

## **COTTON INSECT LOSSES 2012**

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### **Highlights**

**Cotton losses to arthropod pests reduced overall yields by 2.04%. Lygus were the top ranked pest in 2012 reducing yields by 0.695%. Stink bugs were ranked second at 0.375%. Thrips were ranked second at 0.374%. Bollworm/budworm complex caused 0.188% loss. Cotton fleahoppers were fifth at 0.152% and spider mites reduced yields by 0.147%. No other pest exceeded 0.1% loss. Total costs and loss for insects in 2012 were \$896.5 million. Direct management costs for arthropods were \$51.39 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.

### 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.

Table 1

## USDA Cotton Production

## Cotton Insect losses 2012

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>	<u>2011</u>
Alabama	380,000	377000	866	891	952	684
Arizona	203,000	198000	34,860	1576	1,511	1,467
Arkansas	595,000	580000	1,083	1084	1,083	1,049
California	367,000	141000	1,651	1617	1,651	1,639
Florida	108,000	105000	960	960	897	809
Georgia	1,290,000	1,285,000	1,009	1009	1027	811
Kansas	56,000	52000	415	508	578	784
Louisiana	230,000	220000	1,004	1025	1003	864
Mississippi	475,000	460000	1,013	981	970	983
Missouri	350,000	330000	945	1018	1,033	1,068
New Mexico	484,000	47000	1,008	970	981	1,096
North Carolina	525,000	580000	920	977	993	854
Oklahoma	305,000	175000	184	411	480	738
South Carolina	301,000	296000	875	908	918	872
Tennessee	380,000	375000	900	922	934	843
Texas	6,558,000	4,900,000	401	539	615	722
Virginia	86,000	85000	1,080	1045	1129	685
<b>total US</b>	<b>12,121,000</b>	<b>10,206,000</b>	<b>668</b>	<b>781</b>	<b>849</b>	<b>814</b>
			<u>Pima</u>			
Arizona	3,000	3,000		1120	1152	864
California	225,000	224,000		1350	1,575	1,216
New Mexico	3,000	2,900		828	981	889
Texas	8,000	7,500		960	832	931
<b>total US</b>	<b>239,000</b>	<b>237,400</b>		<b>1328</b>	<b>1,540</b>	<b>1,184</b>
<b>TOTAL US</b>	<b>12,360,000</b>	<b>10,443,400</b>		<b>793</b>	<b>866</b>	<b>821</b>

Table 1A

## USDA Cotton production

## Cotton Insect Losses 2012

State	Area Planted			Area Harvested		
	2010	2011	2012	2010	2011	2012
<u>Upland</u>						
Alabama	340,000	460,000	380,000	337,000	440,000	377,000
Arizona	195,000	261,000	203,000	193,000	259,000	198,000
Arkansas	545,000	680,000	595,000	540,000	660,000	580,000
California	124,000	442,000	367,000	123,000	440,000	141,000
Florida	92,000	122,000	108,000	89,000	120,000	105,000
Georgia	1,330,000	1,600,000	1,290,000	1,320,000	1,520,000	1,285,000
Kansas	51,000	78,000	56,000	49,000	67,000	52,000
Louisiana	255,000	295,000	230,000	250,000	285,000	220,000
Mississippi	420,000	630,000	475,000	415,000	605,000	460,000
Missouri	310,000	375,000	350,000	308,000	360,000	330,000
New Mexico	47,000	71,000	484,000	46,000	66,000	47,000
North Carolina	550,000	810,000	525,000	545,000	800,000	580,000
Oklahoma	285,000	415,000	305,000	270,000	100,000	175,000
South Carolina	202,000	305,000	301,000	201,000	303,000	296,000
Tennessee	390,000	495,000	380,000	387,000	490,000	375,000
Texas	5,550,000	7,565,000	6,558,000	5,350,000	3,214,500	4,900,000
Virginia	83,000	116,000	86,000	82,000	115,000	85,000
<b>total US</b>	<b>10,769,000</b>	<b>14,720,000</b>	<b>12,121,000</b>	<b>10,505,000</b>	<b>9,844,500</b>	<b>10,206,000</b>
<u>Pima</u>						
Arizona	2,500	11,000	3,000	2,500	11,000	3,000
California	182,000	260,000	225,000	180,000	259,000	224,000
New Mexico	2,700	2,040	3,000	2,700	2,040	2,900
Texas	17,000	15,000	8,000	16,500	14,500	7,500
<b>total US</b>	<b>204,200</b>	<b>288,040</b>	<b>239,000</b>	<b>201,700</b>	<b>286,540</b>	<b>237,400</b>
<b>All US Cotton</b>	<b>10,973,200</b>	<b>15,008,040</b>	<b>12,360,000</b>	<b>10,706,700</b>	<b>10,131,040</b>	<b>10,443,400</b>

