33.33	\$4,901,024	0.0%	0	0.00
Southeast Arkansas	172,900	\$32.17	\$30.56	\$5,562,487	94.8%	127,218	1.64
Northeast Arkansas	321,100	\$29.32	\$27.85	\$9,413,424	99.4%	57,561	1.29
California	6,395	\$0.00	\$0.00	\$0	0.0%	0	0.00
Florida	83,505	\$25.14	\$23.88	\$2,099,420	94.9%	35,806	1.00
Georgia	963,171	\$18.06	\$17.57	\$17,397,306	47.4%	424,860	1.10
Kansas	14,000	\$35.00	\$14.00	\$489,976	0.0%	420	1.00
Louisiana	212,724	\$29.24	\$27.28	\$6,219,447	98.1%	196,535	1.99
Mississippi - Delta	204,289	\$30.38	\$29.78	\$6,206,837	98.8%	147,276	1.68
Mississippi - Hills	82,613	\$30.36	\$28.53	\$2,507,759	98.1%	11,601	0.73
Missouri	246,125	\$32.56	\$29.14	\$8,013,830	90.2%	86,745	1.00
New Mexico	30,151	\$19.25	\$17.13	\$580,329	100.0%	0	0.05
North Carolina	353,780	\$24.98	\$24.49	\$8,839,085	98.2%	4,812	0.80
Oklahoma	190,000	\$34.03	\$34.03	\$6,464,913	96.3%	2,926	1.97
South Carolina	113,735	\$24.74	\$24.47	\$2,814,277	92.4%	46,791	1.82
Tennessee	294,000	\$11.86	\$11.62	\$3,486,000	98.0%	34,200	1.00
Texas Southern Plains	869,828	\$16.35	\$6.77	\$14,219,676	100.0%	0	0.00
Texas Coastal Bend	120,629	\$9.09	\$7.09	\$1,096,923	98.9%	1,176	1.00
Texas Rolling Plains	698,571	\$10.79	\$9.60	\$7,538,291	17.9%	511	1.00
Texas Winter Garden	16,987	\$9.21	\$9.11	\$156,389	100.0%	429	1.00
Texas Blacklands	100,776	\$16.27	\$15.94	\$1,639,177	99.7%	3,023	1.00
Texas Permian Basin	249,561	\$15.21	\$9.89	\$3,796,586	100.0%	0	0.00
Texas Trans-Pecos	14,993	\$15.82	\$7.28	\$237,213	100.0%	0	0.00
Texas Panhandle	16,327	\$20.96	\$2.10	\$342,218	100.0%	0	0.00
Texas Lower Rio Grande	35,550	\$9.09	\$7.09	\$323,267	98.9%	347	1.00
Virginia	63,700	\$17.14	\$16.80	\$1,092,000	100.0%	0	0.00
All States	5,841,945	\$20.63	\$15.31	\$120,533,766	79.2%	1,368,256	0.75

Table 5

Cotton Types

Cotton Insect Losses - 2009

	Acres of cotton which are						
	Bollgard	Bollgard II	WideStrike	Herbicides GM only	Non-GM conventional	Organic	Pima
US	1,643,217	3,625,261	583,255	1,618,991	201,383	10,524	147,963
Alabama	144,793	63,024	14,373	1,904	26,956	0	0
Arizona	10,083	129,638	4,321	1,567	1,447	0	1,596
Arkansas	111,769	341,380	46,332	18,699	1,823	5	0
California	0	0	0	0	0	950	127,344
Florida	70,320	12,306	879	4,395	0	0	0
Georgia	821,997	89,298	51,876	23,760	2,970	0	0
Kansas	0	14,000	0	21,000	0	0	0
Louisiana	83,015	107,821	23,023	14,136	0	0	0
Mississippi	44,677	198,652	40,057	6,479	6,479	0	0
Missouri	1,375	243,375	16,500	5,500	1,375	0	0
New Mexico	1,457	17,514	11,315	0	3,794	576	1,423
North Carolina	72,200	212,990	68,590	6,498	542	0	0
Oklahoma	28,500	150,100	9,500	0	0	1,900	0
South Carolina	42,677	64,711	6,371	1,208	0	0	0
Tennessee	54,000	120,000	120,000	6,000	0	0	0
Texas	153,755	1,831,851	137,617	1,506,545	149,117	7,088	17,600
Virginia	2,600	28,600	32,500	1,300	0	0	0

Table 6

	Application Technology			Cotton Insect losses -2009			# Acres
	Applications by air			Applications by ground			
	% Acres	Cost/Ac	# apps	% Acres	Cost/Ac	# apps	
NO apps							
North Alabama	35%	\$4.10	0.3	65%	\$3.60	2.00	0
South Alabama	15%	\$0.00	0.0	85%	\$0.00	0.00	95,190
Arizona	64%	\$8.26	1.3	39%	\$7.38	1.70	34,902
Southeast Arkansas	95%	\$6.00	4.5	30%	\$4.50	1.00	0
Northeast Arkansas	85%	\$6.00	2.5	90%	\$4.50	2.00	0
California	9%	\$12.00	1.0	70%	\$8.00	1.00	0
Florida	60%	\$6.50	2.0	100%	\$3.00	3.50	0
Georgia	30%	\$6.00	2.0	80%	\$4.00	2.00	198,000
Kansas	5%	\$8.00	1.0	50%	\$6.00	1.00	7,000
Louisiana	90%	\$0.00	4.5	60%	\$4.50	2.00	0
Mississippi - Delta	80%	\$5.50	7.0	20%	\$4.00	2.00	0
Mississippi - Hills	10%	\$7.00	1.0	90%	\$4.00	3.00	6,152
Missouri	42%	\$11.30	1.0	83%	\$8.10	1.00	3,850
New Mexico	71%	\$9.97	1.2	8%	\$8.60	1.00	2,710
North Carolina	10%	\$7.00	1.0	100%	\$4.00	1.80	0
Oklahoma	42%	\$4.25	0.0	10%	\$0.00	0.00	66,500
South Carolina	10%	\$6.00	1.0	95%	\$4.50	3.00	1,150
Tennessee	30%	\$0.00	1.0	100%	\$0.00	2.50	9,000
Texas Southern Plains	8%	\$5.60	1.0	10%	\$4.40	1.00	1,512,745
Texas Coastal Bend	15%	\$4.50	0.4	85%	\$2.50	1.90	10,826
Texas Rolling Plains	1%	\$5.50	1.0	5%	\$5.00	1.00	745,666
Texas Winter Garden	92%	\$6.00	1.0	8%	\$3.00	1.20	515
Texas Blacklands	27%	\$5.00	0.5	73%	\$3.00	1.90	1,028
Texas Permian Basin	2%	\$4.50	1.0	5%	\$4.00	1.00	364,743
Texas Trans-Pecos	3%	\$5.00	1.0	12%	\$5.50	1.00	9,778
Texas Panhandle	20%	\$5.85	1.0	60%	\$4.25	1.50	40,818
Texas Lower Rio Grande	30%	\$4.60	0.4	70%	\$2.50	1.90	0
Virginia	0%	\$0.00	0.0	100%	\$5.00	2.50	0
All States	29%	\$5.64	2.3	45%	\$4.07	1.84	3,110,572

State	Acres	Time per	Wt Avg cost	Cost per Scouted	Total Cost
	Scouted	Week	All Acres	Acre	
North Alabama	54,603	1.00	\$5.85	\$6.50	\$354,920
South Alabama	114,227	1.00	\$3.90	\$6.50	\$742,478
Arizona	147,735	1.95	\$9.86	\$9.81	\$1,449,280
Southeast Arkansas	180,180	1.70	\$8.91	\$9.00	\$1,621,620
Northeast Arkansas	331,240	1.50	\$7.35	\$7.50	\$2,484,300
California	180,562	1.50	\$1.90	\$2.00	\$361,124
Florida	70,320	1.25	\$5.60	\$7.00	\$492,240
Georgia	693,000	1.10	\$5.60	\$8.00	\$5,544,000
Kansas	17,500	1.00	\$4.00	\$8.00	\$140,000
Louisiana	205,200	1.50	\$8.33	\$9.25	\$1,898,100
Mississippi - Delta	204,289	2.00	\$6.86	\$7.00	\$1,430,022
Mississippi - Hills	70,309	1.50	\$5.60	\$7.00	\$492,162
Missouri	266,750	0.00	\$7.76	\$8.00	\$2,134,000
New Mexico	22,698	1.00	\$4.02	\$6.00	\$136,186
North Carolina	361,000	1.00	\$8.00	\$8.00	\$2,888,000
Oklahoma	28,500	1.00	\$1.13	\$7.50	\$213,750
South Carolina	80,500	1.00	\$5.60	\$8.00	\$644,000
Tennessee	225,000	1.30	\$6.30	\$8.40	\$1,890,000
Texas Southern Plains	1,218,600	1.20	\$3.48	\$6.00	\$7,311,600
Texas Coastal Bend	108,257	0.00	\$6.30	\$9.00	\$974,314
Texas Rolling Plains	15,698	1.00	\$0.11	\$5.50	\$86,340
Texas Winter Garden	16,644	1.00	\$8.97	\$9.25	\$153,954
Texas Blacklands	51,417	0.00	\$2.50	\$5.00	\$257,083
Texas Permian Basin	7,679	1.00	\$0.06	\$3.00	\$23,036
Texas Trans-Pecos	16,297	1.00	\$3.00	\$6.00	\$97,780
Texas Panhandle	122,454	1.00	\$4.50	\$6.00	\$734,724
Texas Lower Rio Grande	25,067	1.50	\$3.30	\$6.00	\$150,403
Virginia	2,600	1.00	\$0.30	\$7.50	\$19,500
All States	4,838,325	1.13	\$4.41	\$7.18	\$34,724,915

