

## **COTTON INSECT LOSSES 2011**

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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.

### **Highlights**

**Cotton losses to arthropod pests reduced overall yields by 3.03%. Lygus were the top ranked pest in 2011 reducing yields by 1.03%. Thrips were ranked second at 0.695%. Stink bugs were ranked third at 0.509%. Bollworm/budworm complex caused 0.383% loss. Spider mites reduced yields by 0.167%. No other pest exceeded 0.1% loss. Total costs and loss for insects in 2011 were \$1.022 billion. Direct management costs for arthropods were \$62.34 per acre.**

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### 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 the average per pound price. 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.

Table 1

## USDA Cotton Production

## Cotton Insect Losses - 2011

State	Upland Cotton		Cotton yields in pounds lint per acre			
	<u>Acres planted</u>	<u>Acres harvested</u>	<u>Est. Yield*</u>	<u>December</u>	<u>January</u>	<b>2010</b>
Alabama	460,000	440,000	825	742	762	684
Arizona	261,000	259,000	1,535	1488	1,548	1,467
Arkansas	680,000	660,000	997	938	938	1,049
California	442,000	440,000	1,361	1336	1,432	1,639
Florida	122,000	120,000	650	620	660	809
Georgia	1,600,000	1,520,000	837	837	805	811
Kansas	78,000	67,000	595	501	494	784
Louisiana	295,000	285,000	912	876	852	864
Mississippi	630,000	605,000	1,019	952	968	983
Missouri	375,000	360,000	1,131	1052	961	1,068
New Mexico	71,000	66,000	1,023	947	1,084	1,096
North Carolina	810,000	800,000	750	600	630	854
Oklahoma	415,000	100,000	306	432	432	738
South Carolina	305,000	303,000	750	745	773	872
Tennessee	495,000	490,000	820	823	813	843
Texas	7,565,000	3,214,500	536	557	542	722
Virginia	116,000	115,000	750	751	689	685
<b>total US</b>	<b>14,720,000</b>	<b>9,844,500</b>	<b>777</b>		<b>754</b>	814
<u>Pima</u>						
Arizona	11,000	11,000		873	960	864
California	260,000	259,000		1269	1,376	1,216
New Mexico	2,040	2,040			805	889
Texas	15,000	14,500		894	1038	931
<b>total US</b>	<b>288,040</b>	<b>286,540</b>			<b>1,336</b>	1,184
<b>TOTAL US</b>	<b>15,008,040</b>	<b>10,131,040</b>			<b>770</b>	821

Table 1a                      USDA Cotton Production                      Cotton Insect Losses - 2011

State	Area Planted			Area Harvested		
	2009	2010	2011	2009	2010	2011
<u>Upland</u>						
Alabama	255,000	340,000	460,000	250,000	337,000	440,000
Arizona	145,000	195,000	261,000	144,000	193,000	259,000
Arkansas	520,000	545,000	680,000	500,000	540,000	660,000
California	71,000	124,000	442,000	70,000	123,000	440,000
Florida	82,000	92,000	122,000	78,000	89,000	120,000
Georgia	1,000,000	1,330,000	1,600,000	990,000	1,320,000	1,520,000
Kansas	38,000	51,000	78,000	34,000	49,000	67,000
Louisiana	230,000	255,000	295,000	225,000	250,000	285,000
Mississippi	305,000	420,000	630,000	295,000	415,000	605,000
Missouri	272,000	310,000	375,000	260,000	308,000	360,000
New Mexico	30,500	47,000	71,000	29,000	46,000	66,000
North Carolina	375,000	550,000	810,000	370,000	545,000	800,000
Oklahoma	205,000	285,000	415,000	200,000	270,000	100,000
South Carolina	115,000	202,000	305,000	114,000	201,000	303,000
Tennessee	300,000	390,000	495,000	280,000	387,000	490,000
Texas	5,000,000	5,550,000	7,565,000	3,650,000	5,350,000	3,214,500
Virginia	64,000	83,000	116,000	63,000	82,000	115,000
<b>total US</b>	<b>9,007,500</b>	<b>10,769,000</b>	<b>14,720,000</b>	<b>7,552,000</b>	<b>10,505,000</b>	<b>9,844,500</b>
<u>Pima</u>						
Arizona	1,700	2,500	11,000	1,700	2,500	11,000
California	119,000	182,000	260,000	116,000	180,000	259,000
New Mexico	3,000	2,700	2,040	3,000	2,700	2,040
Texas	18,000	17,000	15,000	17,800	16,500	14,500
<b>total US</b>	<b>141,700</b>	<b>204,200</b>	<b>288,040</b>	<b>138,500</b>	<b>201,700</b>	<b>286,540</b>
All US Cotton	<b>9,149,200</b>	<b>10,973,200</b>	<b>15,008,040</b>	<b>7,690,500</b>	<b>10,706,700</b>	<b>10,131,040</b>

**Table 2 At Planting Insecticide Application Cotton Insect Losses - 2011**

States	Acres treated	weightedCost/ all acres	Cost/ treated acre	Acres treated	weightedCost/ all acres	Cost/ treated acre	Total Cost
Seed treatments			In-furrow treatments				
North Alabama	113,250	\$6.75	\$9.00	15,100	\$1.20	\$12.00	\$1,200,450
South Alabama	224,999	\$7.50	\$10.00	45,000	\$1.80	\$12.00	\$2,789,991
Arizona	44,414	\$2.26	\$13.08	20,096	\$0.51	\$6.53	\$712,055
Southeast Arkansas	215,600	\$10.78	\$11.00	11,000	\$0.75	\$15.00	\$2,536,600
Northeast Arkansas	388,000	\$10.67	\$11.00	10,000	\$0.38	\$15.00	\$4,418,000
California	272,757	\$9.00	\$15.00	90,919	\$1.80	\$9.00	\$4,909,626
Florida	114,000	\$11.40	\$12.00	24,000	\$3.00	\$15.00	\$1,728,000
Georgia	1,064,000	\$7.00	\$10.00	380,000	\$3.00	\$12.00	\$15,200,000
Kansas	0	\$0.00	\$0.00	0	\$0.00	\$0.00	\$0
Louisiana	279,300	\$56.00	\$15.64	28,500	\$3.84	\$10.50	\$4,667,502
Mississippi - Delta	441,000	\$9.31	\$9.50	9,000	\$0.21	\$10.50	\$4,284,000
Mississippi - Hills	135,000	\$8.55	\$9.50	30,000	\$2.10	\$10.50	\$1,597,500
Missouri	337,500	\$9.90	\$11.00	75,000	\$1.96	\$9.80	\$4,447,500
New Mexico	42,158	\$1.86	\$3.00	12,239	\$1.76	\$9.80	\$246,418
North Carolina	560,000	\$11.42	\$16.32	240,000	\$5.40	\$18.00	\$13,459,200
Oklahoma	343,212	\$5.44	\$6.40	20,189	\$0.55	\$11.00	\$2,418,636
South Carolina	181,800	\$7.20	\$12.00	121,200	\$3.92	\$9.80	\$3,369,360
Tennessee	475,200	\$8.91	\$9.00	4,800	\$0.10	\$9.80	\$4,323,840
Texas Southern Plains	1,165,910	\$6.30	\$9.00	999,352	\$7.80	\$13.00	\$23,484,763
Texas - Southern	640,728	\$6.96	\$9.80	18,049	\$0.20	\$9.98	\$6,459,262
Texas Rolling Plains	56,000	\$8.05	\$11.50	1,600	\$0.20	\$9.80	\$659,680
Texas Blacklands	278,513	\$11.52	\$12.00	0	\$0.00	\$0.00	\$3,342,159
Texas Permian Basin	29,300	\$2.30	\$11.50	0	\$0.00	\$9.80	\$336,950
Texas Trans-Pecos	27,145	\$8.75	\$12.50	7,756	\$1.96	\$9.80	\$415,312
Texas Panhandle	198,926	\$10.00	\$12.50	174,061	\$6.86	\$9.80	\$4,192,374
Virginia	85,000	\$15.00	\$15.00	12,750	\$1.47	\$9.80	\$1,399,950
All States	7,713,713	\$8.11	\$10.79	2,350,610	\$2.86	\$12.48	\$112,599,127

**Table 3****Cotton Insect Eradication****Cotton Insect Losses - 2011**

State	Number Acres	Cost/ treated Acre	Wt cost/all acres	Total Cost
North Alabama	151,000	\$2.50	\$2.50	\$377,500
South Alabama	299,999	\$3.50	\$3.50	\$1,049,997
Arizona	256,845	\$2.09	\$2.09	\$536,806
Southeast Arkansas	220,000	\$12.00	\$12.00	\$2,640,000
Northeast Arkansas	400,000	\$14.00	\$14.00	\$5,600,000
California	0	\$0.00	\$0.00	\$0
Florida	120,000	\$1.00	\$1.00	\$120,000
Georgia	1,520,000	\$0.85	\$0.85	\$1,292,000
Kansas	0	\$0.00	\$0.00	\$0
Louisiana	285,000	\$5.00	\$5.00	\$1,425,000
Mississippi - Delta	450,000	\$4.00	\$4.00	\$1,800,000
Mississippi - Hills	150,000	\$6.00	\$6.00	\$900,000
Missouri	375,000	\$1.00	\$1.00	\$375,000
New Mexico	67,996	\$5.95	\$5.95	\$404,576
North Carolina	800,000	\$1.10	\$1.10	\$880,000
Oklahoma	403,779	\$2.00	\$2.00	\$807,558
South Carolina	303,000	\$1.25	\$1.25	\$378,750
Tennessee	480,000	\$1.50	\$1.50	\$720,000
Texas Southern Plains	1,665,586	\$1.25	\$1.25	\$2,081,983
Texas Southern	902,434	\$22.50	\$22.50	\$20,304,765
Texas Rolling Plains	80,000	\$3.00	\$3.00	\$240,000
Texas Blacklands	290,118	\$13.25	\$13.25	\$3,844,064
Texas Permian Basin	146,500	\$2.00	\$2.00	\$293,000
Texas Trans-Pecos	38,778	\$10.00	\$10.00	\$387,780
Texas Panhandle	248,658	\$1.50	\$1.50	\$372,987
Virginia	85,000	\$3.25	\$3.25	\$276,250
<b>All States - Boll Weevil</b>	<b>9,739,693</b>	<b>\$4.84</b>	<b>\$4.59</b>	<b>\$47,108,015</b>
Arizona Pink Bollworm	256,845	\$7.95	\$7.95	\$2,041,945
California Pink Bollworm	454,595	\$5.67	\$5.67	\$2,577,932
New Mexico Pink Bollworm	18,155	\$6.98	\$1.86	\$126,721
West Texas Pink Bollworm	38,778	\$16.63	\$0.19	\$644,878
<b>Total US - Pink Bollworm</b>	<b>768,373</b>	<b>\$7.02</b>	<b>\$0.52</b>	<b>\$5,391,477</b>
<b>Total US - Insect Eradication*</b>	<b>10,508,066</b>	<b>\$5.00</b>	<b>\$5.11</b>	<b>\$52,499,492</b>