Table 2

At planting insecticide applications

Cotton Insect Losses 2012

States	At planting insecticide applications			Cotton Insect Losses 2012			
	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	125,609	\$8.91	\$9.00	1,269	\$0.12	\$12.00	\$1,145,708
South Alabama	223,000	\$8.48	\$10.00	26,300	\$1.20	\$12.00	\$2,545,600
Arizona	34,426	\$2.26	\$13.08	15,584	\$0.51	\$6.53	\$552,150
Southeast Arkansas	200,000	\$11.00	\$11.00	0	\$0.00	\$15.00	\$2,200,000
Northeast Arkansas	380,000	\$11.00	\$11.00	0	\$0.00	\$15.00	\$4,180,000
California	203,500	\$8.25	\$15.00	148,000	\$6.00	\$15.00	\$5,272,500
Florida	103,950	\$6.93	\$7.00	1,050	\$0.15	\$15.00	\$743,400
Georgia	1,156,500	\$6.30	\$7.00	64,250	\$0.75	\$15.00	\$9,059,250
Kansas	0	\$0.00	\$0.00	0	\$0.00	\$0.00	\$0
Louisiana	220,000	\$55.00	\$13.00	0	\$0.00	\$0.00	\$2,860,000
Mississippi - Delta	348,975	\$14.85	\$15.00	3,525	\$0.12	\$12.00	\$5,276,925
Mississippi - Hills	116,325	\$14.85	\$15.00	0	\$0.00	\$0.00	\$1,744,875
Missouri	350,000	\$15.00	\$15.00	17,500	\$0.05	\$1.00	\$5,267,500
New Mexico	31,736	\$7.99	\$11.75	8,401	\$1.76	\$9.80	\$455,219
North Carolina	522,000	\$14.69	\$16.32	58,000	\$1.50	\$15.00	\$9,389,040
Oklahoma	255,000	\$6.16	\$7.25	15,000	\$0.55	\$11.00	\$2,013,750
South Carolina	222,000	\$9.00	\$12.00	118,400	\$4.00	\$10.00	\$3,848,000
Tennessee	371,250	\$8.91	\$9.00	3,750	\$0.10	\$9.80	\$3,378,000
Texas Coast & Blacklands	836,280	\$7.81	\$8.58	101,089	\$1.12	\$10.15	\$8,201,334
Texas Rolling Plains	1,359,030	\$9.60	\$12.00	16,988	\$0.10	\$9.80	\$16,474,836
Texas Farwest & High Plains	2,366,310	\$5.34	\$9.71	215,119	\$0.56	\$11.24	\$25,394,804
Virginia	85,000	\$13.00	\$13.00	850	\$0.15	\$15.00	\$1,117,750
All States	9,510,890	\$8.04	\$10.67	815,074	\$0.76	\$11.84	\$111,120,642

Table 3

## Cotton Insect Eradication

## Cotton Insect losses 2012

State	Number Acres	Cost/ treated Acre	Wt cost/all acres	Total Cost
North Alabama	126,878	\$2.50	\$2.50	\$317,195
South Alabama	263,123	\$3.50	\$3.50	\$920,931
Arizona	199,000	\$1.22	\$1.22	\$242,780
Southeast Arkansas	200,000	\$12.00	\$12.00	\$2,400,000
Northeast Arkansas	380,000	\$13.00	\$13.00	\$4,940,000
California	0	\$0.00	\$0.00	\$0
Florida	105,000	\$1.00	\$1.00	\$105,000
Georgia	1,285,000	\$1.00	\$1.00	\$1,285,000
Kansas	0	\$0.00	\$0.00	\$0
Louisiana	220,000	\$6.00	\$6.00	\$1,320,000
Mississippi - Delta	352,500	\$4.00	\$4.00	\$1,410,000
Mississippi - Hills	117,500	\$6.00	\$6.00	\$705,000
Missouri	350,000	\$5.00	\$5.00	\$1,750,000
New Mexico	46,670	\$5.95	\$5.95	\$277,687
North Carolina	580,000	\$0.90	\$0.90	\$522,000
Oklahoma	300,000	\$2.00	\$2.00	\$600,000
South Carolina	296,000	\$1.25	\$1.25	\$370,000
Tennessee	375,000	\$1.00	\$1.00	\$375,000
Texas Coast & Blacklands	918,989	\$18.94	\$18.94	\$17,405,652
Texas Rolling Plains	1,698,787	\$2.69	\$2.69	\$4,569,737
Texas Far West and High Plains	4,302,381	\$1.32	\$1.32	\$5,666,236
Virginia	85,000	\$0.50	\$0.50	\$42,500
<b>All States - Boll Weevil</b>	<b>12,201,828</b>	<b>\$3.72</b>	<b>\$3.58</b>	<b>\$45,224,716</b>
Arizona Pink Bollworm	199,000	\$5.49	\$5.49	\$1,092,510
California Pink Bollworm	370,000	\$6.13	\$6.13	\$2,266,250
New Mexico Pink Bollworm	11,154	\$6.98	\$1.67	\$77,856
West Texas Pink Bollworm	25,162	\$9.38	\$0.03	\$236,016
<b>Total US - Pink Bollworm</b>	<b>605,316</b>	<b>\$6.87</b>	<b>\$0.29</b>	<b>\$3,672,632</b>
<b>Total US - Insect Eradication*</b>	<b>12,807,144</b>	<b>\$3.82</b>	<b>\$3.87</b>	<b>\$48,897,348</b>

\*PBW and BW erad areas may overlap!