Table 8

Pest	Summary All States				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	116,247	27,902	2.49	0.009	\$0.00	0.002%	400
Bollworm/Budworm	4,376,640	2,564,259	0.98	0.319	\$1.69	0.486%	91,119
Pink Bollworm	81,211	52,528	0.00	0.000	\$0.00	0.000%	0
Cotton Fleahopper	1,490,760	623,733	1.00	0.079	\$0.47	0.093%	15,598
Lygus	4,209,086	2,973,382	1.53	0.577	\$2.98	0.614%	126,871
Cotton Leaf Perforator	2,585	151	1.00	0.000	\$0.00	0.000%	1
Spider Mites	2,022,705	773,958	0.62	0.061	\$0.67	0.099%	21,673
Thrips	7,437,609	4,459,190	0.71	0.402	\$1.44	0.713%	138,207
Beet Armyworm	703,067	330,835	0.05	0.002	\$0.00	0.004%	643
Fall Armyworm	1,835,299	1,047,700	0.74	0.099	\$0.72	0.113%	20,238
European Cornborer	655	0	0.00	0.000	\$0.00	0.000%	0
Stink Bugs	3,265,604	2,051,345	1.48	0.386	\$2.57	0.371%	79,327
Grasshoppers	1,128,763	133,086	0.21	0.004	\$0.01	0.001%	266
Saltmarsh Caterpillars	487,934	126,062	0.00	0.000	\$0.00	0.000%	0
Aphids	3,851,114	1,208,582	0.40	0.061	\$0.24	0.030%	6,456
Banded Winged Whitefly	524,519	212,790	0.01	0.000	\$0.00	0.001%	249
Silverleaf Whitefly (Bemesia)	289,731	109,454	1.00	0.014	\$0.34	0.008%	2,245
Loopers	808,131	309,849	0.12	0.005	\$0.01	0.000%	12
Southern Armyworms	68,798	19,038	1.00	0.002	\$0.01	0.000%	0
Cutworms	386,007	504,678	1.00	0.064	\$0.25	0.001%	200
Clouded Plant bugs	452,752	132,363	1.14	0.019	\$0.15	0.038%	8,300
Other Insects	62,193	50,666	1.27	0.008	\$0.09	0.003%	668
			2.111		\$11.63	2.58%	512,472

Yield & Management Results

Total Acres	7,871,264
Total bales Harvested	12,560,769
Yield (lbs/acre)	766
Total bales Lost to Insects	512,472
Percent Yield Loss	2.579%
Yield w/o Insects (lbs/acre)	786
Ave. # Spray Applications	2.111
Yield loss to all factors	6,391,502
% Yield loss to all factors	33.56%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$91,556,134	\$11.63
At Planting Costs	\$57,670,537	\$7.33
Scouting costs	\$34,724,915	\$4.41
Eradication costs	\$36,551,322	\$4.64
Transgenic cotton	\$120,548,747	\$15.32
Total Costs	\$341,051,656	\$43.33
Yield Lost to insects	\$160,522,186	\$20.39
Total Losses + Costs	\$501,573,842	\$63.72

Eradication – PBW \$0.26 BW \$4.30

Table 9

Pest	acres infested	acres treated	Alabama Summary		cost/ acre	Cotton Insect Losses - 2009	
			#apps/ acre trtd	#apps/ tot acres		%red	Bales lost
Boll Weevil	0	0	0	0	\$0.00	0.00%	0
Bollworm/Budworm	251,049	202,513	1.5	1.19	\$5.79	1.88%	10,039
Pink Bollworm	0	0	0	0	\$0.00	0.00%	0
Cotton Fleahopper	3,034	0	0	0	\$0.00	0.00%	0
Lygus	79,708	51,570	1.8	0.37	\$3.40	0.60%	3,228
Cotton Leaf Perforator	0	0	0	0	\$0.00	0.00%	0
Spider Mites	34,143	7,448	1.5	0.04	\$0.58	0.01%	65
Thrips	251,049	205,547	1	0.83	\$3.41	0.12%	646
Beet Armyworm	4,414	1,904	1	0.01	\$0.11	0.00%	0
Fall Armyworm	158,370	134,479	1.5	0.8	\$11.96	0.73%	3,902
European Cornborer	0	0	0	0	\$0.00	0.00%	0
Stink Bugs	251,049	183,894	2.5	1.81	\$9.13	2.78%	14,825
Grasshoppers	20,251	9,701	1	0.04	\$0.19	0.00%	0
Saltmarsh Caterpillars	0	0	0	0	\$0.00	0.00%	0
Aphids	117,784	18,619	1	0.07	\$0.65	0.02%	129
Banded Winged Whitefly	1,904	0	0	0	\$0.00	0.00%	0
Silverleaf Whitefly (Bemisia)	2,510	0	0	0	\$0.00	0.00%	0
Loopers	19,038	9,519	1	0.04	\$0.46	0.00%	0
Southern Armyworms	38,076	19,038	1	0.08	\$0.46	0.00%	0
Cutworms	9,101	6,067	1	0.02	\$0.16	0.00%	19
Clouded Plant bugs	9,519	0	0	0	\$0.00	0.00%	0
Other	0	0	0	0	\$0.00	0.00%	0
				5.31	\$36.30	6.15%	32851

Yield & Management Results

Total Acres	251,049
Total bales Harvested	286,789
Yield (lbs/acre)	548
Total bales Lost to Insects	32,851
Percent Yield Loss	6.15%
Yield w/o Insects (lbs/acre)	584
Ave. # Spray Applications	5.3
Yield loss to all factors	247,429
% Yield loss to all factors	46.30%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$9,114,038	\$36.30
At Planting Costs	\$3,094,351	\$12.33
Scouting costs	\$355,034	\$1.41
Eradication costs	\$151,675	\$0.60
Transgenic cotton	\$5,097,955	\$20.31
Total Costs	\$17,813,053	\$70.95
Yield Lost to insects	\$10,173,448	\$40.52
Total Losses + Costs	\$27,986,500	\$111.48

Table 9a

		North Alabama			Cotton Insect Losses -2009		
Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	60,670	12,134	1.0	0.20	\$1.40	1.50%	1,901
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	3,034	0	0.0	0.00	\$0.00	0.00%	0
Lygus	60,670	51,570	1.8	1.53	\$14.08	2.50%	3,168
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	30,335	3,640	1.0	0.06	\$0.66	0.05%	63
Thrips	60,670	15,168	1.0	0.25	\$1.31	0.50%	634
Beet Armyworm	607	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	6,067	1,213	1.0	0.02	\$0.14	0.01%	13
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	60,670	3,034	1.0	0.05	\$0.36	0.50%	634
Grasshoppers	1,213	182	1.0	0.00	\$0.02	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	60,670	9,101	1.0	0.15	\$1.58	0.10%	127
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	607	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	9,101	6,067	1.0	0.10	\$0.65	0.02%	19
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				2.36	\$20.19	5.18%	6557

Yield & Management Results

Total Acres	60,670
Total bales Harvested	88,477
Yield (lbs/acre)	700
Total bales Lost to Insects	6,557
Percent Yield Loss	9.38%
Yield w/o Insects (lbs/acre)	738
Ave. # Spray Applications	5.307
Yield loss to all factors	86,887
% Yield loss to all factors	49.5%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$1,225,049	\$20.19
At Planting Costs	\$686,390	\$11.31
Scouting costs	\$354,920	\$5.85
Eradication costs	\$151,675	\$2.50
Transgenic cotton	\$981,824	\$16.18
Total Costs	\$3,399,857	\$56.04
Yield Lost to insects	\$1,982,951	\$32.68
Total Losses + Costs	\$5,382,808	\$88.72