there are overlap acres in PBW and BW eradication



**Table 4****Bt Cotton Costs****Cotton Insect Losses - 2011**

<b>State</b>	<b>Number acres</b>	<b>Bt cost/Acre</b>	<b>Average/ all Acres</b>	<b>Total Cost</b>	<b>% population Bollworm</b>	<b>cotton sprayed</b>	<b>Avg. appli to Bt cotton</b>
Alabama, North	150,750	\$19.09	\$19.06	\$2,878,320	81.5%	50,510	1.00
Alabama, South	293,999	\$27.86	\$27.30	\$8,190,479	96.2%	11,820	1.00
Arizona	251,463	\$33.51	\$32.81	\$8,426,289	88.1%	0	0.00
Arkansas, Southeast	217,800	\$29.03	\$28.74	\$6,322,118	98.5%	213,400	1.51
Arkansas, Northeast	398,000	\$25.19	\$25.06	\$10,025,920	94.7%	175,200	1.05
California	22,730	\$7.37	\$0.37	\$167,473	0.0%	0	0.50
Florida	118,800	\$25.83	\$25.57	\$3,068,943	49.5%	7,224	1.00
Georgia	1,504,800	\$26.23	\$25.97	\$39,467,104	0.0%	41,496	1.00
Kansas	0	\$0.00	\$0.00	\$0	0.0%	0	0.00
Louisiana	278,730	\$29.94	\$29.28	\$8,345,964	79.7%	268,310	2.55
Mississippi, Delta	441,000	\$27.39	\$26.85	\$12,080,430	99.0%	360,900	2.60
Mississippi, Hills	142,500	\$27.91	\$26.52	\$3,977,363	99.5%	38,625	1.00
Missouri	371,250	\$21.37	\$21.15	\$7,931,992	91.9%	0	0.00
New Mexico	55,077	\$11.59	\$9.39	\$638,190	100.0%	1,515	1.00
North Carolina	799,040	\$28.00	\$27.97	\$22,373,120	75.0%	693,960	1.00
Oklahoma	403,779	\$8.60	\$8.60	\$3,473,310	69.6%	0	0.00
South Carolina	299,970	\$21.11	\$20.90	\$6,332,262	100.0%	272,100	1.68
Tennessee	475,200	\$16.27	\$16.10	\$7,729,488	99.6%	322,560	1.25
Texas Southern Plains	1,249,190	\$7.76	\$5.82	\$9,699,455	100.0%	12	0.00
Texas Southern	658,777	\$7.97	\$5.82	\$5,252,419	99.8%	12,589	1.00
Texas Rolling Plains	72,000	\$7.42	\$6.68	\$534,316	0.0%	0	0.00
Texas Blacklands	278,513	\$7.50	\$7.20	\$2,088,850	98.0%	8,529	1.00
Texas Permian Basin	124,525	\$7.73	\$6.57	\$962,556	100.0%	0	0.00
Texas Trans-Pecos	15,511	\$8.40	\$3.36	\$130,251	100.0%	0	0.00
Texas Panhandle	223,792	\$8.56	\$7.71	\$1,916,705	100.0%	0	0.00
Virginia	82,875	\$16.51	\$16.10	\$1,368,266	100.0%	83,300	1.00
<b>US</b>	<b>8,930,070</b>	<b>\$18.79</b>	<b>\$16.88</b>	<b>\$173,381,584</b>	<b>76.3%</b>	<b>2,213,337</b>	<b>0.82</b>

Table 5

Cotton types  
2012 Beltwide Cotton Conferences, Orlando, Florida, January 3-6, 2012

Cotton Insect losses - 2011  
1022

	Acres of cotton which are						
	Bollgard II	Widestrike	Other	Herbicides GM only	non-GM conventional	Organic	Pima
<b>US</b>	6,991,138	1,948,552	0	712,606	311,101	16,143	309,743
<b>Alabama</b>	320,189	120,300	0	4,510	6,000	0	0
<b>Arizona</b>	241,907	9,631	0	2,635	2,748	0	9,577
<b>Arkansas</b>	571,400	44,400	0	1,540	2,660	2,200	0
<b>California</b>	18,184	4,546	0	113,649	45,914	0	272,757
<b>Florida</b>	84,000	33,600	0	1,200	1,200	0	0
<b>Georgia</b>	1,124,800	380,000	0	15,200	1,520	0	0
<b>Kansas</b>	0	0	0	78,000	0	0	0
<b>Louisiana</b>	237,120	41,325	0	6,555	0	0	0
<b>Mississippi</b>	478,500	99,000	0	15,750	7,500	0	0
<b>Missouri</b>	241,500	112,500	0	18,750	1,875	375	0
<b>New Mexico</b>	27,878	27,198	0	6,120	6,120	612	2,040
<b>North Carolina</b>	492,000	306,400	0	1,299	1,299	0	0
<b>Oklahoma</b>	394,169	2,342	0	6,299	0	0	0
<b>South Carolina</b>	204,525	97,808	0	455	303	0	0
<b>Tennessee</b>	144,000	331,200	0	4,800	0	0	0
<b>Texas</b>	2,382,916	283,052	0	434,570	233,537	12,956	25,369
<b>Virginia</b>	28,050	55,250	0	1,275	425	0	0

Table 6

## Application Technology

## Cotton Insect Losses 2011

State	applications by air			applications by ground			# Acres w
	% Acres	cost/ Acre	# apps	% Acres	cost/ Acre	# apps	NO apps
Alabama, North	35%	\$4.10	0.50	65%	\$3.60	2.60	1,510
Alabama, South	5%	\$4.50	1.00	95%	\$3.00	1.50	90,000
Arizona	78%	\$9.77	2.05	52%	\$10.29	1.69	41,935
Arkansas, Southeast	85%	\$6.00	5.00	20%	\$5.50	2.00	1,100
Arkansas, Northeast	70%	\$6.00	3.00	30%	\$5.50	2.00	4,000
California	85%	\$9.00	2.00	15%	\$13.50	1.00	45,460
Florida	10%	\$7.00	1.00	90%	\$6.00	2.00	12,000
Georgia	30%	\$4.10	0.50	65%	\$3.60	2.60	1,510
Kansas	3%	\$15.00	1.00	5%	\$12.00	1.00	54,600
Louisiana	82%	\$4.75	4.80	95%	\$3.85	2.10	3,135
Mississippi Delta	70%	\$6.00	5.00	30%	\$4.50	3.00	4,500
Mississippi Hills	30%	\$4.10	0.50	65%	\$3.60	2.60	1,510
Missouri	50%	\$6.00	0.60	100%	\$4.50	1.25	37,500
New Mexico	58%	\$6.00	1.00	7%	\$6.00	1.00	57,117
North Carolina	12%	\$6.00	1.00	95%	\$3.50	2.50	0
Oklahoma	3%	\$8.50	1.00	20%	\$5.50	1.00	312,929
South Carolina	10%	\$5.50	0.50	90%	\$4.50	2.00	15,150
Tennessee	17%	\$6.50	1.00	100%	\$4.75	5.30	4,800
Texas Southern Plains	10%	\$6.00	1.00	40%	\$5.00	2.00	1,099,287
Texas Southern	20%	\$5.50	0.50	80%	\$2.90	1.70	126,341
Texas Rolling Plains	10%	\$4.50	1.00	90%	\$3.50	1.00	76,000
Texas Blacklands	100%	\$7.00	1.00	100%	\$8.15	2.50	17,407
Texas Permian Basin	1%	\$4.50	1.00	1%	\$3.50	1.00	143,570
Texas Trans-Pecos	35%	\$4.10	0.50	65%	\$3.60	2.60	1,510
Texas Panhandle	25%	\$6.00	1.00	55%	\$5.50	1.50	198,926
Virginia	0%	\$0.00	0.00	100%	\$5.50	2.00	34,000
<b>Total US</b>	33%	\$6.54	2.18	64%	\$4.54	2.16	2,784,541

Table 7	Cotton Insect Monitoring Costs			Cotton Insect Losses - 2011	
	Acres	Times/week	wt Avg Cost	Cost per	Total
State	Scouted	Scouted	over all acres	scouted acre	Cost
Alabama, North	113,250	1.30	\$4.88	\$6.50	\$736,125
Alabama, South	194,999	1.20	\$5.20	\$8.00	\$1,559,995
Arizona	251,342	2.04	\$10.66	\$10.89	\$2,737,893
Arkansas, Southeast	213,400	1.50	\$8.73	\$9.00	\$1,920,600
Arkansas, Northeast	380,000	1.50	\$8.55	\$9.00	\$3,420,000
California	409,136	1.00	\$4.50	\$5.00	\$2,045,678
Florida	90,000	1.00	\$5.25	\$7.00	\$630,000
Georgia	1,064,000	1.10	\$5.60	\$8.00	\$8,512,000
Kansas	31,200	1.00	\$3.20	\$8.00	\$249,600
Louisiana	260,205	1.80	\$8.90	\$9.75	\$2,536,999
Mississippi, Delta	436,500	1.80	\$7.28	\$7.50	\$3,273,750
Mississippi, Hills	112,500	1.50	\$5.63	\$7.50	\$843,750
Missouri	337,500	1.00	\$7.20	\$8.00	\$2,700,000
New Mexico	30,598	1.00	\$4.28	\$9.50	\$290,683
North Carolina	600,000	1.00	\$6.00	\$8.00	\$4,800,000
Oklahoma	60,567	1.00	\$0.98	\$6.50	\$393,685
South Carolina	212,100	1.50	\$5.95	\$8.50	\$1,802,850
Tennessee	360,000	1.30	\$7.13	\$9.50	\$3,420,000
Texas Southern Plains	999,352	1.00	\$3.60	\$6.00	\$5,996,110
Texas Southern	730,972	1.20	\$6.03	\$7.45	\$5,445,738
Texas Rolling Plains	8,000	1.20	\$0.60	\$6.00	\$48,000
Texas Blacklands	261,106	1.20	\$5.40	\$6.00	\$1,566,637
Texas Permian Basin	7,325	1.00	\$0.30	\$6.00	\$43,950
Texas Trans-Pecos	25,206	1.20	\$3.90	\$6.00	\$151,234
Texas Panhandle	211,359	1.00	\$5.10	\$6.00	\$1,268,156
Virginia	6,800	1.50	\$0.68	\$8.50	\$57,800
<b>Total US</b>	<b>7,407,416</b>	<b>1.20</b>	<b>\$5.50</b>	<b>\$7.62</b>	<b>\$56,451,232</b>