Table 4

*Bt* Cotton Costs

## Cotton insect losses 2012

State	Number acres	Bt cost/Acre	Average/ all Acres	Total Cost	% population Bollworm	Acres Bt cotton sprayed	Avg. appli to Bt cotton
Alabama, North	125,609	\$27.51	\$27.24	\$3,455,560	24.7%	0	0.00
Alabama, South	255,229	\$25.00	\$24.25	\$6,380,733	10.0%	4,736	0.37
Arizona	195,000	\$33.51	\$32.84	\$6,534,278	90.0%	0	0.00
Arkansas, Southeast	197,000	\$4.90	\$4.82	\$965,000	99.7%	105,500	1.28
Arkansas, Northeast	372,400	\$21.29	\$20.86	\$7,927,560	99.6%	112,100	1.20
California	0	\$0.00	\$0.00	\$0	0.0%	0	0.00
Florida	103,950	\$24.62	\$24.37	\$2,559,207	49.0%	41,475	1.00
Georgia	1,272,150	\$22.68	\$22.45	\$28,848,764	99.1%	33,796	1.00
Kansas	0	\$0.00	\$0.00	\$0	0.0%	0	0.00
Louisiana	215,600	\$27.21	\$26.67	\$5,867,400	100.0%	61,600	1.00
Mississippi, Delta	345,450	\$26.88	\$26.35	\$9,286,754	99.8%	143,291	1.43
Mississippi, Hills	115,150	\$26.68	\$26.15	\$3,072,085	99.8%	36,131	1.00
Missouri	336,000	\$24.16	\$23.19	\$8,118,180	87.5%	27,370	1.00
New Mexico	44,337	\$13.11	\$12.45	\$581,078	0.0%	0	0.00
North Carolina	578,840	\$19.74	\$19.70	\$11,426,302	25.0%	578,840	1.00
Oklahoma	297,000	\$8.60	\$8.51	\$2,554,200	0.0%	0	0.00
South Carolina	293,040	\$19.25	\$19.05	\$5,639,718	99.9%	263,736	1.11
Tennessee	371,250	\$17.98	\$17.80	\$6,675,938	99.9%	90,750	1.17
Texas Coast and Blacklands	827,090	\$16.54	\$14.89	\$13,680,070	99.9%	9,098	1.00
Texas Far West & High Plains	3,570,977	\$14.57	\$12.09	\$52,014,926	99.1%	4,216	1.00
Texas Rolling Plains	1,562,884	\$13.90	\$12.79	\$21,724,088	99.2%	8,494	1.00
Virginia	85,000	\$16.29	\$16.29	\$1,384,820	100.0%	85,000	1.00
<b>US</b>	<b>11,163,956</b>	<b>\$17.59</b>	<b>\$15.74</b>	<b>\$198,696,658</b>	<b>88.0%</b>	<b>1,362,208</b>	<b>0.95</b>



Table 5

Cotton Types

Cotton Insect losses 2012

	Acres of cotton which are					
	Bollgard II	Widestrike	TwinLink	Herbicides GM only	non-GM conventional	Organic
<b>US</b>	8,221,553	2,813,364	4,753	782,075	432,334	1,460
<b>Alabama</b>	242,882	135,325	0	3,900	7,894	0
<b>Arizona</b>	187,590	7,469	4,753	1,958	2,042	0
<b>Arkansas</b>	473,400	96,000	0	5,800	4,800	0
<b>California</b>	0	0	0	0	0	37
<b>Florida</b>	63,000	39,900	0	1,050	0	0
<b>Georgia</b>	745,300	526,850	0	12,850	0	0
<b>Kansas</b>	0	0	0	52,000	0	0
<b>Louisiana</b>	169,400	46,200	0	4,400	0	0
<b>Mississippi</b>	350,150	110,450	0	9,400	0	0
<b>Missouri</b>	287,000	49,000	0	10,500	3,500	0
<b>New Mexico</b>	20,815	20,021	0	1,447	1,307	653
<b>North Carolina</b>	322,480	256,360	0	580	580	0
<b>Oklahoma</b>	291,000	3,000	0	6,000	0	0
<b>South Carolina</b>	198,320	94,720	0	1,480	1,480	0
<b>Tennessee</b>	93,750	277,500	0	0	3,750	0
<b>Texas</b>	4,742,466	1,099,569	0	670,710	406,981	770
<b>Virginia</b>	34,000	51,000	0	0	0	0