Table 9b

Pest	South Alabama			Cotton Insect Losses -2009			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	190,379	190,379	1.5	1.50	\$7.13	2.00%	8,171
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	19,038	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	3,808	3,808	2.0	0.04	\$0.60	0.00%	0
Thrips	190,379	190,379	1.1	1.10	\$4.40	0.00%	0
Beet Armyworm	3,808	1,904	1.0	0.01	\$0.15	0.00%	0
Fall Armyworm	152,303	133,265	1.5	1.05	\$15.75	0.96%	3,922
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	190,379	180,860	2.5	2.38	\$11.88	3.50%	14,299
Grasshoppers	19,038	9,519	1.0	0.05	\$0.25	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	57,114	9,519	1.0	0.05	\$0.35	0.00%	0
Banded Winged Whitefly	1,904	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	1,904	0	0.0	0.00	\$0.00	0.00%	0
Loopers	19,038	9,519	1.0	0.05	\$0.60	0.00%	0
Southern Armyworms	38,076	19,038	1.0	0.10	\$0.60	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	9,519	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				6.33	\$41.70	6.46%	26393

Yield & Management Results

Total Acres	190,379
Total bales Harvested	198,311
Yield (lbs/acre)	500
Total bales Lost to Insects	26,393
Percent Yield Loss	6.46%
Yield w/o Insects (lbs/acre)	535
Ave. # Spray Applications	6.325
Yield loss to all factors	210,241
% Yield loss to all factors	51.5%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$7,938,804	\$41.70
At Planting Costs	\$2,407,247	\$12.64
Scouting costs	\$742,478	\$3.90
Eradication costs	\$666,327	\$3.50
Transgenic cotton	\$4,114,090	\$21.61
Total Costs	\$15,868,946	\$83.35
Yield Lost to insects	\$8,234,460	\$43.25
Total Losses + Costs	\$24,103,407	\$126.61

Table 10

Table 10			Arizona Summary		Cotton Insect losses -2009		
Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	20,350	0	0.0	0.00	\$0.00	0.00%	2
Pink Bollworm	241	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	68,418	3,097	0.8	0.02	\$0.20	0.04%	218
Lygus	129,224	91,527	1.5	0.93	\$20.01	1.95%	10,396
Cotton Leaf Perforator	1,029	151	1.0	0.00	\$0.02	0.00%	1
Spider Mites	95,095	15,308	0.8	0.08	\$2.45	0.35%	1,854
Thrips	147,057	4,854	1.0	0.03	\$0.35	0.07%	354
Beet Armyworm	23,195	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	5,391	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	58,371	8,603	1.0	0.06	\$1.00	0.49%	2,583
Grasshoppers	12,903	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	9,453	0	0.0	0.00	\$0.00	0.00%	0
Aphids	19,407	807	1.0	0.01	\$0.10	0.01%	60
Banded Winged Whitefly	33,561	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	116,231	74,432	1.0	0.51	\$13.66	0.40%	2,122
Loopers	12,723	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	2,881	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Mealybug	720	144	2.0	0.00	\$0.02	0.00%	1
				1.64	\$37.80	3.31%	17,591

Yield & Management Results

Total Acres	147,057
Total bales Harvested	450,362
Yield (lbs/acre)	1470
Total bales Lost to Insects	17,591
Percent Yield Loss	3.31%
Yield w/o Insects (lbs/acre)	1,520
Ave. # Spray Applications	1.639
Yield loss to all factors	78,026
% Yield loss to all factors	14.7%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$5,558,889	\$37.80
At Planting Costs	\$91,819	\$0.62
Scouting costs	\$1,449,280	\$9.86
Eradication costs	\$1,569,098	\$10.67
Transgenic cotton	\$4,901,024	\$33.33
Total Costs	\$13,570,109	\$92.28
Yield Lost to insects	\$5,625,809	\$38.26
Total Losses + Costs	\$19,195,919	\$130.53

Official Arizona losses may be seen on the Arizona WEB site <http://cals.arizona.edu/crops/cotton/insects/cil/cil.html>

Eradication includes PBW \$8.57 BW \$2.10

Table 11

Arkansas Summary

Cotton Insect Losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	520,000	230,807	1.6	0.71	\$4.26	0.27%	3,436
Pink Bollworm	0	1	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	172,900	0	0.0	0.00	\$0.00	0.00%	0
Lygus	520,000	469,300	3.2	2.88	\$20.18	2.79%	35,791
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	128,700	42,900	1.1	0.09	\$1.04	0.01%	171
Thrips	520,000	520,000	1.5	1.50	\$10.50	0.54%	6,924
Beet Armyworm	85,800	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	200,200	35,100	1.0	0.07	\$0.68	0.02%	247
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	468,000	22,360	0.9	0.04	\$0.26	0.04%	491
Grasshoppers	449,800	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	293,800	0	0.0	0.00	\$0.00	0.00%	0
Aphids	520,000	85,800	1.0	0.17	\$1.71	0.00%	0
Banded Winged Whitefly	102,700	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	287,300	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	94,900	4,550	1.0	0.01	\$0.03	0.00%	7
Clouded Plant bugs	71,240	33,800	1.0	0.07	\$0.46	0.01%	84
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				5.52	\$39.10	3.67%	47,151

Yield & Management Results

Total Acres	520,000
Total bales Harvested	967,417
Yield (lbs/acre)	893
Total bales Lost to Insects	47,151
Percent Yield Loss	3.67%
Yield w/o Insects (lbs/acre)	927
Ave. # Spray Applications	5.523
Yield loss to all factors	317,253
% Yield loss to all factors	24.7%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$20,331,849	\$39.10
At Planting Costs	\$4,862,000	\$9.35
Scouting costs	\$4,105,920	\$7.90
Eradication costs	\$6,578,000	\$12.65
Transgenic cotton	\$14,965,338	\$28.78
Total Costs	\$50,843,107	\$97.78
Yield Lost to insects	\$14,711,257	\$28.29
Total Losses + Costs	\$65,554,364	\$126.07

Table 11a

Northeast Arkansas

Cotton Insect Losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	338,000	58,271	1.3	0.22	\$1.34	0.25%	2,113
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	118,300	0	0.0	0.00	\$0.00	0.00%	0
Lygus	338,000	287,300	3.0	2.55	\$17.85	2.59%	21,886
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	101,400	33,800	1.0	0.10	\$1.20	0.02%	152
Thrips	338,000	338,000	1.5	1.50	\$10.50	0.56%	4,732
Beet Armyworm	67,600	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	118,300	16,900	1.0	0.05	\$0.50	0.02%	148
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	304,200	16,900	1.0	0.05	\$0.35	0.05%	456
Grasshoppers	304,200	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	202,800	0	0.0	0.00	\$0.00	0.00%	0
Aphids	338,000	67,600	1.0	0.20	\$2.20	0.00%	0
Banded Winged Whitefly	84,500	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	169,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	67,600	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	67,600	33,800	1.0	0.10	\$0.70	0.01%	85
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				4.77	\$34.64	3.50%	29,571

Yield & Management Results

Total Acres	338,000
Total bales Harvested	628,821
Yield (lbs/acre)	893
Total bales Lost to Insects	29,571
Percent Yield Loss	3.50%
Yield w/o Insects (lbs/acre)	925
Ave. # Spray Applications	4.774
Yield loss to all factors	202,800
% Yield loss to all factors	24.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$11,709,915	\$34.64
At Planting Costs	\$3,160,300	\$9.35
Scouting costs	\$2,484,300	\$7.35
Eradication costs	\$4,394,000	\$13.00
Transgenic cotton	\$9,413,414	\$27.85
Total Costs	\$31,161,930	\$92.20
Yield Lost to insects	\$9,226,152	\$27.30
Total Losses + Costs	\$40,388,081	\$119.49

Table 11b

Pest	Southeast Arkansas				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	182,000	172,536	1.7	1.61	\$9.67	0.30%	1,365
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	54,600	0	0.0	0.00	\$0.00	0.00%	0
Lygus	182,000	182,000	3.5	3.50	\$24.50	3.15%	14,333
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	27,300	9,100	1.3	0.06	\$0.75	0.00%	20
Thrips	182,000	182,000	1.5	1.50	\$10.50	0.50%	2,275
Beet Armyworm	18,200	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	81,900	18,200	1.0	0.10	\$1.00	0.02%	102
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	163,800	5,460	0.5	0.02	\$0.09	0.01%	41
Grasshoppers	145,600	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	91,000	0	0.0	0.00	\$0.00	0.00%	0
Aphids	182,000	18,200	1.0	0.10	\$0.80	0.00%	0
Banded Winged Whitefly	18,200	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	118,300	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	27,300	4,550	1.0	0.03	\$0.08	0.00%	7
Clouded Plant bugs	3,640	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				6.91	\$47.38	3.99%	18,143