**Table 8**

**Summary of All States**

**Cotton insect losses 2011**

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	185,353	17,500	3.00	0.01	\$0.01	0.00%	0
Bollworm/Budworm	5,702,269	1,990,592	1.53	0.30	\$2.04	0.38%	103,781
Pink Bollworm	18,184	1	0.00	0.00	\$0.00	0.00%	0
Cotton Fleahopper	2,658,864	1,055,418	2.02	0.21	\$0.93	0.09%	16,200
Lygus	5,098,902	3,112,214	3.37	1.02	\$12.57	1.03%	313,941
Cotton Leaf Perforator	18,310	1	0.00	0.00	\$0.00	0.00%	0
Spider Mites	4,290,794	1,347,324	1.35	0.18	\$2.60	0.17%	57,441
Thrips	8,574,843	4,492,042	1.16	0.51	\$2.43	0.69%	167,445
Beet Armyworm	966,329	15,444	0.93	0.00	\$0.02	0.00%	6
Fall Armyworm	1,012,570	62,849	0.43	0.00	\$0.03	0.01%	3,244
European Cornborer	0	0	0.00	0.00	\$0.00	0.00%	0
Stink Bugs	4,775,848	2,629,184	1.09	0.28	\$2.05	0.51%	108,438
Grasshoppers	889,911	144,026	0.91	0.01	\$0.08	0.01%	1,482
Saltmarsh Caterpillars	255,801	430	1.00	0.00	\$0.00	0.00%	17
Aphids	6,093,761	872,587	0.89	0.08	\$0.81	0.03%	8,581
Banded Winged Whitefly	537,126	6,570	0.96	0.00	\$0.01	0.00%	173
Silverleaf Whitefly (Bemesia)	616,184	184,301	0.90	0.02	\$0.45	0.03%	10,158
Loopers	517,856	6,000	1.00	0.00	\$0.01	0.00%	397
Southern Armyworms	16,651	0	0.00	0.00	\$0.00	0.00%	0
Cutworms	585,598	737,499	0.94	0.07	\$0.29	0.00%	566
Clouded Plant bugs	615,905	108,685	1.00	0.01	\$0.08	0.03%	10,519
Other Insects 1	602,363	107,941	0.99	0.01	\$0.03	0.04%	54,877
				2.690	\$24.44	3.03%	856784

<b>Yield &amp; Management Results</b>	
Total Acres	10,272,288
Total bales Harvested	16,627,155
yield (lbs/acre)	777
Total bales Lost to Insects	857,265
Percent Yield Loss	3.03%
Yield w/o Insects (lbs/ac)	801
Ave. # Spray Applications	2.69
Bales lost all factors	8,562,605
% yield loss all factors	33.99%

<b>Economic results</b>	Total	Per Acre
Foliar Insecticides Costs	\$251,043,287	\$24.44
At Planting Costs	\$83,258,791	\$8.11
In-furrow costs	\$29,340,336	\$2.86
Scouting costs	\$56,451,232	\$5.50
*Eradication costs*	\$52,499,492	\$5.11
Transgenic cotton	\$167,824,266	\$16.34
Total Costs	\$640,417,404	\$62.34
Yield Lost to insects	\$381,669,896	\$37.16
Total Losses + Costs	\$1,022,087,301	\$99.50

\*\*PBWerad = \$.52 Boll Weevil erad = \$4.59

**Table 9****Alabama Summary****Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>treated</b>	<b>trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	420,999	15,000	1.0	0.03	\$0.27	0.18%	2,094
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	3,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	271,000	149,590	2.0	0.66	\$6.10	0.67%	7,078
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	106,000	3,020	1.0	0.01	\$0.05	0.06%	8,258
Thrips	450,999	78,020	1.0	0.17	\$1.03	1.08%	12,814
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	7,500	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	375,999	45,000	1.0	0.10	\$0.55	0.55%	6,525
Grasshoppers	94,530	30,906	1.0	0.07	\$0.55	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	301,000	65,000	1.0	0.14	\$1.18	0.07%	944
Banded Winged Whitefly	3,000	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	3,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	45,300	22,650	1.0	0.05	\$0.25	0.00%	0
Clouded Plant bugs	9,000	0	0.0	0.00	\$0.00	0.00%	0
Other	0	0	0.0	0.00	\$0.00	0.00%	0
				1.24	\$9.98	2.60%	37,712

**Yield & Management Results**

Total Acres	450999
Total bales Harvested	775155
yield (lbs/acre)	825
Total bales Lost to Insects	37712
Percent Yield Loss	2.60%
Yield w/o Insects (lbs/ac)	847
Ave. # Spray Applications	1.24
Bales lost all factors	482562
% yield loss all factors	38.3%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$4,502,058	\$9.98
At Planting Costs	\$3,269,243	\$7.25
In-furrow costs	\$721,198	\$1.60
Scouting costs	\$2,296,120	\$5.09
Eradication costs	\$1,427,497	\$3.17
Transgenic cotton	\$11,067,171	\$24.54
Total Costs	\$23,283,286	\$51.63
Yield Lost to insects	\$17,196,890	\$38.13
Total Losses + Costs	\$40,480,176	\$89.76

**Table 9a**

**Alabama North**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	151,000	0	0.0	0.00	\$1.40	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	151,000	149,590	2.0	1.98	\$18.23	1.50%	7,078
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	100,000	3,020	1.0	0.02	\$0.16	1.75%	8,258
Thrips	151,000	3,020	1.0	0.02	\$0.11	0.25%	1,180
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	7,500	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	151,000	0	0.0	0.00	\$0.00	0.15%	708
Grasshoppers	4,530	906	1.0	0.01	\$0.04	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	151,000	5,000	1.0	0.03	\$0.35	0.20%	944
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	45,300	22,650	1.0	0.15	\$0.75	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
				2.21	\$21.03	3.85%	18,167

**Economic Results**

<b>Yield &amp; Management Results</b>		<b>Economic Results</b>	
		<b>Total</b>	<b>Per Acre</b>
Total Acres	151,000	Foliar Insecticides Costs	\$3,175,963
Total bales Harvested	259,531	At Planting Costs	\$1,019,250
yield (lbs/acre)	825	In-furrow costs	\$181,200
Total bales Lost to Insects	18,167	Scouting costs	\$736,125
Percent Yield Loss	3.85%	Eradication costs	\$377,500
Yield w/o Insects (lbs/ac)	858	Transgenic cotton	\$2,878,320
Ave. # Spray Applications	2.210	Total Costs	\$8,368,358
Bales lost all factors	213,177	Yield Lost to insects	\$8,284,238
% yield loss all factors	48.9%	Total Losses + Costs	\$16,652,595

**Table 9b**

**Alabama South**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	269,999	15,000	1.0	0.05	\$0.40	0.27%	2,094
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	3,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	120,000	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	6,000	0	0.0	0.00	\$0.00	0.00%	0
Thrips	299,999	75,000	1.0	0.25	\$1.50	1.50%	11,634
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	224,999	45,000	1.0	0.15	\$0.83	0.75%	5,817
Grasshoppers	90,000	30,000	1.0	0.10	\$0.80	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	150,000	60,000	1.0	0.20	\$1.60	0.00%	0
Banded Winged Whitefly	3,000	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	3,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	9,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				0.75	\$5.13	2.52%	19,545

**Yield & Management Results**

Total Acres	299,999
Total bales Harvested	515,623
yield (lbs/acre)	825
Total bales Lost to Insects	19,545
Percent Yield Loss	2.52%
Yield w/o Insects (lbs/ac)	846
Ave. # Spray Applications	0.75
Bales lost all factors	259,983
% yield loss all factors	33.5%

**Economic Results**

	<b>Total</b>	<b>Per Acre</b>
Foliar Insecticides Costs	\$1,537,495	\$5.13
At Planting Costs	\$2,249,993	\$7.50
In-furrow costs	\$539,998	\$1.80
Scouting costs	\$1,559,995	\$5.20
Eradication costs	\$1,049,997	\$3.50
Transgenic cotton	\$8,190,479	\$27.30
Total Costs	\$15,127,956	\$50.43
Yield Lost to insects	\$8,912,652	\$29.71
Total Losses + Costs	\$24,040,608	\$80.14



Table 10

## Arizona Summary

## Cotton Insect Losses 2011

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	39,730	807	0.5	0.00	\$0.03	0.003%	32
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.000%	0
Cotton Fleahopper	170,332	4,557	0.5	0.01	\$0.08	0.042%	428
Lygus	242,586	177,312	1.0	0.69	\$15.01	1.866%	18,955
Cotton Leaf Perforator	124	0	0.0	0.00	\$0.00	0.000%	0
Spider Mites	117,927	51,099	1.0	0.20	\$4.58	0.587%	5,963
Thrips	230,662	34,282	0.5	0.07	\$0.97	0.131%	1,333
Beet Armyworm	13,727	807	0.5	0.00	\$0.02	0.001%	4
Fall Armyworm	4,602	0	0.0	0.00	\$0.00	0.000%	0
European Cornborer	0	0	0.0	0.00	\$0.00	0.000%	0
Stink Bugs	111,784	20,538	0.7	0.06	\$1.16	0.146%	1,477
Grasshoppers	2,976	0	0.0	0.00	\$0.00	0.000%	0
Saltmarsh Caterpillars	31,748	430	1.0	0.00	\$0.03	0.002%	17
Aphids	31,780	1,182	1.0	0.00	\$0.11	0.000%	3
Banded Winged Whitefly	48,762	0	0.0	0.00	\$0.00	0.000%	0
Silverleaf Whitefly (Bemesia)	225,347	152,166	1.0	0.59	\$17.22	0.874%	8,880
Loopers	0	0	0.0	0.00	\$0.00	0.000%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.000%	0
Cutworms	0	0	0.0	0.00	\$0.00	0.000%	0
Clouded Plant bugs	0	0	0.0	0.00	\$0.00	0.000%	0
Darkling Beetles	29,612	1,290	0.5	0.00	\$0.01	0.000%	2
Bagrada bug	172	0	0.0	0.00	\$0.00	0.000%	0
Bean thrips	3,628	0	0.0	0.00	\$0.00	0.000%	0
Mealy bugs	75	75	1.0	0.00	\$0.01	0.000%	0
Pale-sided Flea Beetle	78,043	1,917	0.5	0.00	\$0.04	0.009%	94
				1.630	\$39.28	3.66%	37187

**Yield & Management Results**

Total Acres	256,845
Total bales Harvested	821,255
Yield (lbs/acre)	1,535
Total bales Lost to Insects	37,187
Percent Yield Loss	3.66%
Yield w/o Insects (lbs/ac)	1,593
Ave. # Spray Applications	1.630
yield loss to all factors	191,232
% yield loss all factors	18.9%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$10,089,456	\$39.28
At Planting Costs	\$580,887	\$2.26
In-furrow costs	\$131,168	\$0.51
Scouting costs	\$2,737,893	\$10.66
Eradication costs	\$2,578,751	\$10.04
Transgenic cotton	\$8,426,289	\$32.81
Total Costs	\$24,544,445	\$95.56
Yield Lost to insects	\$16,778,991	\$63.33
Total Losses + Costs	\$41,323,436	\$160.89