Table 6

State	Application Technology			Cotton Insect losses 2012			
	applications by air			applications by ground			# Acres w
	% Acres	cost/ Acre	# apps	% Acres	cost/ Acre	# apps	NO apps
Alabama, North	20%	\$4.10	0.00	80%	\$3.60	0.00	254
Alabama, South	10%	\$4.50	1.00	95%	\$3.00	1.50	39,468
Arizona	78%	\$9.77	3.48	52%	\$10.29	1.99	20,500
Arkansas, Southeast	80%	\$6.00	6.00	20%	\$5.50	2.00	0
Arkansas, Northeast	70%	\$6.00	3.00	30%	\$5.50	2.00	3,800
California	85%	\$9.00	1.00	15%	\$13.50	1.00	0
Florida	20%	\$0.00	1.00	80%	\$0.00	2.00	0
Georgia	30%	\$0.00	1.50	80%	\$0.00	2.50	192,750
Kansas	3%	\$15.00	1.00	5%	\$5.00	1.00	47,840
Louisiana	100%	\$6.00	6.00	60%	\$4.00	1.50	0
Mississippi Delta	70%	\$5.50	7.60	30%	\$4.50	3.20	3,525
Mississippi Hills	25%	\$7.50	1.00	75%	\$4.50	2.80	21,150
Missouri	30%	\$5.00	1.70	70%	\$4.00	2.00	3,500
New Mexico	22%	\$6.80	1.00	3%	\$6.10	1.00	43,683
North Carolina	10%	\$8.00	1.00	90%	\$4.00	1.60	0
Oklahoma	15%	\$8.50	1.00	50%	\$5.50	2.00	75,000
South Carolina	15%	\$5.50	0.50	90%	\$4.50	2.00	2,960
Tennessee	22%	\$6.90	3.00	100%	\$4.75	6.00	0
Texas Coast & Blacklands	12%	\$5.85	0.40	88%	\$3.15	3.10	101,089
Texas Rolling Plains	10%	\$6.00	1.00	90%	\$3.50	1.00	1,596,860
Texas Far West & High Plains	56%	\$5.55	1.00	44%	\$3.25	1.00	3,570,976
Virginia	0%	\$0.00	0.00	100%	\$5.50	2.80	0
<b>Total US</b>	39%	\$5.59	1.97	63%	\$3.33	1.82	5,723,355

Table 7

## Cotton Insect monitoring Costs

## Cotton Insect Losses 2012

	Acres	Times/week	wt Avg Cost	Cost per	Total
State	Scouted	Scouted	over all acres	scouted acre	Cost
Alabama, North	126,878	1.00	\$6.50	\$6.50	\$824,707
Alabama, South	176,000	1.20	\$5.35	\$8.00	\$1,408,000
Arizona	194,772	2.04	\$10.67	\$10.90	\$2,122,669
Arkansas, Southeast	194,000	1.50	\$9.22	\$9.50	\$1,843,000
Arkansas, Northeast	361,000	1.50	\$9.03	\$9.50	\$3,429,500
California	366,300	1.00	\$9.90	\$10.00	\$3,663,000
Florida	68,250	1.10	\$5.20	\$8.00	\$546,000
Georgia	899,500	1.10	\$5.60	\$8.00	\$7,196,000
Kansas	20,800	1.00	\$3.20	\$8.00	\$166,400
Louisiana	220,000	1.50	\$6.00	\$6.00	\$1,320,000
Mississippi, Delta	348,975	1.80	\$7.92	\$8.00	\$2,791,800
Mississippi, Hills	94,000	1.50	\$6.00	\$7.50	\$705,000
Missouri	297,500	1.00	\$6.80	\$8.00	\$2,380,000
New Mexico	22,402	1.00	\$4.60	\$9.58	\$214,607
North Carolina	348,000	1.00	\$4.80	\$8.00	\$2,784,000
Oklahoma	45,000	1.00	\$0.98	\$6.50	\$292,500
South Carolina	207,200	1.00	\$6.30	\$9.00	\$1,864,800
Tennessee	300,000	1.50	\$7.60	\$9.50	\$2,850,000
Texas Coast and Blacklands	615,723	1.00	\$5.46	\$8.15	\$5,018,139
Texas Rolling Plains	135,903	1.00	\$0.56	\$7.00	\$951,321
Texas Farwest and High Plains	1,548,857	1.00	\$2.32	\$6.45	\$9,990,129
Virginia	12,750	1.00	\$1.28	\$8.50	\$108,375
<b>Total US</b>	<b>6,603,809</b>	<b>1.11</b>	<b>\$4.16</b>	<b>\$7.95</b>	<b>\$52,469,947</b>