Yield & Management Results

Total Acres	182,000
Total bales Harvested	338,596
Yield (lbs/acre)	893
Total bales Lost to Insects	18,143
Percent Yield Loss	3.99%
Yield w/o Insects (lbs/acre)	930
Ave. # Spray Applications	6.914
Yield loss to all factors	118,300
% Yield loss to all factors	26.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$8,623,997	\$47.38
At Planting Costs	\$1,701,700	\$9.35
Scouting costs	\$1,621,620	\$8.91
Eradication costs	\$2,184,000	\$12.00
Transgenic cotton	\$5,562,481	\$30.56
Total Costs	\$19,693,799	\$108.21
Yield Lost to insects	\$5,660,655	\$31.10
Total Losses + Costs	\$25,354,454	\$139.31

Table 12

Pest	California Summary			Cotton Insect Losses - 2009			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	1,901	0	0.0	0.00	\$0.00	0.00%	0
Pink Bollworm	5,702	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	180,562	57,020	1.0	0.30	\$5.40	0.95%	5,259
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	180,562	123,542	1.0	0.65	\$19.50	0.48%	2,629
Thrips	180,562	38,013	1.0	0.20	\$3.00	0.48%	2,629
Beet Armyworm	57,020	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	19	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	95,033	19,007	1.0	0.10	\$3.00	0.01%	28
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	76,026	19,007	1.0	0.10	\$2.50	0.02%	111
Loopers	1,901	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.35	\$33.40	1.93%	10656

Yield & Management Results

Total Acres	190,065
Total bales Harvested	542,873
Yield (lbs/acre)	1371
Total bales Lost to Insects	10,656
Percent Yield Loss	1.93%
Yield w/o Insects (lbs/acre)	1,398
Ave. # Spray Applications	1.350
Yield loss to all factors	10,672
% Yield loss to all factors	1.93%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$6,348,171	\$33.40
At Planting Costs	\$380,130	\$2.00
Scouting costs	\$361,124	\$1.90
Eradication costs	\$380,130	\$2.00
Transgenic cotton	\$0	\$0.00
Total Costs	\$7,469,555	\$39.30
Yield Lost to insects	\$3,836,070	\$20.18
Total Losses + Costs	\$11,305,625	\$59.48

Table 13

Pest	Florida Summary			Cotton Insect Losses - 2009			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	87,900	43,950	1.0	0.50	\$4.88	2.50%	4,849
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	1	0	0.0	0.00	\$0.00	0.00%	0
Lygus	61,530	52,740	1.5	0.90	\$8.33	0.00%	0
Cotton Leaf Perforator	1	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	1	0	0.0	0.00	\$0.00	0.00%	0
Thrips	87,900	35,160	1.0	0.40	\$2.30	0.10%	194
Beet Armyworm	4,395	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	79,110	35,160	2.0	0.80	\$10.62	1.35%	2,619
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	87,900	79,110	1.8	1.58	\$13.64	4.00%	7,759
Grasshoppers	17,580	8,790	1.0	0.10	\$0.80	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	87,900	21,975	1.0	0.25	\$2.48	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	1	0	0.0	0.00	\$0.00	0.00%	0
Loopers	70,320	4,395	1.0	0.05	\$0.62	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	35,160	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				4.58	\$43.66	7.95%	15,421

Yield & Management Results

Total Acres	87,900
Total bales Harvested	126,588
Yield (lbs/acre)	691
Total bales Lost to Insects	15,421
Percent Yield Loss	7.95%
Yield w/o Insects (lbs/acre)	751
Ave. # Spray Applications	4.575
Yield loss to all factors	93,396
% Yield loss to all factors	48.2%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$3,838,022	\$43.66
At Planting Costs	\$1,432,770	\$16.30
Scouting costs	\$492,240	\$5.60
Eradication costs	\$131,850	\$1.50
Transgenic cotton	\$2,099,420	\$23.88
Total Costs	\$7,994,302	\$90.95
Yield Lost to insects	\$4,811,201	\$54.73
Total Losses + Costs	\$12,805,503	\$145.68

Table 14

Pest	Georgia Summary			Cotton Insect losses - 2009			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	891,000	544,500	1.4	0.77	\$5.78	1.80%	37,125
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	148,500	9,900	1.0	0.01	\$0.07	0.02%	309
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	198,000	9,900	1.0	0.01	\$0.10	0.00%	0
Thrips	891,000	99,000	1.0	0.10	\$0.60	0.01%	186
Beet Armyworm	29,700	9,900	1.0	0.01	\$0.09	0.03%	619
Fall Armyworm	594,000	346,500	1.2	0.42	\$4.62	0.30%	6,188
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	792,000	742,500	2.2	1.65	\$12.38	0.80%	16,500
Grasshoppers	9,900	1,980	1.0	0.00	\$0.02	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	792,000	39,600	1.0	0.04	\$0.32	0.08%	1,650
Banded Winged Whitefly	19,800	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	49,500	9,900	1.0	0.01	\$0.10	0.00%	0
Loopers	9,900	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	9,900	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				3.02	\$24.06	3.03%	62,576

Yield & Management Results

Total Acres	990,000
Total bales Harvested	1,856,250
Yield (lbs/acre)	900
Total bales Lost to Insects	62,576
Percent Yield Loss	3.03%
Yield w/o Insects (lbs/acre)	928
Ave. # Spray Applications	3.022
Yield loss to all factors	206,271
% Yield loss to all factors	10.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$23,819,400	\$24.06
At Planting Costs	\$8,910,000	\$9.00
Scouting costs	\$5,544,000	\$5.60
Eradication costs	\$1,980,000	\$2.00
Transgenic cotton	\$17,397,306	\$17.57
Total Costs	\$57,650,706	\$58.23
Yield Lost to insects	\$19,523,790	\$19.72
Total Losses + Costs	\$77,174,496	\$77.95

Table 15

Pest	Kansas Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	5,250	3,500	1.0	0.10	\$1.20	0.15%	87
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	15,750	7,000	1.0	0.20	\$2.40	0.90%	521
Lygus	5,250	700	1.0	0.02	\$0.24	0.15%	87
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	0	0	0.0	0.00	\$0.00	0.00%	0
Thrips	17,500	12,250	1.0	0.35	\$1.93	2.00%	1,159
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	4	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	0	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.67	\$5.77	3.20%	1854

Yield & Management Results	
Total Acres	35,000
Total bales Harvested	47,396
Yield (lbs/acre)	650
Total bales Lost to Insects	1,854
Percent Yield Loss	3.20%
Yield w/o Insects (lbs/acre)	671
Ave. # Spray Applications	0.670
Yield loss to all factors	10,545
% Yield loss to all factors	18.2%

Economic Results		
	Total	Per Acre
Foliar Insecticides - costs	\$201,775	\$5.77
At Planting Costs	\$0	\$0.00
Scouting costs	\$140,000	\$4.00
Eradication costs	\$0	\$0.00
Transgenic cotton	\$489,974	\$14.00
Total Costs	\$831,749	\$23.76
Yield Lost to insects	\$578,484	\$16.53
Total Losses + Costs	\$1,410,233	\$40.29

Table 16

Louisiana Summary

Cotton Insect Losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	22,800	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	228,000	188,807	2.1	1.74	\$9.56	1.06%	6,558
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	2	0	0.0	0.00	\$0.00	0.00%	0
Lygus	216,600	182,400	3.8	3.00	\$29.25	2.14%	13,286
Cotton Leaf Perforator	2	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	91,200	57,000	0.0	0.00	\$0.00	0.10%	622
Thrips	223,440	159,600	1.0	0.70	\$1.93	0.49%	3,046
Beet Armyworm	11,400	2,280	1.0	0.01	\$0.08	0.00%	0
Fall Armyworm	45,600	22,800	0.0	0.00	\$0.00	0.02%	124
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	136,800	57,000	1.0	0.25	\$1.38	0.06%	373
Grasshoppers	342	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	228	0	0.0	0.00	\$0.00	0.00%	0
Aphids	159,600	86,640	1.0	0.38	\$2.76	0.32%	1,958
Banded Winged Whitefly	45,600	1,140	1.0	0.01	\$0.04	0.04%	249
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	45,600	22,800	1.0	0.10	\$0.80	0.00%	12
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	68,400	91,200	1.0	0.40	\$1.30	0.00%	19
Clouded Plant bugs	22,800	0	0.0	0.00	\$0.00	0.00%	6
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				7	\$47.08	4.22%	26252