PBW

\$7.95

BW

\$2.09

Table 10a

Arizona Bt

Cotton Insect losses 2011

Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0.000	0.000	\$0.00	0.00%	0
Bollworm/Budworm	37,719	0	0.000	0.000	\$0.00	0.00%	24
Pink Bollworm	0	0	0.000	0.000	\$0.00	0.00%	0
Cotton Fleahopper	168,562	4,557	0.500	0.009	\$0.08	0.04%	428
Lygus	238,889	176,024	1.000	0.700	\$15.21	1.90%	18,907
Cotton Leaf Perforator	124	0	0.000	0.000	\$0.00	0.00%	0
Spider Mites	116,879	50,293	1.000	0.200	\$4.58	0.60%	5,941
Thrips	225,520	34,282	0.500	0.068	\$0.99	0.13%	1,333
Beet Armyworm	12,679	0	0.000	0.000	\$0.00	0.00%	0
Fall Armyworm	4,361	0	0.000	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0.000	0.000	\$0.00	0.00%	0
Stink Bugs	109,773	19,731	0.700	0.055	\$1.12	0.15%	1,467
Grasshoppers	2,976	0	0.000	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	31,507	430	1.000	0.002	\$0.03	0.00%	17
Aphids	30,816	1,182	1.000	0.005	\$0.12	0.00%	3
Banded Winged Whitefly	48,521	0	0.000	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	224,058	150,878	1.000	0.600	\$17.46	0.89%	8,867
Loopers	0	0	0.000	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0.000	0.000	\$0.00	0.00%	0
Cutworms	0	0	0.000	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0.000	0.000	\$0.00	0.00%	0
Darkling Beetles	29,371	1,290	0.500	0.003	\$0.01	0.00%	2
Bagrada bug	172	0	0.000	0.000	\$0.00	0.00%	0
Bean thrips	3,628	0	0.000	0.000	\$0.00	0.00%	0
Mealy bugs	75	75	1.000	0.000	\$0.01	0.00%	0
Pale-sided Flea Beetles	77,237	1,917	0.500	0.004	\$0.05	0.01%	92
				1.645	\$39.66	3.73%	37080

**Yield & Management Results**

Total Acres	251,463
Total bales Harvested	806,776
Yield (lbs/acre)	1,540
Total bales Lost to Insects	37,080
Percent Yield Loss	3.73%
Yield w/o Insects (lbs/ac)	1,600
Ave. # Spray Applications	1.65
yield loss to all factors	188,319
% yield loss all factors	18.9%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$9,973,108	\$39.66
At Planting Costs	\$577,483	\$2.30
In-furrow costs	\$133,976	\$0.53
Scouting costs	\$2,723,556	\$10.83
Eradication costs	\$2,502,053	\$9.95
Transgenic cotton	\$8,426,289	\$33.51
Total Costs	\$24,336,464	\$96.78
Yield Lost to insects	\$16,730,450	\$66.53
Total Losses + Costs	\$41,066,914	\$163.31

PBW erad

\$7.86

BW erad

\$2.09

Table 10b

Arizona nonBt

Corron Insect Losses 2011

Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot	cost/ acre	%red	Bales lost
				acres			
Boll Weevil	0	0	0.0	0.00	\$0.00	0.00%	0
Bollworm/Budworm	2,011	807	0.5	0.07	\$1.50	0.05%	8
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	1,770	0	0.0	0.00	\$0.00	0.00%	0
Lygus	3,697	1,288	1.0	0.24	\$5.43	0.27%	48
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	1,048	807	1.0	0.15	\$4.80	0.12%	22
Thrips	5,142	0	0.0	0.00	\$0.00	0.00%	0
Beet Armyworm	1,048	807	0.5	0.07	\$0.75	0.02%	4
Fall Armyworm	241	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	2,011	807	1.0	0.15	\$2.92	0.06%	10
Grasshoppers	0	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	241	0	0.0	0.00	\$0.00	0.00%	0
Aphids	963	0	0.0	0.00	\$0.00	0.00%	0
Banded Winged Whitefly	241	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	1,288	1,288	1.0	0.24	\$6.18	0.08%	14
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
Darkling Beetles	241	0	0.0	0.00	\$0.00	0.00%	0
Bagrada bug	0	0	0.0	0.00	\$0.00	0.00%	0
Bean thrips	0	0	0.0	0.00	\$0.00	0.00%	0
Mealy bugs	0	0	0.0	0.00	\$0.00	0.00%	0
Pale-sided Flea Beetles	807	0	0.0	0.00	\$0.00	0.01%	2
				0.93	\$21.58	0.62%	108

**Yield & Management Results**

Total Acres	5,382
Total bales Harvested	14,479
Yield (lbs/acre)	1,291
Total bales Lost to Insects	108
Percent Yield Loss	0.62%
Yield w/o Insects (lbs/ac)	1,299
Ave. # Spray Applications	0.93
yield loss to all factors	2,995
% yield loss all factors	17.1%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$116,136	\$21.58
At Planting Costs	\$4,816	\$0.89
In-furrow costs	\$0	\$0.00
Scouting costs	\$20,891	\$3.88
Eradication costs	\$76,698	\$14.25
Transgenic cotton	\$0	\$0.00
Total Costs	\$218,542	\$40.60
Yield Lost to insects	\$48,541	\$9.02
Total Losses + Costs	\$267,083	\$49.62

PBW erad	\$12.16	BW erad	\$2.09
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All data in this Table are preliminary

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

Table 11

## Arkansas Summary

## Cotton Insect Losses 2011

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	620,000	198,000	2.5	0.80	\$2.40	2.35%	38,021
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	474,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	620,000	620,000	4.4	4.35	\$30.48	3.42%	55,208
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	368,000	102,000	1.4	0.23	\$2.06	0.15%	2,396
Thrips	620,000	496,000	1.3	1.01	\$3.04	0.50%	8,073
Beet Armyworm	57,600	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	290,000	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	507,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	372,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	124,000	0	0.0	0.00	\$0.00	0.00%	0
Aphids	558,000	31,000	1.0	0.05	\$0.35	0.00%	0
Banded Winged Whitefly	31,000	0	0.0	0.00	\$0.00	0.00%	0
Silverleaf Whitefly (Bemisia)	0	0	0.0	0.00	\$0.00	0.00%	0
Loopers	19,600	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	93,000	0	1.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	182,000	40,000	1.0	0.06	\$0.42	0.000%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				6.51	\$38.75	6.42%	103,698

## Economic Results

## Yield &amp; Management Results

Total Acres	620,000
Total bales Harvested	1,287,500
yield (lbs/acre)	997
Total bales Lost to Insects	103,698
Percent Yield Loss	6.42%
Yield w/o Insects (lbs/ac)	1,065
Ave. # Spray Applications	6.51
Bales lost all factors	298,532
% yield loss all factors	18.82%

	Total	Per Acre
Foliar Insecticides Costs	\$24,026,400	\$38.75
At Planting Costs	\$6,639,600	\$10.71
In-furrow costs	\$315,000	\$0.51
Scouting costs	\$5,340,600	\$8.61
Eradication costs	\$8,240,000	\$13.29
Transgenic cotton	\$16,348,038	\$26.37
Total Costs	\$60,909,638	\$98.24
Yield Lost to insects	\$44,797,502	\$72.25
Total Losses + Costs	\$105,707,140	\$170.50

Table11a

## Arkansas Northeast

## Cotton Insect Losses 2011

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	400,000	0	1.7	0.00	\$0.00	2.00%	20,833
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	320,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	400,000	400,000	4.0	4.00	\$28.00	3.10%	32,292
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	280,000	80,000	1.5	0.30	\$2.70	0.18%	1,823
Thrips	400,000	320,000	1.3	1.00	\$3.00	0.50%	5,208
Beet Armyworm	40,000	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	180,000	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	320,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	240,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	80,000	0	0.0	0.00	\$0.00	0.00%	0
Aphids	360,000	20,000	1.0	0.05	\$0.35	0.00%	0
Banded Winged Whitefly	20,000	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	2,000	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	60,000	0	1.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	160,000	40,000	1.0	0.10	\$0.65	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				5.45	\$34.70	5.78%	60,156

## Yield &amp; Management Results

Total Acres	400,000
Total bales Harvested	875,000
yield (lbs/acre)	1,050
Total bales Lost to Insects	60,156
Percent Yield Loss	5.78%
Yield w/o Insects (lbs/ac)	1,114
Ave. # Spray Applications	5.45
Bales lost all factors	166,406
% yield loss all factors	16.0%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$13,880,000	\$34.70
At Planting Costs	\$4,268,000	\$10.67
In-furrow costs	\$150,000	\$0.38
Scouting costs	\$3,420,000	\$8.55
Eradication costs	\$5,600,000	\$14.00
Transgenic cotton	\$10,025,920	\$25.06
Total Costs	\$37,343,920	\$93.36
Yield Lost to insects	\$25,987,502	\$64.97
Total Losses + Costs	\$63,331,422	\$158.33

Table 11b

## Arkansas Southeast

## Cotton Insect Losses 2011

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	220,000	198,000	2.5	2.25	\$6.75	3.00%	17,188
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	154,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	220,000	220,000	5.0	5.00	\$35.00	4.00%	22,917
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	88,000	22,000	1.0	0.10	\$0.90	0.10%	573
Thrips	220,000	176,000	1.3	1.04	\$3.12	0.50%	2,865
Beet Armyworm	17,600	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	110,000	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	187,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	132,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	44,000	0	0.0	0.00	\$0.00	0.00%	0
Aphids	198,000	11,000	1.0	0.05	\$0.35	0.00%	0
Banded Winged Whitefly	11,000	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	17,600	0	0.0	0.00	\$0.00	0.00%	0
Southern Armyworms	0	0	0.0	0.00	\$0.00	0.00%	0
Cutworms	33,000	0	0.0	0.00	\$0.00	0.00%	0
Clouded Plant bugs	22,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				8.44	\$46.12	7.60%	43,542

## Yield &amp; Management Results

Total Acres	220,000
Total bales Harvested	412,500
yield (lbs/acre)	900
Total bales Lost to Insects	43,542
Percent Yield Loss	7.60%
Yield w/o Insects (lbs/ac)	974
Ave. # Spray Applications	8.44
Bales lost all factors	137,500
% yield loss all factors	24.0%

## Total Per Acre

Foliar Insecticides Costs	\$10,146,400	\$46.12
At Planting Costs	\$2,371,600	\$10.78
In-furrow costs	\$165,000	\$0.75
Scouting costs	\$1,920,600	\$8.73
Eradication costs	\$2,640,000	\$12.00
Transgenic cotton	\$6,322,118	\$28.74
Total Costs	\$23,565,718	\$107.12
Yield Lost to insects	\$18,810,000	\$85.50
Total Losses + Costs	\$42,375,718	\$192.62

Table 12

## California

## Cotton Insect Losses 2010

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	227,298	0	0	0.000	\$0.00	0.00%	0
Pink Bollworm	18,184	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	431,865	409,136	3	2.250	\$67.50	3.80%	57,874
Cotton Leaf Perforator	18,184	0	0	0.000	\$0.00	0.00%	0
Spider Mites	409,136	295,487	1	0.650	\$19.50	0.09%	1,371
Thrips	431,865	227,298	1	0.250	\$0.00	0.00%	0
Beet Armyworm	363,676	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	0	0	0	0.000	\$0.00	0.00%	0
Grasshoppers	0	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	68,189	0	0	0.000	\$0.00	0.00%	0
Aphids	409,136	90,919	0	0.060	\$1.50	0.05%	685
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	272,757	22,730	0	0.008	\$0.23	0.03%	457
Loopers	45,460	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				3.218	\$88.73	3.97%	60,387