Table 8

Allstates Summary  
#apps/ acre

## Cotton Insect Losses 2012

Pest	acres infested	acres treated	trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
Boll Weevil	23,894	0	0.00	0.00	\$0.00	0.000%	0
Bollworm/Budworm	6,512,925	1,349,555	1.20	0.13	\$1.06	0.188%	60,853
Pink Bollworm	18,500	0	0.00	0.00	\$0.00	0.000%	0
Cotton Fleahopper	4,975,626	1,302,215	1.64	0.17	\$1.22	0.152%	29,091
Lygus	5,744,318	2,848,888	3.30	0.75	\$8.16	0.695%	281,003
Cotton Leaf Perforator	9,286	0	0.00	0.00	\$0.00	0.000%	0
Spider Mites	3,617,075	1,284,449	1.32	0.13	\$1.49	0.147%	63,726
Thrips	8,890,673	4,427,147	1.23	0.43	\$2.77	0.374%	123,947
Beet Armyworm	244,436	8,260	0.98	0.00	\$0.01	0.001%	495
Fall Armyworm	763,301	21,800	0.32	0.00	\$0.01	0.003%	1,116
European Cornborer	0	0	0.00	0.00	\$0.00	0.000%	0
Stink Bugs	4,936,193	2,559,390	1.45	0.29	\$2.40	0.375%	125,892
Grasshoppers	1,229,518	156,732	0.87	0.01	\$0.09	0.001%	121
Saltmarsh Caterpillars	44,112	333	1.00	0.00	\$0.00	0.000%	0
Aphids	5,653,039	1,009,267	1.01	0.08	\$0.79	0.038%	14,757
Banded Winged Whitefly	816,188	12,537	1.00	0.00	\$0.01	0.000%	157
Silverleaf Whitefly (Bemesia)	596,499	277,388	1.40	0.03	\$0.65	0.037%	13,659
Loopers	252,091	0	0.00	0.00	\$0.00	0.000%	0
Southern Armyworms	44,485	0	0.00	0.00	\$0.00	0.000%	0
Cutworms	843,571	603,392	0.96	0.05	\$0.18	0.000%	18
Clouded Plant bugs	761,715	60,850	1.00	0.00	\$0.01	0.009%	3,085
Other Insects 1	381,247	116,679	1.05	0.01	\$0.07	0.012%	4,040
Other Insects 2	174,741	92,289	1.00	0.01	\$0.05	0.000%	0
Other Insects 3	2,813	0	0.00	0.00	\$0.00	0.000%	0
Other Insects 4	59	59	1.00	0.00	\$0.00	0.000%	0
Other Insects 5	490,732	2,810	0.65	0.00	\$0.00	0.001%	239
				2.096	\$18.95	2.04%	722197

**Yield & Management Results**

Total Acres	12,623,828
Total bales Harvested	17,574,407
yield (lbs/acre)	668
Total bales Lost to Insects	722,197
Percent Yield Loss	2.04%
Yield w/o Insects (lbs/ac)	682
Ave. # Spray Applications	2.10
Bales lost all factors	11,271,422
% yield loss all factors	39.1%

B. Weevil erad = \$3.58

\*\*PBWerad = \$0.29

**Economic results**

	Total	Per Acre
Foliar Insecticides Costs	\$239,213,947	\$18.95
At Planting Costs	\$101,467,415	\$8.04
In-furrow costs	\$9,653,227	\$0.76
Scouting costs	\$52,469,947	\$4.16
*Eradication costs*	\$48,899,276	\$3.87
Transgenic cotton	\$196,347,037	\$15.55
Total Costs	\$648,710,882	\$51.39
Yield Lost to insects	\$247,834,926	\$19.63
Total Losses + Costs	\$896,545,807	\$71.02

Table 9

Pest	Alabama				Cotton Insect losses 2012		
	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	60,518	24,950	1.0	0.06	\$0.50	0.02%	160
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	134,772	104,134	1.0	0.27	\$1.34	0.33%	3094
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	57,095	6,344	1.0	0.02	\$0.13	0.01%	139
Thrips	390,001	179,503	1.0	0.46	\$3.25	1.66%	16650
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	324,220	69,587	1.0	0.18	\$1.40	0.27%	2770
Grasshoppers	203,686	131,562	1.0	0.34	\$2.70	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	195,001	26,312	1.0	0.07	\$0.54	0.03%	356
Banded Winged Whitefly	7,894	5,262	1.0	0.01	\$0.13	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	63,566	127	1.0	0.00	\$0.16	0.00%	8
Clouded Plant bugs	31,720	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.40	\$10.15	2.32%	23,178