Yield & Management Results

Total Acres	228,000
Total bales Harvested	377,150
Yield (lbs/acre)	794
Total bales Lost to Insects	26,252
Percent Yield Loss	4.22%
Yield w/o Insects (lbs/acre)	829
Ave. # Spray Applications	6.584
Yield loss to all factors	244,425
% Yield loss to all factors	39.3%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$10,735,288	\$47.08
At Planting Costs	\$2,422,500	\$10.63
Scouting costs	\$1,898,100	\$8.33
Eradication costs	\$1,162,800	\$5.10
Transgenic cotton	\$6,219,440	\$27.28
Total Costs	\$22,438,128	\$98.41
Yield Lost to insects	\$8,190,694	\$35.92
Total Losses + Costs	\$30,628,822	\$134.34

Table 17

Pest	Mississippi Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	193,132	153,075	1.4	0.75	\$7.45	1.00%	7,998
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	10,423	0	0.0	0.00	\$0.00	0.00%	0
Lygus	283,161	259,555	5.4	4.76	\$54.16	2.49%	19,996
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	108,623	74,718	1.1	0.28	\$3.87	0.82%	6,627
Thrips	281,077	65,297	1.0	0.22	\$1.54	0.24%	1,905
Beet Armyworm	5,927	879	1.0	0.00	\$0.04	0.00%	24
Fall Armyworm	10,975	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	141,018	40,057	1.0	0.14	\$1.35	1.01%	8,137
Grasshoppers	25,240	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	7,133	0	0.0	0.00	\$0.00	0.00%	0
Aphids	210,709	111,383	1.0	0.38	\$3.92	0.14%	1,143
Banded Winged Whitefly	4,006	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	879	0	0.0	0.00	\$0.00	0.00%	0
Loopers	20,846	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	4,721	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	10,096	169,018	1.0	0.57	\$3.42	0.00%	27
Clouded Plant bugs	34,029	8,563	1.0	0.03	\$0.32	0.23%	1,845
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				7.11	\$76.08	5.94%	47702

Yield & Management Results

Total Acres	296,344
Total bales Harvested	468,061
Yield (lbs/acre)	758
Total bales Lost to Insects	47,702
Percent Yield Loss	5.94%
Yield w/o Insects (lbs/acre)	806
Ave. # Spray Applications	7.114
Yield loss to all factors	335,481
% Yield loss to all factors	41.8%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$22,544,633	\$76.08
At Planting Costs	\$2,510,012	\$8.47
Scouting costs	\$1,922,183	\$6.49
Eradication costs	\$889,032	\$3.00
Transgenic cotton	\$8,714,664	\$29.41
Total Costs	\$36,580,524	\$123.44
Yield Lost to insects	\$14,883,157	\$50.22
Total Losses + Costs	\$51,463,681	\$173.66

Table 17a

Table 17a	Mississippi Delta					Cotton Insect Losses - 2009	
Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	166,766	135,498	1.5	0.98	\$9.75	1.20%	7,166
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	10,423	0	0.0	0.00	\$0.00	0.00%	0
Lygus	208,458	198,035	6.5	6.18	\$71.01	3.00%	17,914
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	104,229	72,960	1.1	0.39	\$5.39	1.13%	6,718
Thrips	206,373	52,115	1.0	0.25	\$1.75	0.25%	1,478
Beet Armyworm	4,169	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	8,338	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	114,652	31,269	1.0	0.15	\$1.50	1.16%	6,897
Grasshoppers	20,846	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	6,254	0	0.0	0.00	\$0.00	0.00%	0
Aphids	166,766	93,806	1.0	0.45	\$4.73	0.16%	955
Banded Winged Whitefly	3,127	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	20,846	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	2,085	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	8,338	125,075	1.0	0.60	\$3.60	0.00%	24
Clouded Plant bugs	20,846	4,169	1.0	0.02	\$0.22	0.20%	1,194
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				9.01	\$97.95	7.09%	42347

Yield & Management Results

Total Acres	208,458
Total bales Harvested	334,401
Yield (lbs/acre)	770
Total bales Lost to Insects	42,347
Percent Yield Loss	7.09%
Yield w/o Insects (lbs/acre)	829
Ave. # Spray Applications	9.005
Yield loss to all factors	262,744
% Yield loss to all factors	44.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$20,417,940	\$97.95
At Planting Costs	\$1,782,316	\$8.55
Scouting costs	\$1,430,022	\$6.86
Eradication costs	\$625,374	\$3.00
Transgenic cotton	\$6,206,837	\$29.77
Total Costs	\$30,462,489	\$146.13
Yield Lost to insects	\$13,212,127	\$63.38
Total Losses + Costs	\$43,674,615	\$209.51

Table 17b

Pest	Mississippi Hills				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	26,366	17,577	1.0	0.20	\$2.00	0.51%	1,049
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	74,703	61,520	2.0	1.40	\$15.40	1.28%	2,622
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	4,394	1,758	1.0	0.02	\$0.28	0.11%	231
Thrips	74,703	13,183	1.0	0.15	\$1.05	0.21%	437
Beet Armyworm	1,758	879	1.0	0.01	\$0.12	0.01%	21
Fall Armyworm	2,637	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	26,366	8,789	1.0	0.10	\$1.00	0.68%	1,388
Grasshoppers	4,394	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	879	0	0.0	0.00	\$0.00	0.00%	0
Aphids	43,943	17,577	1.0	0.20	\$2.00	0.10%	206
Banded Winged Whitefly	879	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	879	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	2,637	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	1,758	43,943	1.0	0.50	\$3.00	0.00%	4
Clouded Plant bugs	13,183	4,394	1.0	0.05	\$0.55	0.30%	617
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				2.63	\$25.40	3.20%	6574

Yield & Management Results

Total Acres	87,886
Total bales Harvested	133,660
Yield (lbs/acre)	730
Total bales Lost to Insects	6,574
Percent Yield Loss	3.20%
Yield w/o Insects (lbs/acre)	754
Ave. # Spray Applications	2.630
Yield loss to all factors	71,971
% Yield loss to all factors	35.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$2,232,304	\$25.40
At Planting Costs	\$727,696	\$8.28
Scouting costs	\$492,162	\$5.60
Eradication costs	\$263,658	\$3.00
Transgenic cotton	\$2,507,759	\$28.53
Total Costs	\$6,223,579	\$70.81
Yield Lost to insects	\$2,051,092	\$23.34
Total Losses + Costs	\$8,274,671	\$94.15

Table 18

Pest	Missouri Summary			Cotton Insect Losses - 2009			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	143,000	42,350	1.0	0.15	\$1.03	0.52%	3,411
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	204,050	204,050	1.2	0.89	\$5.64	3.71%	24,334
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	131,450	96,800	1.0	0.35	\$3.43	0.48%	3,135
Thrips	140,525	140,525	1.0	0.51	\$2.30	1.28%	8,379
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	70,125	9,350	1.0	0.03	\$0.37	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	22,000	11,825	1.0	0.04	\$0.22	0.12%	787
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	11,000	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	3,850	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	3,850	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.98	\$12.98	6.11%	40,045

Yield & Management Results

Total Acres	275,000
Total bales Harvested	543,698
Yield (lbs/acre)	949
Total bales Lost to Insects	40,045
Percent Yield Loss	6.11%
Yield w/o Insects (lbs/acre)	1,011
Ave. # Spray Applications	1.984
Yield loss to all factors	112,194
% Yield loss to all factors	17.1%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$3,570,576	\$12.98
At Planting Costs	\$3,932,500	\$14.30
Scouting costs	\$2,134,000	\$7.76
Eradication costs	\$1,375,000	\$5.00
Transgenic cotton	\$8,013,830	\$29.14
Total Costs	\$19,025,906	\$69.19
Yield Lost to insects	\$12,494,181	\$45.43
Total Losses + Costs	\$31,520,086	\$114.62

Table 19

Pest	New Mexico Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	2,812	1,592	1.0	0.05	\$0.89	0.02%	27
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	1,152	3,964	1.0	0.12	\$2.21	0.04%	44
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	0	0	0.0	0.00	\$0.00	0.00%	0
Thrips	0	0	0.0	0.00	\$0.00	0.00%	0
Beet Armyworm	34	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	5,420	813	1.0	0.02	\$0.45	0.13%	138
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	1,762	339	1.0	0.01	\$0.22	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	2,778	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.20	\$3.76	0.19%	208