**Yield & Management Results**

Total Acres	454,595
Total bales Harvested	1,288,966
yield (lbs/acre)	1,361
Total bales Lost to Insects	60,387
Percent Yield Loss	3.97%
Yield w/o Insects (lbs/ac)	1,417
Ave. # Spray Applications	3.22
Bales lost all factors	234,022
% yield loss all factors	15.4%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$40,334,055	\$88.73
At Planting Costs	\$4,091,355	\$9.00
In-furrow costs	\$818,271	\$1.80
Scouting costs	\$2,045,678	\$4.50
Eradication costs	\$2,577,932	\$5.67
Transgenic cotton	\$167,473	\$0.37
Total Costs	\$50,034,764	\$110.06
Yield Lost to insects	\$36,231,901	\$79.70
Total Losses + Costs	\$86,266,665	\$189.77

Table 13

## Florida

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	120,000	9,600	1	0.080	\$0.64	1.00%	2,955
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	6,000	3,000	1	0.025	\$0.15	0.05%	148
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	0	0	0	0.000	\$0.00	0.00%	0
Thrips	120,000	22,800	1	0.190	\$0.67	1.00%	2,955
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	120,000	102,000	2	1.700	\$9.35	2.50%	7,388
Grasshoppers	12	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	114,000	72,000	1	0.600	\$3.00	0.95%	2,807
Banded Winged Whitefly	2,400	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	0	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	3,600	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				2.595	\$13.81	5.50%	16,253

## Yield &amp; Management Results

Total Acres	120,000
Total bales Harvested	162,500
yield (lbs/acre)	650
Total bales Lost to Insects	16,253
Percent Yield Loss	5.50%
Yield w/o Insects (lbs/ac)	688
Ave. # Spray Applications	2.60
Bales lost all factors	133,014
% yield loss all factors	45.5%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$1,656,600	\$13.81
At Planting Costs	\$1,368,000	\$11.40
In-furrow costs	\$360,000	\$3.00
Scouting costs	\$630,000	\$5.25
Eradication costs	\$120,000	\$1.00
Transgenic cotton	\$3,066,744	\$25.56
Total Costs	\$7,201,344	\$60.01
Yield Lost to insects	\$8,581,716	\$71.51
Total Losses + Costs	\$15,783,060	\$131.53



Table 14

## Georgia Summary

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	760,000	45,600	1	0.030	\$0.23	0.05%	2,008
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	304,000	76,000	1	0.050	\$0.33	0.02%	803
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	608,000	15,200	1	0.010	\$0.10	0.02%	803
Thrips	1,368,000	912,000	1	0.600	\$3.60	0.90%	36,143
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	152,000	7,600	1	0.005	\$0.05	0.01%	402
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	1,292,000	1,064,000	2	1.050	\$7.88	0.85%	34,135
Grasshoppers	0	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	1,140,000	15,200	1	0.010	\$0.08	0.00%	151
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	30,400	7,600	1	0.005	\$0.05	0.02%	803
Loopers	0	0	1	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				1.760	\$12.30	1.87%	75,248

## Yield &amp; Management Results

Total Acres	1,520,000
Total bales Harvested	2,650,500
yield (lbs/acre)	837
Total bales Lost to Insects	75,248
Percent Yield Loss	1.87%
Yield w/o Insects (lbs/ac)	853
Ave. # Spray Applications	1.76
Bales lost all factors	1,365,409
% yield loss all factors	33.9%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$18,696,000	\$12.30
At Planting Costs	\$10,640,000	\$7.00
In-furrow costs	\$4,560,000	\$3.00
Scouting costs	\$8,512,000	\$5.60
Eradication costs	\$1,292,000	\$0.85
Transgenic cotton	\$39,467,104	\$25.97
Total Costs	\$83,167,104	\$54.72
Yield Lost to insects	\$36,119,086	\$23.76
Total Losses + Costs	\$119,286,190	\$78.48

**Table 15**

**Kansas**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	0	0	0	0.000	\$0.00	0.00%	0
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	23,400	3,900	1	0.050	\$0.60	1.50%	2,335
Lygus	7,800	0	0	0.000	\$0.00	0.20%	311
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	3,900	1,560	1	0.020	\$0.24	0.00%	0
Thrips	31,200	7,800	1	0.100	\$1.20	3.20%	4,982
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	1,560	0	0	0.000	\$0.00	0.00%	0
Grasshoppers	1,560	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	0	0	0	0.000	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	0	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				0.170	\$2.04	4.90%	7,629

<b>Yield &amp; Management Results</b>	
Total Acres	78,000
Total bales Harvested	96,688
yield (lbs/acre)	595
Total bales Lost to Insects	7,629
Percent Yield Loss	4.90%
Yield w/o Insects (lbs/ac)	626
Ave. # Spray Applications	0.17
Bales lost all factors	59,009
% yield loss all factors	37.9%

<b>Economic Results</b>		
	Total	Per Acre
Foliar Insecticides Costs	\$159,120	\$2.04
At Planting Costs	\$0	\$0.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$249,600	\$3.20
Eradication costs	\$0	\$0.00
Transgenic cotton	\$0	\$0.00
Total Costs	\$408,720	\$5.24
Yield Lost to insects	\$2,929,585	\$37.56
Total Losses + Costs	\$3,338,305	\$42.80

Table 16

## Louisiana Summary

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	283,860	251,085	2	1.322	\$9.58	1.22%	9,416
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	74,100	35,625	1	0.125	\$0.69	0.00%	0
Lygus	285,000	266,760	4	3.463	\$35.50	4.76%	36,886
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	206,910	124,260	2	0.872	\$8.94	0.54%	4,219
Thrips	282,435	242,250	1	0.850	\$3.69	0.50%	3,840
Beet Armyworm	4,560	713	0	0.000	\$0.00	0.00%	0
Fall Armyworm	62,415	31,635	0	0.033	\$0.33	0.02%	170
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	65,550	43,035	0	0.060	\$0.40	0.01%	89
Grasshoppers	143	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	428	0	0	0.000	\$0.00	0.00%	0
Aphids	207,195	112,005	1	0.197	\$1.69	0.07%	563
Banded Winged Whitefly	10,260	570	1	0.001	\$0.01	0.00%	0
Silverleaf Whitefly (Bemisia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	51,870	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	22,800	28,500	1	0.050	\$0.18	0.00%	0
Clouded Plant bugs	9,405	285	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				6.973	\$60.99	7.12%	55,183

## Yield &amp; Management Results

Total Acres	285,000
Total bales Harvested	541,500
yield (lbs/acre)	912
Total bales Lost to Insects	55,183
Percent Yield Loss	7.12%
Yield w/o Insects (lbs/ac)	982
Ave. # Spray Applications	6.97
Bales lost all factors	233,413
% yield loss all factors	30.1%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$17,381,910	\$60.99
At Planting Costs	\$4,368,252	\$15.33
In-furrow costs	\$299,250	\$1.05
Scouting costs	\$2,536,999	\$8.90
Eradication costs	\$1,425,000	\$5.00
Transgenic cotton	\$8,345,964	\$29.28
Total Costs	\$34,357,374	\$120.55
Yield Lost to insects	\$24,368,939	\$85.51
Total Losses + Costs	\$58,726,313	\$206.06

Table 17

## Mississippi Summary

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	517,500	427,500	2	1.669	\$15.02	0.86%	17,099
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	97,500	13,500	1	0.023	\$0.32	0.02%	322
Lygus	573,000	550,500	6	5.635	\$78.89	4.35%	86,240
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	382,500	193,500	2	0.636	\$7.63	0.96%	18,958
Thrips	594,000	375,000	2	1.108	\$8.31	0.20%	3,925
Beet Armyworm	6,000	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	6,000	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	150,000	30,000	1	0.050	\$0.50	0.13%	2,478
Grasshoppers	30,000	91,500	1	0.153	\$0.92	0.01%	99
Saltmarsh Caterpillars	6,000	0	0	0.000	\$0.00	0.00%	0
Aphids	405,000	217,500	1	0.453	\$6.34	0.07%	1,338
Banded Winged Whitefly	52,500	6,000	1	0.010	\$0.14	0.01%	173
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	120,000	6,000	1	0.010	\$0.12	0.02%	397
Southern Armyworms	1,500	0	0	0.000	\$0.00	0.00%	0
Cutworms	16,500	270,000	1	0.450	\$2.70	0.00%	5
Clouded Plant bugs	90,000	30,000	1	0.050	\$0.60	0.45%	8,921
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				10.245	\$121.47	7.06%	139,957

## Yield &amp; Management Results

Total Acres	600,000
Total bales Harvested	1,273,438
yield (lbs/acre)	1,019
Total bales Lost to Insects	139,957
Percent Yield Loss	7.06%
Yield w/o Insects (lbs/ac)	1,096
Ave. # Spray Applications	10.2
Bales lost all factors	690,109
% yield loss all factors	34.8%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$72,883,200	\$121.47
At Planting Costs	\$5,472,000	\$9.12
In-furrow costs	\$409,500	\$0.68
Scouting costs	\$4,117,500	\$6.86
Eradication costs	\$2,700,000	\$4.50
Transgenic cotton	\$16,055,419	\$26.76
Total Costs	\$101,637,619	\$169.40
Yield Lost to insects	\$67,179,387	\$111.97
Total Losses + Costs	\$168,817,006	\$281.36

Table 17a

Mississippi Delta

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	427,500	382,500	3	2.125	\$19.13	0.95%	15,269
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	90,000	13,500	1	0.030	\$0.42	0.02%	321
Lygus	445,500	445,500	7	6.930	\$97.02	4.95%	79,558
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	337,500	171,000	2	0.798	\$9.58	1.13%	18,081
Thrips	445,500	315,000	2	1.330	\$9.98	0.20%	3,182
Beet Armyworm	4,500	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	4,500	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	90,000	22,500	1	0.050	\$0.50	0.10%	1,607
Grasshoppers	22,500	90,000	1	0.200	\$1.20	0.01%	80
Saltmarsh Caterpillars	4,500	0	0	0.000	\$0.00	0.00%	0
Aphids	315,000	180,000	1	0.520	\$7.28	0.07%	1,125
Banded Winged Whitefly	45,000	4,500	1	0.010	\$0.14	0.01%	161
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	112,500	4,500	1	0.010	\$0.12	0.03%	402
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	9,000	180,000	1	0.400	\$2.40	0.00%	3
Clouded Plant bugs	45,000	22,500	1	0.050	\$0.60	0.30%	4,822
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				12.453	\$148.36	7.75%	124,612

Yield & Management Results

Total Acres	450,000
Total bales Harvested	984,375
yield (lbs/acre)	1,050
Total bales Lost to Insects	124,612
Percent Yield Loss	7.75%
Yield w/o Insects (lbs/ac)	1,138
Ave. # Spray Applications	12.45
Bales lost all factors	622,852
% yield loss all factors	38.8%

Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$66,760,200	\$148.36
At Planting Costs	\$4,189,500	\$9.31
In-furrow costs	\$94,500	\$0.21
Scouting costs	\$3,273,750	\$7.28
Eradication costs	\$1,800,000	\$4.00
Transgenic cotton	\$12,080,430	\$26.85
Total Costs	\$88,198,380	\$196.00
Yield Lost to insects	\$59,813,527	\$132.92
Total Losses + Costs	\$148,011,907	\$328.92