**Yield & Management Results**

Total Acres	390001
Total bales Harvested	703843
yield (lbs/acre)	866
Total bales Lost to Insects	23178
Percent Yield Loss	2.32%
Yield w/o Insects (lbs/ac)	887
Ave. # Spray Applications	1.40
Bales lost all factors	300416
% yield loss all factors	29.7%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$3,958,970	\$10.15
At Planting Costs	\$3,360,483	\$8.62
In-furrow costs	\$330,825	\$0.85
Scouting costs	\$2,232,707	\$5.72
Eradication costs	\$1,238,126	\$3.17
Transgenic cotton	\$3,551,470	\$9.11
Total Costs	\$14,672,580	\$37.62
Yield Lost to insects	\$8,344,047	\$21.39
Total Losses + Costs	\$23,016,628	\$59.02

Table 9A

## North Alabama

## Cotton Insect losses 2012

<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	0	1,269	1.0	0.01	\$0.03	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	126,878	101,502	1.0	0.80	\$4.00	1.00%	3,094
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	57,095	6,344	1.0	0.05	\$0.40	0.05%	139
Thrips	126,878	126,878	1.0	1.00	\$7.50	2.00%	6,187
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	126,878	3,806	1.0	0.03	\$0.15	0.05%	155
Grasshoppers	6,344	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	63,439	0	0.0	0.00	\$0.00	0.00%	8
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	63,566	127	1.0	0.00	\$0.50	0.00%	8
Clouded Plant bugs	31,720	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
			1.89		\$12.58	3.10%	9,590

**Yield & Management Results**

Total Acres	126,878
Total bales Harvested	237,896
yield (lbs/acre)	900
Total bales Lost to Insects	9,590
Percent Yield Loss	3.10%
Yield w/o Insects (lbs/ac)	929
Ave. # Spray Applications	1.89
Bales lost all factors	71,462
% yield loss all factors	23.10%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$1,596,125	\$12.58
At Planting Costs	\$1,130,483	\$8.91
In-furrow costs	\$15,225	\$0.12
Scouting costs	\$824,707	\$6.50
Eradication costs	\$317,195	\$2.50
Transgenic cotton	\$3,455,560	\$27.24
Total Costs	\$7,339,296	\$57.85
Yield Lost to insects	\$3,452,440	\$27.21
Total Losses + Costs	\$10,791,736	\$85.06

Table 9B

## South Alabama

## Cotton Insect Losses 2012

<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	60,518	23,681	1.0	0.09	\$0.72	0.02%	160
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	7,894	2,631	1.0	0.01	\$0.06	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	263,123	52,625	1.0	0.20	\$1.20	1.50%	10,463
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	197,342	65,781	1.0	0.25	\$2.00	0.38%	2,616
Grasshoppers	197,342	131,562	1.0	0.50	\$4.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	131,562	26,312	1.0	0.10	\$0.80	0.05%	349
Banded Winged Whitefly	7,894	5,262	1.0	0.02	\$0.20	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
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				1.17	\$8.98	1.95%	13,588

**Yield & Management Results**

Total Acres	263,123
Total bales Harvested	465,947
yield (lbs/acre)	850
Total bales Lost to Insects	13,588
Percent Yield Loss	1.95%
Yield w/o Insects (lbs/ac)	867
Ave. # Spray Applications	1.17
Bales lost all factors	215,429
% yield loss all factors	32.9%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$2,362,845	\$8.98
At Planting Costs	\$2,230,000	\$8.48
In-furrow costs	\$315,600	\$1.20
Scouting costs	\$2,230,000	\$8.48
Eradication costs	\$1,408,000	\$5.35
Transgenic cotton	\$920,931	\$3.50
Total Costs	\$9,467,375	\$35.98
Yield Lost to insects	\$4,891,607	\$18.59
Total Losses + Costs	\$14,358,982	\$54.57

Table 10

## Arizona Summary

## Cotton Insect losses 2012

Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
<b>Boll Weevil</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Bollworm/Budworm</b>	13,062	409	2.5	0.01	\$0.10	0.02%	154
<b>Pink Bollworm</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Cotton Fleahopper</b>	118,192	10,484	0.5	0.03	\$0.16	0.04%	321
<b>Lygus</b>	184,950	129,567	1.9	1.27	\$26.56	2.26%	18,745
<b>Cotton Leaf Perforator</b>	13,032	0	0.0	0.00	\$0.00	0.00%	0
<b>Spider Mites</b>	83,737	27,187	1.2	0.16	\$2.98	0.18%	1,490
<b>Thrips</b>	184,421	20,714	0.7	0.07	\$0.83	0.17%	1,404
<b>Beet Armyworm</b>	19,559	409	2.5	0.01	\$0.10	0.00%	3
<b>Fall Armyworm</b>	8,254	0	0.0	0.00	\$0.00	0.00%	0
<b>****Brown Stink Bug****</b>	108,402	60,461	1.8	0.54	\$9.43	0.74%	6,150
<b>****OTHER Stink Bugs**</b>	30,484	3,227	0.8	0.01	\$0.21	0.04%	351
<b>Grasshoppers</b>	29,848	0	0.0	0.00	\$0.00	0.00%	0
<b>Saltmarsh Caterpillars</b>	5,089	0	0.0	0.00	\$0.00	0.00%	0
<b>Aphids</b>	34,227	7,257	0.9	0.03	\$0.53	0.03%	211
<b>Banded Winged Whitefly</b>	54,502	0	0.0	0.00	\$0.00	0.00%	0
<b>Silverleaf Whitefly (Bemesia)</b>	162,604	132,325	1.8	1.22	\$33.61	0.72%	5,968
<b>Loopers</b>	7,805	0	0.0	0.00	\$0.00	0.00%	0
<b>*Pollenators* (seed breeding)</b>	21,710	409	2.0	0.00	\$0.06	0.00%	0
<b>Cutworms</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Clouded Plant bugs</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Darkling Beetles</b>	20,851	841	1.0	0.00	\$0.05	0.00%	0
<b>Bagrada bug</b>	274	0	0.0	0.00	\$0.00	0.00%	0
<b>****Citrus thrips****</b>	743	176	1.0	0.00	\$0.01	0.00%	0
<b>Mealy bugs</b>	587	0	0.0	0.00	\$0.00	0.00%	0
<b>Pale-sided Flea Beetle</b>	61,322	3,834	0.3	0.01	\$0.07	0.01%	63
				3.35	\$74.70	4.20%	34,860