Yield & Management Results

Total Acres	33,877
Total bales Harvested	98,921
Yield (lbs/acre)	1402
Total bales Lost to Insects	208
Percent Yield Loss	0.19%
Yield w/o Insects (lbs/acre)	1,404
Ave. # Spray Applications	0.198
Yield loss to all factors	8,713
% Yield loss to all factors	8.1%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$127,441	\$3.76
At Planting Costs	\$238,833	\$7.05
Scouting costs	\$136,186	\$4.02
Eradication costs	\$269,196	\$7.95
Transgenic cotton	\$580,328	\$17.13
Total Costs	\$1,351,984	\$39.91
Yield Lost to insects	\$65,048	\$1.92
Total Losses + Costs	\$1,417,032	\$41.83

Table 20

Pest	North Carolina Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	361,000	289,000	0.5	0.40	\$3.20	0.70%	4,411
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper		0	0.0	0.00	\$0.00	0.00%	0
Lygus	361,000	4,000	1.0	0.01	\$0.10	0.10%	630
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	361,000	35,000	1.0	0.10	\$1.16	0.05%	315
Thrips	361,000	361,000	0.8	0.80	\$4.80	0.50%	3,151
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	30,000	10,000	1.0	0.03	\$0.28	0.08%	524
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	361,000	289,000	0.5	0.40	\$3.20	1.80%	11,343
Grasshoppers	361,000	1,000	1.0	0.00	\$0.02	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	361,000	14,440	1.0	0.04	\$0.44	0.10%	630
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	15,000	15,000	1.0	0.04	\$0.15	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.82	\$13.35	3.33%	21005

Yield & Management Results

Total Acres	361,000
Total bales Harvested	609,188
Yield (lbs/acre)	810
Total bales Lost to Insects	21,005
Percent Yield Loss	3.33%
Yield w/o Insects (lbs/acre)	838
Ave. # Spray Applications	1.821
Yield loss to all factors	21,005
% Yield loss to all factors	3.3%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$4,820,640	\$13.35
At Planting Costs	\$4,873,500	\$13.50
Scouting costs	\$2,888,000	\$8.00
Eradication costs	\$451,250	\$1.25
Transgenic cotton	\$9,025,000	\$25.00
Total Costs	\$22,058,390	\$61.10
Yield Lost to insects	\$6,553,548	\$18.15
Total Losses + Costs	\$28,611,938	\$79.26

Table 21

Oklahoma Summary

Cotton Insect Losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	190,000	1,900	1.0	0.01	\$0.12	0.00%	0
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	104,500	104,500	1.1	0.61	\$6.05	2.75%	10,599
Lygus	2	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	2	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	2	0	0.0	0.00	\$0.00	0.00%	0
Thrips	190,000	190,000	1.0	1.00	\$10.00	5.00%	19,272
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	19	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	1,900	1,900	1.0	0.01	\$0.10	0.01%	39
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	2	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.63	\$16.27	7.76%	29910

Yield & Management Results

Total Acres	190,000
Total bales Harvested	328,542
Yield (lbs/acre)	830
Total bales Lost to Insects	29,910
Percent Yield Loss	7.76%
Yield w/o Insects (lbs/acre)	900
Ave. # Spray Applications	1.625
Yield loss to all factors	56,894
% Yield loss to all factors	14.8%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$3,091,300	\$16.27
At Planting Costs	\$1,852,500	\$9.75
Scouting costs	\$213,750	\$1.13
Eradication costs	\$0	\$0.00
Transgenic cotton	\$6,464,907	\$34.03
Total Costs	\$11,622,457	\$61.17
Yield Lost to insects	\$9,331,865	\$49.12
Total Losses + Costs	\$20,954,321	\$110.29

Table 22

Pest	South Carolina Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	115,000	57,500	2.0	1.00	\$10.00	1.00%	2,565
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	115,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	115,000	5,750	1.0	0.05	\$0.50	0.05%	128
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	115,000	17,250	1.0	0.15	\$2.55	0.10%	257
Thrips	115,000	34,500	1.0	0.30	\$2.25	0.25%	641
Beet Armyworm	43,700	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	103,500	28,750	1.0	0.25	\$5.00	0.90%	2,309
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	115,000	115,000	2.0	2.00	\$20.00	1.95%	5,002
Grasshoppers	115,000	5,750	1.0	0.05	\$0.50	0.05%	128
Saltmarsh Caterpillars	43,700	0	0.0	0.00	\$0.00	0.00%	0
Aphids	115,000	11,500	1.0	0.10	\$0.70	0.10%	257
Banded Winged Whitefly	97,750	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	28,750	0	0.0	0.00	\$0.00	0.00%	0
Loopers	46,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	23,000	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	115,000	5,750	1.0	0.05	\$0.15	0.05%	128
Clouded Plant bugs	23,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				3.95	\$41.65	4.45%	11415

Yield & Management Results

Total Acres	115,000
Total bales Harvested	179,688
Yield (lbs/acre)	750
Total bales Lost to Insects	11,415
Percent Yield Loss	4.45%
Yield w/o Insects (lbs/acre)	785
Ave. # Spray Applications	3.950
Yield loss to all factors	76,826
% Yield loss to all factors	30.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$4,789,750	\$41.65
At Planting Costs	\$1,725,000	\$15.00
Scouting costs	\$644,000	\$5.60
Eradication costs	\$143,750	\$1.25
Transgenic cotton	\$2,814,274	\$24.47
Total Costs	\$10,116,774	\$87.97
Yield Lost to insects	\$3,561,429	\$30.97
Total Losses + Costs	\$13,678,204	\$118.94

Table 23

Pest	Tennessee Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	240,000	39,000	1.2	0.16	\$1.26	0.40%	3,328
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	300,000	195,000	1.4	0.91	\$7.28	1.20%	9,984
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	210,000	21,000	1.1	0.08	\$0.92	0.56%	4,659
Thrips	300,000	180,000	1.1	0.66	\$4.46	0.70%	5,824
Beet Armyworm	9,000	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	21,000	3,000	0.0	0.00	\$0.00	0.03%	233
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	300,000	135,000	1.2	0.55	\$4.57	0.70%	5,824
Grasshoppers	6,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	6,000	0	0.0	0.00	\$0.00	0.00%	0
Aphids	225,000	12,000	1.0	0.04	\$0.32	0.04%	312
Banded Winged Whitefly	6,000	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	15,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	3,000	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	45,000	210,000	1.0	0.70	\$1.68	0.00%	0
Clouded Plant bugs	255,000	90,000	1.2	0.36	\$2.97	0.77%	6,365
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				3.46	\$23.46	4.39%	36,528

Yield & Management Results

Total Acres	300,000
Total bales Harvested	537,500
Yield (lbs/acre)	860
Total bales Lost to Insects	36,528
Percent Yield Loss	4.39%
Yield w/o Insects (lbs/acre)	899
Ave. # Spray Applications	3.457
Yield loss to all factors	269,482
% Yield loss to all factors	32.39%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$7,037,693	\$23.46
At Planting Costs	\$2,613,600	\$8.71
Scouting costs	\$1,890,000	\$6.30
Eradication costs	\$1,500,000	\$5.00
Transgenic cotton	\$3,486,000	\$11.62
Total Costs	\$16,527,293	\$55.09
Yield Lost to insects	\$11,396,728	\$37.99
Total Losses + Costs	\$27,924,020	\$93.08

Table 24

Pest	Texas Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	93,447	27,902	2.49	0.02	\$0.00	0.004%	400
Bollworm/Budworm	1,084,123	60,618	1.10	0.02	\$0.14	0.078%	7,282
Pink Bollworm	70,126	0	0.00	0.00	\$0.00	0.000%	0
Cotton Fleahopper	1,103,565	404,085	1.23	0.13	\$0.83	0.045%	4,259
<i>Lygus</i>	1,499,216	37,043	1.00	0.01	\$0.07	0.036%	3,400
Cotton Leaf Perforator	1,550	0	0.00	0.00	\$0.00	0.000%	0
Spider Mites	368,929	20,968	1.13	0.01	\$0.07	0.014%	1,340
Thrips	3,769,331	667,616	1.22	0.21	\$0.84	0.888%	83,227
Beet Armyworm	325,649	717	1.00	0.00	\$0.00	0.000%	0
Fall Armyworm	517,028	4,141	1.65	0.00	\$0.02	0.044%	4,093
European Cornborer	653	0	0.00	0.00	\$0.00	0.000%	0
Stink Bugs	467,466	49,872	1.00	0.01	\$0.08	0.025%	2,310
Grasshoppers	105,288	0	0.00	0.00	\$0.00	0.000%	0
Saltmarsh Caterpillars	127,609	0	0.00	0.00	\$0.00	0.000%	0
Aphids	1,133,020	53,412	1.09	0.02	\$0.12	0.003%	251
Banded Winged Whitefly	213,197	1,547	1.00	0.00	\$0.00	0.000%	0
Silverleaf Whitefly (<i>Bemesia</i>)	15,830	6,115	1.00	0.00	\$0.02	0.000%	13
Loopers	275,652	0	0.00	0.00	\$0.00	0.000%	0
Southern Armyworms	0	0	0.00	0.00	\$0.00	0.000%	0
Cutworms	9,101	3,093	1.00	0.00	\$0.01	0.000%	0
Clouded Plant bugs	2,003	0	0.00	0.00	\$0.00	0.000%	0
<i>Crenotiades</i> (green mirid)	61,473	50,521	1.27	0.02	\$0.20	0.007%	667
				0	\$2.41	1.145%	10,7243