Table 17b

## Mississippi Hills

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	90,000	45,000	1	0.300	\$2.70	0.60%	2,252
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	7,500	0	0	0.000	\$0.00	0.01%	19
Lygus	127,500	105,000	3	1.750	\$24.50	2.55%	9,570
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	45,000	22,500	1	0.150	\$1.80	0.45%	1,689
Thrips	148,500	60,000	1	0.440	\$3.30	0.20%	743
Beet Armyworm	1,500	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	1,500	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	60,000	7,500	1	0.050	\$0.50	0.20%	751
Grasshoppers	7,500	1,500	1	0.010	\$0.06	0.01%	19
Saltmarsh Caterpillars	1,500	0	0	0.000	\$0.00	0.00%	0
Aphids	90,000	37,500	1	0.250	\$3.50	0.06%	225
Banded Winged Whitefly	7,500	1,500	1	0.010	\$0.14	0.01%	19
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	7,500	1,500	1	0.010	\$0.12	0.01%	19
Southern Armyworms	1,500	0	0	0.000	\$0.00	0.00%	0
Cutworms	7,500	90,000	1	0.600	\$3.60	0.00%	2
Clouded Plant bugs	45,000	7,500	1	0.050	\$0.60	0.90%	3,378
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				3.620	\$40.82	4.98%	18,684

## Yield &amp; Management Results

Total Acres	150,000
Total bales Harvested	289,063
yield (lbs/acre)	925
Total bales Lost to Insects	18,684
Percent Yield Loss	4.98%
Yield w/o Insects (lbs/ac)	973
Ave. # Spray Applications	3.62
Bales lost all factors	86,239
% yield loss all factors	23.0%

## Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$6,123,000	\$40.82
At Planting Costs	\$1,282,500	\$8.55
In-furrow costs	\$315,000	\$2.10
Scouting costs	\$843,750	\$5.63
Eradication costs	\$900,000	\$6.00
Transgenic cotton	\$3,977,363	\$26.52
Total Costs	\$13,441,613	\$89.61
Yield Lost to insects	\$8,968,495	\$59.79
Total Losses + Costs	\$22,410,108	\$149.40

**Table 18**

**Missouri**

**Cotton Insect Losses 2011**

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	56,250	3,750	1	0.010	\$0.05	0.06%	543
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	37,500	0	0	0.000	\$0.00	0.00%	0
Lygus	375,000	225,000	1	0.720	\$4.32	0.80%	7,242
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	375,000	262,500	2	1.050	\$9.45	0.20%	1,810
Thrips	37,500	18,750	1	0.050	\$0.18	0.07%	634
Beet Armyworm	1,125	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	3,750	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	18,750	3,750	1	0.010	\$0.06	0.01%	45
Grasshoppers	375	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	75,000	0	0	0.000	\$0.00	0.00%	18
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	18,750	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	18,750	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				1.840	\$14.06	1.14%	10,292

**Yield & Management Results**

Total Acres	375,000
Total bales Harvested	883,594
yield (lbs/acre)	1,131
Total bales Lost to Insects	10,292
Percent Yield Loss	1.14%
Yield w/o Insects (lbs/ac)	1,144
Ave. # Spray Applications	1.84
Bales lost all factors	21,616
% yield loss all factors	2.39%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$5,270,625	\$14.06
At Planting Costs	\$3,712,500	\$9.90
In-furrow costs	\$735,000	\$1.96
Scouting costs	\$2,700,000	\$7.20
Eradication costs	\$375,000	\$1.00
Transgenic cotton	\$7,931,992	\$21.15
Total Costs	\$20,725,117	\$55.27
Yield Lost to insects	\$4,940,275	\$13.17
Total Losses + Costs	\$25,665,392	\$68.44

**Table 19**

**New Mexico**

**Cotton Insect Losses 2011**

Pest	acres infested	acres treated	#apps/ acre	#apps/ tot	cost/ acre	% Reduction	Bales Lost
			trtd	acres			
Boll Weevil	0	0	0	0.000	\$0.00	0.000%	0
Bollworm/Budworm	6,460	3,400	1	0.050	\$0.50	0.001%	2
Pink Bollworm	0	0	0	0.000	\$0.00	0.000%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.000%	0
Lygus	6,120	952	1	0.014	\$0.14	0.001%	1
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.000%	0
Spider Mites	0	0	0	0.000	\$0.00	0.000%	0
Thrips	10,879	2,040	0	0.000	\$0.00	0.004%	6
Beet Armyworm	7,480	2,040	1	0.030	\$0.08	0.001%	2
Fall Armyworm	0	0	0	0.000	\$0.00	0.000%	0
European Cornborer	0	0	0	0.000	\$0.00	0.000%	0
Stink Bugs	1,360	340	0	0.000	\$0.00	0.000%	0
Grasshoppers	10,879	1,360	1	0.020	\$0.44	0.008%	13
Saltmarsh Caterpillars	340	0	0	0.000	\$0.00	0.000%	0
Aphids	2,720	680	0	0.000	\$0.00	0.000%	0
Banded Winged Whitefly	2,720	0	0	0.000	\$0.00	0.000%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.000%	0
Loopers	0	0	0	0.000	\$0.00	0.000%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.000%	0
Cutworms	0	0	0	0.000	\$0.00	0.000%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.000%	0
Cotton Square Borer	0	0	0	0.000	\$0.00	0.000%	0
				0.114	\$1.16	0.015%	25

Yield & Management Results	
Total Acres	67,996
Total bales Harvested	144,916
yield (lbs/acre)	1,023
Total bales Lost to Insects	25
Percent Yield Loss	0.02%
Yield w/o Insects (lbs/ac)	1,023
Ave. # Spray Applications	0.114
Bales lost all factors	19,603
% yield loss all factors	11.9%

Economic Results				
		Total	Per Acre	
Foliar Insecticides Costs		\$78,535	\$1.16	
At Planting Costs		\$126,473	\$1.86	
In-furrow costs		\$119,945	\$1.76	
Scouting costs		\$290,683	\$4.28	
Eradication costs		\$531,298	\$7.81	
Transgenic cotton		\$638,190	\$9.39	
Total Costs		\$1,785,123	\$26.25	
Yield Lost to insects		\$10,688	\$0.16	
Total Losses + Costs		\$1,795,812	\$26.41	
BW erad		\$5.95	PBW erad	\$6.98



**Table 20**

**North Carolina**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	800,000	160,000	1	0.240	\$1.80	0.10%	1,250
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	800,000	128,000	1	0.192	\$1.39	0.20%	2,500
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	400,000	13,600	1	0.017	\$0.20	0.05%	625
Thrips	800,000	624,000	1	1.014	\$6.08	1.00%	12,500
Beet Armyworm	30,000	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	20,000	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	800,000	624,000	0	0.960	\$6.40	1.60%	20,000
Grasshoppers	80	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	800,000	8,400	1	0.011	\$0.12	0.00%	13
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	0	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	80,000	32,000	1	0.040	\$0.16	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				2.474	\$16.16	2.95%	36,888

**Yield & Management Results**

Total Acres	800,000
Total bales Harvested	1,250,000
yield (lbs/acre)	750
Total bales Lost to Insects	36,888
Percent Yield Loss	2.95%
Yield w/o Insects (lbs/ac)	773
Ave. # Spray Applications	2.47
Bales lost all factors	36,888
% yield loss all factors	2.95%

**Economic Results**

	<b>Total</b>	<b>Per Acre</b>
Foliar Insecticides Costs	\$12,924,400	\$16.16
At Planting Costs	\$9,139,200	\$11.42
In-furrow costs	\$4,320,000	\$5.40
Scouting costs	\$4,800,000	\$6.00
Eradication costs	\$880,000	\$1.10
Transgenic cotton	\$22,373,120	\$27.97
Total Costs	\$54,436,720	\$68.05
Yield Lost to insects	\$16,820,700	\$21.03
Total Losses + Costs	\$71,257,420	\$89.07

**Table 21**

**Oklahoma**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	0	0	0	0.000	\$0.00	0.00%	0
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	26,246	20,189	1	0.050	\$0.45	0.10%	601
Lygus	0	0	0	0.000	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	0	0	0	0.000	\$0.00	0.00%	0
Thrips	80,756	60,567	1	0.150	\$0.75	0.10%	616
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	48,270	27,426	1	0.008	\$0.07	0.02%	92
Grasshoppers	1,009	404	1	0.001	\$0.01	0.00%	15
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	0	0	0	0.000	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	0	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				0.209	\$1.28	0.215%	1,324

**Yield & Management Results**

Total Acres	403,779
Total bales Harvested	55,000
yield (lbs/acre)	306
Total bales Lost to Insects	1,324
Percent Yield Loss	0.215%
Yield w/o Insects (lbs/ac)	307
Ave. # Spray Applications	0.21
Bales lost all factors	358,623
% yield loss all factors	58.2%

**Economic Results**

	<b>Total</b>	<b>Per Acre</b>
Foliar Insecticides Costs	\$515,626	\$1.28
At Planting Costs	\$2,196,558	\$5.44
In-furrow costs	\$222,078	\$0.55
Scouting costs	\$393,685	\$0.98
Eradication costs	\$807,558	\$2.00
Transgenic cotton	\$3,473,310	\$8.60
Total Costs	\$7,608,815	\$18.84
Yield Lost to insects	\$413,235	\$1.02
Total Losses + Costs	\$8,022,049	\$19.87

Table 22

South Carolina

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	303,000	212,100	1	0.700	\$5.60	0.90%	5,554
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	303,000	0	0	0.000	\$0.00	0.00%	0
Lygus	303,000	15,150	0	0.005	\$0.04	0.10%	617
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	303,000	30,300	0	0.010	\$0.14	0.10%	617
Thrips	303,000	242,400	1	0.800	\$5.20	1.00%	6,171
Beet Armyworm	15,150	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	272,700	15,150	0	0.005	\$0.07	0.09%	555
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	303,000	242,400	1	0.800	\$6.40	0.50%	3,085
Grasshoppers	272,700	15,150	0	0.005	\$0.04	0.00%	0
Saltmarsh Caterpillars	15,150	0	0	0.000	\$0.00	0.00%	0
Aphids	303,000	30,300	0	0.010	\$0.09	0.00%	0
Banded Winged Whitefly	151,500	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	60,600	0	0	0.000	\$0.00	0.00%	0
Loopers	30,300	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	15,150	0	0	0.000	\$0.00	0.00%	0
Cutworms	272,700	30,300	0	0.010	\$0.05	0.09%	555
Clouded Plant bugs	15,150	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				2.345	\$17.62	2.78%	17,155

**Yield & Management Results**

Total Acres	303,000
Total bales Harvested	473,438
yield (lbs/acre)	750
Total bales Lost to Insects	17,155
Percent Yield Loss	2.78%
Yield w/o Insects (lbs/ac)	771
Ave. # Spray Applications	2.35
Bales lost all factors	143,660
% yield loss all factors	23.3%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$5,338,860	\$17.62
At Planting Costs	\$2,181,600	\$7.20
In-furrow costs	\$1,187,760	\$3.92
Scouting costs	\$1,802,850	\$5.95
Eradication costs	\$378,750	\$1.25
Transgenic cotton	\$6,332,262	\$20.90
Total Costs	\$17,222,082	\$56.84
Yield Lost to insects	\$7,493,444	\$24.73
Total Losses + Costs	\$24,715,526	\$81.57