**Yield & Management Results**

Total Acres	199,287
Total bales Harvested	645,113
Yield (lbs/acre)	1,554
Total bales Lost to Insects	34,860
Percent Yield Loss	4.20%
Yield w/o Insects (lbs/ac)	1,622
Ave. # Spray Applications	3.353
yield loss to all factors	183,499
% yield loss all factors	22.1%

BW erad = \$1.22

PBW erad = \$5.49

All data in this Table are preliminary

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$14,887,553	\$74.70
At Planting Costs	\$563,198	\$2.83
In-furrow costs	\$119,736	\$0.60
Scouting costs	\$2,296,286	\$11.52
Eradication costs	\$1,337,218	\$6.71
Transgenic cotton	\$6,026,524	\$30.24
Total Costs	\$25,230,515	\$126.60
Yield Lost to insects	\$12,549,664	\$62.97
Total Losses + Costs	\$37,780,180	\$189.58

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



Table 10A

Arizona *Bt*

Cotton Insect Losses 2012

Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
<b>Boll Weevil</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Bollworm/Budworm</b>	11,834	0	0.0	0.00	\$0.00	0.00%	24
<b>Pink Bollworm</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Cotton Fleahopper</b>	117,128	10,484	0.5	0.03	\$0.17	0.04%	321
<b>Lygus</b>	182,577	129,157	1.9	1.28	\$26.89	2.28%	18,574
<b>Cotton Leaf Perforator</b>	11,149	0	0.0	0.00	\$0.00	0.00%	0
<b>Spider Mites</b>	83,327	26,778	1.2	0.16	\$2.97	0.18%	1,476
<b>Thrips</b>	180,738	20,714	0.7	0.07	\$0.85	0.17%	1,404
<b>Beet Armyworm</b>	19,150	0	0.0	0.00	\$0.00	0.00%	0
<b>Fall Armyworm</b>	8,254	0	0.0	0.00	\$0.00	0.00%	0
<b>****Brown Stink Bug****</b>	107,993	60,461	1.8	0.55	\$9.61	0.75%	6,147
<b>****OTHER Stink Bugs****</b>	29,830	3,227	0.8	0.01	\$0.21	0.04%	338
<b>Grasshoppers</b>	29,438	0	0.0	0.00	\$0.00	0.00%	0
<b>Saltmarsh Caterpillars</b>	5,007	0	0.0	0.00	\$0.00	0.00%	0
<b>Aphids</b>	33,859	7,257	0.9	0.03	\$0.54	0.03%	204
<b>Banded Winged Whitefly</b>	54,339	0	0.0	0.00	\$0.00	0.00%	0
<b>Silverleaf Whitefly (Bemisia)</b>	162,195	131,915	1.8	1.24	\$34.11	0.73%	5,963
<b>Loopers</b>	7,805	0	0.0	0.00	\$0.00	0.00%	0
<b>**Pollenators** (seed breeding)</b>	21,301	0	0.0	0.00	\$0.00	0.00%	0
<b>Cutworms</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Clouded Plant bugs</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Darkling Beetles</b>	20,851	841	1.0	0.00	\$0.05	0.00%	0
<b>Bagrada bug</b>	274	0	0.0	0.00	\$0.00	0.00%	0
<b>****Citrus thrips****</b>	743	176	1.0	0.00	\$0.01	0.00%	0
<b>Mealy bugs</b>	587	0	0.0	0.00	\$0.00	0.00%	0
<b>Pale-sided Flea Beetles</b>	61,322	3,834	0.3	0.01	\$0.07	0.01%	63
				3.39	\$75.49	4.23%	34,512