Yield & Management Results

Total Acres	3,785,972
Total bales Harvested	5,011,702
Yield (lbs/acre)	635
Total bales Lost to Insects	107,243
Percent Yield Loss	1.14%
Yield w/o Insects (lbs/acre)	643
Ave. # Spray Applications	0.449
Yield loss to all factors	4,357,789
% Yield loss to all factors	46.5%

Failed Acres*

1,190,737

* Failed Acres were planted
but never made it to stand
not included in total acres

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$9,116,434	\$2.41
At Planting Costs	\$17,956,650	\$4.74
Scouting costs	\$9,709,513	\$2.56
Eradication costs	\$18,262,530	\$4.82
Transgenic cotton	\$29,349,741	\$7.75
Total Costs	\$84,394,869	\$22.29
Yield Lost to insects	\$33,459,807	\$8.84
Total Losses + Costs	\$117,854,676	\$31.13

Table 24a

Pest			Texas Southern Plains		Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	735,362	31,516	1.2	0.02	\$0.13	0.11%	6,458
Pink Bollworm	52,526	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	210,103	105,052	1.0	0.05	\$0.33	0.00%	0
Lygus	1,365,672	16,808	1.0	0.01	\$0.07	0.07%	3,998
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	252,124	0	0.0	0.00	\$0.00	0.00%	0
Thrips	2,101,035	420,207	1.2	0.24	\$1.02	1.50%	92,251
Beet Armyworm	315,155	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	420,207	1,786	1.2	0.00	\$0.01	0.00%	246
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	252,124	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	105,052	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	126,062	0	0.0	0.00	\$0.00	0.00%	0
Aphids	735,362	4,202	1.0	0.00	\$0.01	0.00%	0
Banded Winged Whitefly	210,103	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	273,134	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.32	\$1.57	1.67%	102,953

Yield & Management Results

Total Acres	2,101,035*
Total bales Harvested	3,064,009
Yield (lbs/acre)	700
Total bales Lost to Insects	56,317
Percent Yield Loss	1.05%
Yield w/o Insects (lbs/acre)	707
Ave. # Spray Applications	0.319
Yield loss to all factors	2,325,154
% Yield loss to all factors	43.1%

Failed acres*

694,858

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$3,299,792	\$1.57
At Planting Costs	\$8,194,035	\$3.90
Scouting costs	\$7,311,600	\$3.48
Eradication costs	\$5,252,586	\$2.50
Transgenic cotton	\$14,769,225	\$7.03
Total Costs	\$38,827,239	\$18.48
Yield Lost to insects	\$17,570,828	\$8.36
Total Losses + Costs	\$56,398,067	\$26.84

Table 24b

Pest	Texas Coastal Bend					Cotton Insect Losses - 2009	
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	20,105	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	108,257	15,465	1.0	0.10	\$0.89	0.11%	338
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	154,653	140,734	1.5	1.37	\$10.10	0.10%	322
Lygus	92,792	3,093	1.0	0.02	\$0.17	0.00%	0
Cotton Leaf Perforator	1,547	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	61,861	9,279	1.0	0.06	\$0.58	0.00%	0
Thrips	154,653	12,372	1.0	0.08	\$0.42	0.00%	0
Beet Armyworm	1,547	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	1,547	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	54,129	10,826	1.0	0.07	\$0.51	0.11%	338
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	1,547	0	0.0	0.00	\$0.00	0.00%	0
Aphids	123,722	21,651	1.0	0.14	\$0.93	0.00%	0
Banded Winged Whitefly	3,093	1,547	1.0	0.01	\$0.07	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	1,547	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	7,733	3,093	1.0	0.02	\$0.13	0.00%	0
Clouded Plant bugs	1,547	0	0.0	0.00	\$0.00	0.00%	0
Green Mirid	20,105	7,733	1.0	0.05	\$0.31	0.00%	0
				1.92	\$14.10	0.31%	997

Yield & Management Results		Failed acres*
Total Acres*	154,653	
Total bales Harvested	136,288	365,535
Yield (lbs/acre)	423	
Total bales Lost to Insects	997	
Percent Yield Loss	0.31%	
Yield w/o Insects (lbs/acre)	424	
Ave. # Spray Applications	1.915	
Yield loss to all factors	185,222	
% Yield loss to all factors	57.6%	

Economic Results		
	Total	Per Acre
Foliar Insecticides - costs	\$2,180,978	\$14.10
At Planting Costs	\$1,029,989	\$6.66
Scouting costs	\$974,314	\$6.30
Eradication costs	\$3,465,774	\$22.41
Transgenic cotton	\$1,096,923	\$7.09
Total Costs	\$8,747,978	\$56.57
Yield Lost to insects	\$310,964	\$2.01
Total Losses + Costs	\$9,058,942	\$58.58

Table 24c

Pest	Texas Rolling Plains				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	78,491	1,962	1.0	0.00	\$0.02	0.02%	217
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	392,456	23,547	1.0	0.03	\$0.17	0.00%	27
Lygus	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	785	0	0.0	0.00	\$0.00	0.00%	0
Thrips	784,912	3,925	1.0	0.01	\$0.02	0.01%	54
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	78,491	2,355	2.0	0.01	\$0.06	0.20%	2,168
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	1,570	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	156,982	7,849	1.0	0.01	\$0.07	0.00%	22
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.05	\$0.33	0.230%	2487

Yield & Management Results

Total Acres	784912*
Total bales Harvested	506,922
Yield (lbs/acre)	310
Total bales Lost to Insects	2,487
Percent Yield Loss	0.23%
Yield w/o Insects (lbs/acre)	311
Ave. # Spray Applications	0.054
Yield loss to all factors	576,928
% Yield loss to all factors	53.2%

Failed Acres*

38,491

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$256,666	\$0.33
At Planting Costs	\$6,004,574	\$7.65
Scouting costs	\$86,340	\$0.11
Eradication costs	\$3,532,102	\$4.50
Transgenic cotton	\$7,538,291	\$9.60
Total Costs	\$17,417,973	\$22.19
Yield Lost to insects	\$776,080	\$0.99
Total Losses + Costs	\$18,194,053	\$23.18

Table 24d

Pest	Texas Wintergarden				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	17,158	1,716	1.0	0.10	\$1.40	0.50%	354
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	1,716	0	0.0	0.00	\$0.00	0.00%	0
Lygus	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	8,579	2,574	1.0	0.15	\$3.54	0.50%	354
Thrips	10,295	0	0.0	0.00	\$0.00	0.00%	0
Beet Armyworm	343	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	858	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	172	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	17,158	3,432	1.0	0.20	\$4.20	0.50%	354
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	515	515	1.0	0.03	\$0.66	0.03%	21
Loopers	515	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Green Mirid	16,300	15,443	1.0	0.90	\$21.24	1.43%	1,008
				1.38	\$31.04	2.96%	2089

Yield & Management Results

Total Acres	17158*
Total bales Harvested	50,939
Yield (lbs/acre)	1425
Total bales Lost to Insects	2,089
Percent Yield Loss	2.96%
Yield w/o Insects (lbs/acre)	1,468
Ave. # Spray Applications	1.380
Yield loss to all factors	19,765
% Yield loss to all factors	28.0%

Failed Acres*

32

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$532,597	\$31.04
At Planting Costs	\$184,968	\$10.78
Scouting costs	\$153,954	\$8.97
Eradication costs	\$227,349	\$13.25
Transgenic cotton	\$156,389	\$9.11
Total Costs	\$1,255,255	\$73.16
Yield Lost to insects	\$651,866	\$37.99
Total Losses + Costs	\$1,907,122	\$111.15