**Table 23**

**Tennessee**

**Cotton Insect Losses 2011**

<b>Pest</b>	<b>acres infested</b>	<b>acres treated</b>	<b>#apps/ acre trtd</b>	<b>#apps/ tot acres</b>	<b>cost/ acre</b>	<b>%red</b>	<b>Bales lost</b>
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	456,000	336,000	1	0.840	\$4.20	1.52%	20,234
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	480,000	480,000	3	2.900	\$18.85	3.00%	39,935
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	288,000	96,000	1	0.220	\$1.98	0.66%	8,786
Thrips	480,000	384,000	1	1.040	\$3.38	3.20%	42,598
Beet Armyworm	9,600	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	48,000	4,800	1	0.010	\$0.08	0.01%	133
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	480,000	216,000	1	0.450	\$2.48	0.80%	10,649
Grasshoppers	4,800	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	432,000	33,600	1	0.070	\$0.32	0.09%	1,198
Banded Winged Whitefly	24,000	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	5	0	0	0.000	\$0.00	0.00%	0
Loopers	4,800	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	19,200	336,000	1	0.700	\$1.82	0.00%	5
Clouded Plant bugs	288,000	38,400	1	0.080	\$0.44	0.12%	1,597
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
			0	6.310	\$33.54	9.40%	125,136

<b>Yield &amp; Management Results</b>	
Total Acres	480,000
Total bales Harvested	820,000
yield (lbs/acre)	820
Total bales Lost to Insects	125,136
Percent Yield Loss	9.40%
Yield w/o Insects (lbs/ac)	905
Ave. # Spray Applications	6.31
Bales lost all factors	511,177
% yield loss all factors	38.4%

<b>Economic Results</b>		
	Total	Per Acre
Foliar Insecticides Costs	\$16,099,200	\$33.54
At Planting Costs	\$4,276,800	\$8.91
In-furrow costs	\$47,040	\$0.10
Scouting costs	\$3,420,000	\$7.13
Eradication costs	\$720,000	\$1.50
Transgenic cotton	\$7,729,488	\$16.10
Total Costs	\$32,292,528	\$67.28
Yield Lost to insects	\$55,260,061	\$115.13
Total Losses + Costs	\$87,552,589	\$182.40

Table 24

## Texas

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	185,353	17,500	0	0.016		\$0.00	0.000%	0
Bollworm/Budworm	1,031,673	251,251	1	0.075		\$0.43	0.069%	4,573
Pink Bollworm	0	0	0	0.000		\$0.00	0.000%	0
Cotton Fleahopper	1,449,786	977,647	2	0.609		\$2.78	0.208%	12,513
Lygus	392,682	10,815	1	0.003		\$0.02	0.001%	143
Cotton Leaf Perforator	3	0	0	0.000		\$0.00	0.000%	0
Spider Mites	721,571	158,798	1	0.047		\$0.32	0.054%	3,635
Thrips	2,648,547	679,836	1	0.236		\$0.86	0.450%	28,230
Beet Armyworm	457,412	11,885	0	0.004		\$0.02	0.000%	0
Fall Armyworm	145,603	3,664	1	0.001		\$0.01	0.028%	1,984
European Cornborer	0	0	0	0.000		\$0.00	0.000%	0
Stink Bugs	493,807	171,142	1	0.051		\$0.33	0.399%	22,473
Grasshoppers	98,838	4,706	1	0.001		\$0.01	0.024%	1,354
Saltmarsh Caterpillars	9,946	0	0	0.000		\$0.00	0.000%	0
Aphids	1,314,931	194,801	1	0.058		\$0.33	0.014%	861
Banded Winged Whitefly	210,984	0	0	0.000		\$0.00	0.000%	0
Silverleaf Whitefly (Bemesia)	27,076	1,805	1	0.001		\$0.00	0.0002%	17
Loopers	224,077	0	0	0.000		\$0.00	0.000%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.000%	0
Cutworms	36,098	18,049	1	0.005		\$0.04	0.000%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.000%	0
Crenotiadetes (green mirid)	144,390	18,049	1	0.005		\$0.03	0.001%	62
Kurtomathrips morrilli	333,117	83,279	1	0.560		\$1.40	0.701%	54,324
Stripped fleabeetle	4,997	1,666	1	0.021		\$0.09	0.000%	396
False Chinch Bug	8,328	1,666	1	0.000		\$0.00	0.000%	0
				1.693		\$6.67	1.950%	130564

**Yield & Management Results**

Total Acres	3,372,074
Total bales Harvested	3,767,485
yield (lbs/acre)	536
Total bales Lost to Insects	130,564
Percent Yield Loss	1.95%
Yield w/o Insects (lbs/ac)	547
Ave. # Spray Applications	1.69
Bales lost all factors	3,683,509
% yield loss all factors	49.44%

**Economic Results**

	Total	Per Acre	
Foliar Insecticides Costs	\$289,727	\$0.09	
At Planting Costs	\$23,921,324	\$7.09	
In-furrow costs	\$14,969,175	\$4.44	
Scouting costs	\$14,519,825	\$4.31	
Eradication costs	\$27,524,578	\$8.16	
Transgenic cotton	\$20,665,627	\$6.13	
Total Costs	\$101,890,257	\$30.22	
Yield Lost to insects	\$53,821,624	\$15.96	
Total Losses + Costs	\$155,711,881	\$46.18	
BW erad	\$8.16	PBW erad	\$0.00

Table 24a

## Southern Texas

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	167,853	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	785,118	153,414	1	0.170	\$0.87	0.04%	837
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	902,434	703,899	2	1.248	\$6.05	0.08%	1,540
Lygus	180,487	0	0	0.000	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	342,925	135,365	1	0.150	\$1.20	0.08%	1,463
Thrips	902,434	36,097	1	0.040	\$0.18	0.02%	385
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	9,024	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	216,584	162,438	1	0.180	\$0.88	0.01%	231
Grasshoppers	9,024	1,805	1	0.002	\$0.01	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	803,166	153,414	1	0.170	\$1.12	0.00%	0
Banded Winged Whitefly	36,097	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	27,073	1,805	1	0.002	\$0.02	0.00%	17
Loopers	9,024	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	36,097	18,049	1	0.020	\$0.14	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Crenotiades (green mirid)	144,389	18,049	1	0.020	\$0.12	0.00%	62
				2.002	\$10.59	0.24%	4,534

**Yield & Management Results**

Total Acres	902,434
Total bales Harvested	1,410,053
yield (lbs/acre)	750
Total bales Lost to Insects	4,534
Percent Yield Loss	0.24%
Yield w/o Insects (lbs/ac)	752
Ave. # Spray Applications	2.00
Bales lost all factors	514,556
% yield loss all factors	26.7%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$9,554,791	\$10.59
At Planting Costs	\$6,279,136	\$6.96
In-furrow costs	\$180,126	\$0.20
Scouting costs	\$5,445,738	\$6.03
Eradication costs	\$20,304,765	\$22.50
Transgenic cotton	\$5,252,419	\$5.82
Total Costs	\$47,016,974	\$52.10
Yield Lost to insects	\$1,893,556	\$2.10
Total Losses + Costs	\$48,910,531	\$54.20

Table 24b

## Texas Rolling Plains

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	0	0	0	0.000		\$0.00	0.00%	0
Bollworm/Budworm	56,000	0	0	0.000		\$0.00	0.00%	0
Pink Bollworm	0	0	0	0.000		\$0.00	0.00%	0
Cotton Fleahopper	80,000	2,400	1	0.030		\$0.23	0.50%	1,086
Lygus	0	0	0	0.000		\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000		\$0.00	0.00%	0
Spider Mites	8,000	800	1	0.010		\$0.18	0.03%	54
Thrips	80,000	0	0	0.000		\$0.00	0.00%	0
Beet Armyworm	0	0	0	0.000		\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000		\$0.00	0.00%	0
European Cornborer	0	0	0	0.000		\$0.00	0.00%	0
Stink Bugs	0	0	0	0.000		\$0.00	0.00%	0
Grasshoppers	800	0	0	0.000		\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000		\$0.00	0.00%	0
Aphids	20,000	1,600	1	0.020		\$0.18	0.06%	136
Banded Winged Whitefly	0	0	0	0.000		\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000		\$0.00	0.00%	0
Loopers	0	0	0	0.000		\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.00%	0
Cutworms	0	0	0	0.000		\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.00%	0
Crenotiades (green mirid)	0	0	0	0.000		\$0.00	0.00%	0
Cotton Square Borer	0	0	0	0.000		\$0.00	0.00%	0
				0.060		\$0.59	0.59%	1,276

**Yield & Management Results**

Total Acres	80,000
Total bales Harvested	133,333
yield (lbs/acre)	800
Total bales Lost to Insects	1,276
Percent Yield Loss	0.59%
Yield w/o Insects (lbs/ac)	805
Ave. # Spray Applications	0.06
Bales lost all factors	83,778
% yield loss all factors	38.6%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$46,800	\$0.59
At Planting Costs	\$644,000	\$8.05
In-furrow costs	\$15,680	\$0.20
Scouting costs	\$48,000	\$0.60
Eradication costs	\$240,000	\$3.00
Transgenic cotton	\$534,316	\$6.68
Total Costs	\$1,528,796	\$19.11
Yield Lost to insects	\$520,415	\$6.51
Total Losses + Costs	\$2,049,211	\$25.62

Table 24c

Texas Southern Plains

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	0	0	0	0.000		\$0.00	0.00%	0
Bollworm/Budworm	66,623	2,498	1	0.002		\$0.01	0.03%	1,122
Pink Bollworm	0	0	0	0.000		\$0.00	0.00%	0
Cotton Fleahopper	8,328	0	0	0.000		\$0.00	0.00%	0
Lygus	99,935	8,328	1	0.005		\$0.03	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000		\$0.00	0.00%	0
Spider Mites	158,231	6,662	1	0.004		\$0.02	0.04%	1,232
Thrips	949,384	249,838	1	0.180		\$0.45	0.37%	12,991
Beet Armyworm	263,163	0	0	0.000		\$0.00	0.00%	0
Fall Armyworm	136,578	3,664	1	0.002		\$0.01	0.06%	1,984
European Cornborer	0	0	0	0.000		\$0.00	0.00%	0
Stink Bugs	4,497	0	0	0.000		\$0.00	0.00%	0
Grasshoppers	0	0	0	0.000		\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000		\$0.00	0.00%	0
Aphids	133,247	0	0	0.000		\$0.00	0.00%	0
Banded Winged Whitefly	174,887	0	0	0.000		\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000		\$0.00	0.00%	0
Loopers	133,247	0	0	0.000		\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.00%	0
Cutworms	0	0	0	0.000		\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.00%	0
Kurtomathrips morrilli	333,117	83,279	1	0.050		\$0.13	1.42%	49,789
Stripped fleabeetle	4,997	1,666	1	0.001		\$0.00	0.00%	0
False Chinch Bug	8,328	1,666	1	0.001		\$0.00	0.00%	0
				0.245		\$0.66	1.91%	67,118

Yield & Management Results

Total Acres	1,665,586
Total bales Harvested	1,387,988
yield (lbs/acre)	400
Total bales Lost to Insects	67,118
Percent Yield Loss	1.91%
Yield w/o Insects (lbs/ac)	408
Ave. # Spray Applications	0.24
Bales lost all factors	2,118,293
% yield loss all factors	60.4%

Economic Results

	Total	Per Acre
Foliar Insecticides Costs	\$1,093,540	\$0.66
At Planting Costs	\$10,493,192	\$6.30
In-furrow costs	\$12,991,571	\$7.80
Scouting costs	\$5,996,110	\$3.60
Eradication costs	\$2,081,983	\$1.25
Transgenic cotton	\$9,699,455	\$5.82
Total Costs	\$42,355,851	\$25.43
Yield Lost to insects	\$27,384,259	\$16.44
Total Losses + Costs	\$69,740,110	\$41.87



Table 24d

Texas Blacklands

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	17,500	17,500	3	0.181		\$0.46	0.00%	0
Bollworm/Budworm	58,024	87,035	1	0.300		\$2.40	0.40%	1,934
Pink Bollworm	0	0	0	0.000		\$0.00	0.00%	0
Cotton Fleahopper	290,118	261,106	4	3.150		\$7.09	2.00%	9,671
Lygus	0	0	0	0.000		\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000		\$0.00	0.00%	0
Spider Mites	101,541	14,506	1	0.050		\$0.50	0.18%	846
Thrips	290,118	261,106	1	0.900		\$2.25	3.00%	14,506
Beet Armyworm	0	0	0	0.000		\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000		\$0.00	0.00%	0
European Cornborer	0	0	0	0.000		\$0.00	0.00%	0
Stink Bugs	266,909	8,704	1	0.030		\$0.24	4.60%	22,242
Grasshoppers	81,233	2,901	1	0.010		\$0.07	0.28%	1,354
Saltmarsh Caterpillars	0	0	0	0.000		\$0.00	0.00%	0
Aphids	145,059	34,814	1	0.120		\$0.54	0.15%	725
Banded Winged Whitefly	0	0	0	0.000		\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000		\$0.00	0.00%	0
Loopers	0	0	0	0.000		\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.00%	0
Cutworms	0	0	0	0.000		\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.00%	0
Crenotiades (green mirid)	0	0	0	0.000		\$0.00	0.00%	0
Cotton Square Borer	0	0	0	0.000		\$0.00	0.00%	0
				4.741		\$13.54	10.6%	51,278

**Yield & Management Results**

Total Acres	290,118
Total bales Harvested	181,324
yield (lbs/acre)	300
Total bales Lost to Insects	51,278
Percent Yield Loss	10.6%
Yield w/o Insects (lbs/ac)	336
Ave. # Spray Applications	4.74
Bales lost all factors	302,206
% yield loss all factors	66.1%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$3,928,639	\$13.54
At Planting Costs	\$3,342,159	\$11.52
In-furrow costs	\$0	\$0.00
Scouting costs	\$1,566,637	\$5.40
Eradication costs	\$3,844,064	\$13.25
Transgenic cotton	\$2,088,850	\$7.20
Total Costs	\$14,770,349	\$50.91
Yield Lost to insects	\$21,413,842	\$73.81
Total Losses + Costs	\$36,184,190	\$124.72

Table 24e

## Texas Permian Basin

## Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	0	0	0	0.000		\$0.00	0.00%	0
Bollworm/Budworm	1,465	0	0	0.000		\$0.00	0.00%	0
Pink Bollworm	0	0	0	0.000		\$0.00	0.00%	0
Cotton Fleahopper	14,650	0	0	0.000		\$0.00	0.00%	0
Lygus	0	0	0	0.000		\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000		\$0.00	0.00%	0
Spider Mites	1,465	1,465	1	0.010		\$0.10	0.01%	39
Thrips	139,175	1,465	1	0.010		\$0.06	0.00%	0
Beet Armyworm	0	0	0	0.000		\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000		\$0.00	0.00%	0
European Cornborer	0	0	0	0.000		\$0.00	0.00%	0
Stink Bugs	0	0	1	0.000		\$0.00	0.00%	0
Grasshoppers	0	0	0	0.000		\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000		\$0.00	0.00%	0
Aphids	7,325	0	0	0.000		\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0	0.000		\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000		\$0.00	0.00%	0
Loopers	0	0	0	0.000		\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.00%	0
Cutworms	0	0	0	0.000		\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.00%	0
Crenotiades (green mirid)	0	0	0	0.000		\$0.00	0.00%	0
Cotton Square Borer	0	0	0	0.000		\$0.00	0.00%	0
				0.020		\$0.16	0.010%	39

**Yield & Management Results**

Total Acres	146,500
Total bales Harvested	244,167
yield (lbs/acre)	800
Total bales Lost to Insects	39
Percent Yield Loss	0.01%
Yield w/o Insects (lbs/ac)	800
Ave. # Spray Applications	0.020
Bales lost all factors	146,563
% yield loss all factors	37.5%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$23,440	\$0.16
At Planting Costs	\$336,950	\$2.30
In-furrow costs	\$0	\$0.00
Scouting costs	\$43,950	\$0.30
Eradication costs	\$293,000	\$2.00
Transgenic cotton	\$962,556	\$6.57
Total Costs	\$1,659,896	\$11.33
Yield Lost to insects	\$15,942	\$0.11
Total Losses + Costs	\$1,675,838	\$11.44

Table 24f

Texas Trans-Pecos

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot	cost/ acre	%red	Bales lost
				acres			
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	27,145	5,817	1	0.150	\$1.65	0.14%	144
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	34,900	7,756	1	0.200	\$1.60	0.05%	46
Lygus	12,797	0	1	0.000	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	0	0	0	0.000	\$0.00	0.00%	0
Thrips	38,778	36,839	2	1.425	\$9.12	0.20%	206
Beet Armyworm	7,756	1,939	1	0.050	\$0.75	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	5,817	0	0	0.000	\$0.00	0.00%	0
Grasshoppers	7,756	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	9,695	0	1	0.000	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	9,695	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Crenotiades (green mirid)	0	0	0	0.000	\$0.00	0.00%	0
Cotton Square Borer	0	0	0	0.000	\$0.00	0.00%	0
				1.825	\$13.12	0.39%	396

**Yield & Management Results**

Total Acres	38,778
Total bales Harvested	86,847
yield (lbs/acre)	1,075
Total bales Lost to Insects	396
Percent Yield Loss	0.39%
Yield w/o Insects (lbs/ac)	1,079
Ave. # Spray Applications	1.83
Bales lost all factors	16,034
% yield loss all factors	15.59%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$508,767	\$13.12
At Planting Costs	\$339,308	\$8.75
In-furrow costs	\$76,005	\$1.96
Scouting costs	\$151,234	\$3.90
Eradication costs	\$387,780	\$10.00
Transgenic cotton	\$130,251	\$3.36
Total Costs	\$1,593,345	\$41.09
Yield Lost to insects	\$190,123	\$4.90
Total Losses + Costs	\$1,783,468	\$45.99

Table 24g

Texas Panhandle

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot		cost/ acre	%red	Bales lost
				acres				
Boll Weevil	0	0	0	0.000		\$0.00	0.00%	0
Bollworm/Budworm	37,299	2,487	1	0.010		\$0.07	0.08%	535
Pink Bollworm	0	0	0	0.000		\$0.00	0.00%	0
Cotton Fleahopper	119,356	2,487	1	0.010		\$0.06	0.02%	171
Lygus	99,463	2,487	1	0.010		\$0.06	0.02%	143
Cotton Leaf Perforator	2	0	0	0.000		\$0.00	0.00%	0
Spider Mites	109,410	0	0	0.000		\$0.00	0.00%	0
Thrips	248,658	94,490	2	0.570		\$2.00	0.02%	143
Beet Armyworm	186,494	9,946	1	0.040		\$0.50	0.00%	0
Fall Armyworm	0	0	0	0.000		\$0.00	0.00%	0
European Cornborer	0	0	0	0.000		\$0.00	0.00%	0
Stink Bugs	0	0	0	0.000		\$0.00	0.00%	0
Grasshoppers	25	0	0	0.000		\$0.00	0.00%	0
Saltmarsh Caterpillars	9,946	0	0	0.000		\$0.00	0.00%	0
Aphids	196,440	4,973	1	0.020		\$0.15	0.00%	0
Banded Winged Whitefly	0	0	0	0.000		\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	2	0	0	0.000		\$0.00	0.00%	0
Loopers	72,111	0	0	0.000		\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000		\$0.00	0.00%	0
Cutworms	0	0	0	0.000		\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000		\$0.00	0.00%	0
Crenotiades (green mirid)	0	0	0	0.000		\$0.00	0.00%	0
Cotton Square Borer	0	0	0	0.000		\$0.00	0.00%	0
				0.660		\$2.83	0.139%	992

Yield & Management Results	
Total Acres	248,658
Total bales Harvested	323,773
yield (lbs/acre)	625
Total bales Lost to Insects	992
Percent Yield Loss	0.139%
Yield w/o Insects (lbs/ac)	626
Ave. # Spray Applications	0.66
Bales lost all factors	389,997
% yield loss all factors	54.6%

Economic Results		
	Total	Per Acre
Foliar Insecticides Costs	\$704,697	\$2.83
At Planting Costs	\$2,486,580	\$10.00
In-furrow costs	\$1,705,794	\$6.86
Scouting costs	\$1,268,156	\$5.10
Eradication costs	\$372,987	\$1.50
Transgenic cotton	\$1,916,705	\$7.71
Total Costs	\$8,454,919	\$34.00
Yield Lost to insects	\$404,794	\$1.63
Total Losses + Costs	\$8,859,712	\$35.63

Table 25

Virginia

Cotton Insect Losses 2011

Pest	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	59,500	76,500	1	0.300	\$2.40	0.00%	0
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	850	0	0	0.000	\$0.00	0.00%	0
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	850	0	0	0.000	\$0.00	0.00%	0
Thrips	85,000	85,000	1	0.840	\$5.88	2.00%	2,625
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	0	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	51,000	63,750	1	0.150	\$1.20	0.00%	0
Grasshoppers	9	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	0	0	0	0.000	\$0.00	0.00%	0
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	0	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	0	0	0	0.000	\$0.00	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other 1	0	0	0	0.000	\$0.00	0.00%	0
				1.290	\$9.48	2.00%	2,625

Yield & Management Results	
Total Acres	85,000
Total bales Harvested	132,813
yield (lbs/acre)	750
Total bales Lost to Insects	2,625
Percent Yield Loss	2.00%
Yield w/o Insects (lbs/ac)	765
Ave. # Spray Applications	1.29
Bales lost all factors	29,219
% yield loss all factors	21.00%

Economic Results	Total	Per Acre
Foliar Insecticides Costs	\$805,800	\$9.48
At Planting Costs	\$1,275,000	\$15.00
In-furrow costs	\$124,950	\$1.47
Scouting costs	\$57,800	\$0.68
Eradication costs	\$276,250	\$3.25
Transgenic cotton	\$1,368,216	\$16.10
Total Costs	\$3,908,016	\$45.98
Yield Lost to insects	\$1,197,000	\$14.08
Total Losses + Costs	\$5,105,016	\$60.06