Texas 24e

Texas Blacklands

Cotton Insect Losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	27,765	27,765	2.5	0.68	\$0.00	0.14%	263
Bollworm/Budworm	5,142	5,142	1.0	0.05	\$0.45	0.08%	146
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	102,833	102,833	1.5	1.50	\$9.00	1.50%	2,922
Lygus	1	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	1	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	1	0	0.0	0.00	\$0.00	0.00%	0
Thrips	102,833	102,833	1.0	1.00	\$3.00	2.00%	3,896
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	10	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	0	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	1	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				3.23	\$12.45	3.71%	7227

Yield & Management Results

Total Acres	102,833
Total bales Harvested	96,406
Yield (lbs/acre)	450
Total bales Lost to Insects	7,227
Percent Yield Loss	3.71%
Yield w/o Insects (lbs/acre)	467
Ave. # Spray Applications	3.225
Yield loss to all factors	98,397
% Yield loss to all factors	50.5%

Failed Acres*

374

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$1,280,278	\$12.45
At Planting Costs	\$874,081	\$8.50
Scouting costs	\$257,083	\$2.50
Eradication costs	\$1,362,537	\$13.25
Transgenic cotton	\$1,639,177	\$15.94
Total Costs	\$5,413,155	\$52.64
Yield Lost to insects	\$2,254,881	\$21.93
Total Losses + Costs	\$7,668,036	\$74.57

Table 24f

Pest	Texas Permian Basin				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	19,197	3,839	1.0	0.01	\$0.08	0.01%	31
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	191,970	19,197	0.0	0.00	\$0.00	0.00%	0
Lygus	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	0	0	0.0	0.00	\$0.00	0.00%	0
Thrips	383,940	3,839	1.0	0.01	\$0.03	0.00%	0
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	153,576	38,394	1.0	0.10	\$0.60	0.20%	1,224
Grasshoppers	38	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	0	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.12	\$0.71	0.21%	1255

Yield & Management Results

Total Acres	383,940
Total bales Harvested	359,943
Yield (lbs/acre)	450
Total bales Lost to Insects	1,255
Percent Yield Loss	0.21%
Yield w/o Insects (lbs/acre)	451
Ave. # Spray Applications	0.120
Yield loss to all factors	252,268
% Yield loss to all factors	41.2%

Failed Acres
62,808

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$272,597	\$0.71
At Planting Costs	\$84,467	\$0.22
Scouting costs	\$23,036	\$0.06
Eradication costs	\$2,687,577	\$7.00
Transgenic cotton	\$3,796,586	\$9.89
Total Costs	\$6,864,262	\$17.88
Yield Lost to insects	\$391,570	\$1.02
Total Losses + Costs	\$7,255,832	\$18.90

Table 24g

Pest	Texas Trans-Pecos				Cotton Insect Losses – 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	1,467	978	1.0	0.03	\$0.22	0.05%	44
Pink Bollworm	17,600	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	652	0	0.0	0.00	\$0.00	0.00%	0
Lygus	6,193	815	1.0	0.03	\$0.20	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	0	0	0.0	0.00	\$0.00	0.00%	0
Thrips	22,815	163	1.0	0.01	\$0.02	0.01%	7
Beet Armyworm	8,148	717	1.0	0.02	\$0.29	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	652	652	1.0	0.02	\$0.10	0.01%	10
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	1,630	326	1.0	0.01	\$0.07	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	10,756	1,043	1.0	0.03	\$0.42	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.14	\$1.30	0.06%	61

Yield & Management Results

Total Acres	32593*
Total bales Harvested	72,996
Yield (lbs/acre)	1075
Total bales Lost to Insects	61
Percent Yield Loss	0.06%
Yield w/o Insects (lbs/acre)	1,076
Ave. # Spray Applications	0.144
Yield loss to all factors	24,673
% Yield loss to all factors	25.3%

Failed Acres*

293

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$42,518	\$1.30
At Planting Costs	\$35,853	\$1.10
Scouting costs	\$97,780	\$3.00
Eradication costs	\$651,868	\$20.00
Transgenic cotton	\$510,523	\$15.66
Total Costs	\$1,338,542	\$41.07
Yield Lost to insects	\$18,893	\$0.58
Total Losses + Costs	\$1,357,435	\$41.65

Eradication – PBW \$10 BWE \$10

Table 24h

Pest	Texas Panhandle				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	73,472	0	0.0	0.00	\$0.00	0.14%	918
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	8,164	8,164	0.0	0.00	\$0.00	0.00%	17
Lygus	16,327	16,327	1.0	0.10	\$0.65	0.01%	34
Cotton Leaf Perforator	2	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	2	0	0.0	0.00	\$0.00	0.00%	0
Thrips	163,272	122,454	1.5	1.13	\$3.94	0.01%	68
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	16,327	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	653	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	16	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	57,145	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.23	\$4.59	0.15%	1,038

Yield & Management Results

Total Acres	163272*
Total bales Harvested	267,018
Yield (lbs/acre)	785
Total bales Lost to Insects	1,038
Percent Yield Loss	0.15%
Yield w/o Insects (lbs/acre)	786
Ave. # Spray Applications	1.225
Yield loss to all factors	413,326
% Yield loss to all factors	60.75%

Failed Acres*
6,078

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$749,011	\$4.59
At Planting Costs	\$1,306,176	\$8.00
Scouting costs	\$734,724	\$4.50
Eradication costs	\$1,178,824	\$7.22
Transgenic cotton	\$342,218	\$2.10
Total Costs	\$4,310,953	\$26.40
Yield Lost to insects	\$323,707	\$1.98
Total Losses + Costs	\$4,634,660	\$28.39

Texas 24i

Texas Lower Rio Grande Valley

Cotton Insect losses - 2009

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	45,577	137	1.0	0.00	\$0.02	0.05%	49
Bollworm/Budworm	45,577	0	0.0	0.00	\$0.00	0.00%	0
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	41,019	4,558	1.0	0.10	\$0.74	0.00%	0
Lygus	18,231	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	45,577	9,115	1.3	0.26	\$2.52	1.00%	990
Thrips	45,577	1,823	1.0	0.04	\$0.21	0.00%	0
Beet Armyworm	456	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	456	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	4,558	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	41,019	15,952	1.3	0.46	\$3.01	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	4,558	4,558	1.0	0.10	\$0.85	0.00%	0
Loopers	456	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	1,367	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	456	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	25,067	27,346	1.5	0.90	\$5.58	0.06%	54
				1.86	\$12.93	1.11%	1094

Yield & Management Results

Total Acres	45,577
Total bales Harvested	63,238
Yield (lbs/acre)	666
Total bales Lost to Insects	1,094
Percent Yield Loss	1.11%
Yield w/o Insects (lbs/acre)	673
Ave. # Spray Applications	1.858
Yield loss to all factors	35,734
% Yield loss to all factors	36.1%

Failed Acres*

27,268

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$589,233	\$12.93
At Planting Costs	\$205,096	\$4.50
Scouting costs	\$150,403	\$3.30
Eradication costs	\$782,098	\$17.16
Transgenic cotton	\$323,267	\$7.09
Total Costs	\$2,050,097	\$44.98
Yield Lost to insects	\$341,214	\$7.49
Total Losses + Costs	\$2,391,311	\$52.47

Table 25

Pest	Virginia Summary				Cotton Insect Losses - 2009		
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	19,500	1,300	1.0	0.02	\$0.16	0.00%	0
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0.0	0.00	\$0.00	0.00%	0
Lygus	1,300	0	0.0	0.00	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	0	0	0.0	0.00	\$0.00	0.00%	0
Thrips	65,000	65,000	1.2	1.20	\$6.00	0.33%	670
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.00%	0
Stink Bugs	65,000	65,000	1.3	1.30	\$10.40	1.67%	3,392
Grasshoppers	7	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	0	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	0	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				2.52	\$16.56	2.00%	4,063

Yield & Management Results

Total Acres	65,000
Total bales Harvested	128,646
Yield (lbs/acre)	950
Total bales Lost to Insects	4,063
Percent Yield Loss	2.00%
Yield w/o Insects (lbs/acre)	969
Ave. # Spray Applications	2.520
Yield loss to all factors	73,125
% Yield loss to all factors	36.0%

Economic Results

	Total	Per Acre
Foliar Insecticides - costs	\$1,076,400	\$16.56
At Planting Costs	\$812,500	\$12.50
Scouting costs	\$19,500	\$0.30
Eradication costs	\$162,500	\$2.50
Transgenic cotton	\$1,092,000	\$16.80
Total Costs	\$3,162,900	\$48.66
Yield Lost to insects	\$1,267,500	\$19.50
Total Losses + Costs	\$4,430,400	\$68.16