**Yield & Management Results**

Total Acres	195,604
Total bales Harvested	635,713
Yield (lbs/acre)	1,560
Total bales Lost to Insects	34,512
Percent Yield Loss	4.23%
Yield w/o Insects (lbs/ac)	1,629
Ave. # Spray Applications	3.39
yield loss to all factors	179,345
% yield loss all factors	22.0%

BWERad \$1.22

PBWERad \$5.49

All data in this Table are preliminary

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$14,765,431	\$75.49
At Planting Costs	\$573,804	\$2.93
In-furrow costs	\$121,990	\$0.62
Scouting costs	\$2,275,650	\$11.63
Eradication costs	\$1,312,503	\$6.71
Transgenic cotton	\$6,026,524	\$30.81
Total Costs	\$25,075,902	\$128.20
Yield Lost to insects	\$12,424,257	\$63.52
Total Losses + Costs	\$37,500,159	\$191.71

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

Table 10B

Arizona Non-Bt

Cotton Insect Losses 2012

Pest	Acres Infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	%red	Bales lost
<b>Boll Weevil</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Bollworm/Budworm</b>	1,228	409	2.5	0.28	\$5.28	0.98%	130
<b>Pink Bollworm</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Cotton Fleahopper</b>	1,064	0	0.0	0.00	\$0.00	0.00%	0
<b>Lygus</b>	2,374	409	3.0	0.33	\$10.00	1.28%	171
<b>Cotton Leaf Perforator</b>	1,883	0	0.0	0.00	\$0.00	0.00%	0
<b>Spider Mites</b>	409	409	1.0	0.11	\$3.11	0.10%	14
<b>Thrips</b>	3,683	0	0.0	0.00	\$0.00	0.00%	0
<b>Beet Armyworm</b>	409	409	2.5	0.28	\$5.28	0.03%	3
<b>Fall Armyworm</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>****Brown Stink Bug****</b>	409	0	0.0	0.00	\$0.00	0.03%	3
<b>****OTHER Stink Bugs****</b>	655	0	0.0	0.00	\$0.00	0.10%	13
<b>Grasshoppers</b>	409	0	0.0	0.00	\$0.00	0.00%	0
<b>Saltmarsh Caterpillars</b>	82	0	0.0	0.00	\$0.00	0.00%	0
<b>Aphids</b>	368	0	0.0	0.00	\$0.00	0.06%	7
<b>Banded Winged Whitefly</b>	164	0	0.0	0.00	\$0.00	0.00%	0
<b>Silverleaf Whitefly (Bemesia)</b>	409	409	2.0	0.22	\$7.11	0.04%	5
<b>Loopers</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>****Pollenators**** (seed breeding)</b>	409	409	2.0	0.22	\$3.33	0.00%	0
<b>Cutworms</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Clouded Plant bugs</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Darkling Beetles</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Bagrada bug</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>****Citrus thrips****</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Mealy bugs</b>	0	0	0.0	0.00	\$0.00	0.00%	0
<b>Pale-sided Flea Beetles</b>	0	0	0.0	0.00	\$0.00	0.00%	0
				1.44	\$34.11	2.61%	348

**Yield & Management Results**

Total Acres	3,683
Total bales Harvested	9,400
Yield (lbs/acre)	1,225
Total bales Lost to Insects	348
Percent Yield Loss	2.61%
Yield w/o Insects (lbs/ac)	1,258
Ave. # Spray Applications	1.44
yield loss to all factors	3,962
% yield loss all factors	29.7%

BWErad \$1.22

PBWErad \$5.49

All data in this Table are preliminary

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$125,629	\$34.11
At Planting Costs	\$0	\$0.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$22,509	\$6.11
Eradication costs	\$24,715	\$6.71
Transgenic cotton	\$0	\$0.00
Total Costs	\$172,852	\$46.93
Yield Lost to insects	\$125,408	\$34.05
Total Losses + Costs	\$298,260	\$80.98

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 2012

<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	580,000	225,000	1.3	0.50	\$3.89	0.67%	12,238
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	580,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	580,000	572,400	5.2	5.13	\$46.18	4.00%	72,476
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	464,000	213,000	1.3	0.50	\$3.72	0.04%	722
Thrips	580,000	485,000	1.8	1.48	\$8.88	0.97%	17,462
Beet Armyworm	0	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	580,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	406,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	504,000	116,000	1.0	0.20	\$1.60	0.00%	0
Banded Winged Whitefly	194,000	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	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	348,000	39,000	1.0	0.07	\$0.13	0.00%	0
Clouded Plant bugs	328,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	3.45	\$0.00	0.00%	0
Other Insects	0	0	0.0	4.42	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				15.75	\$64.41	5.68%	102,898

**Yield & Management Results**

Total Acres	580,000
Total bales Harvested	1,308,333
yield (lbs/acre)	1,083
Total bales Lost to Insects	102,898
Percent Yield Loss	5.68%
Yield w/o Insects (lbs/ac)	1,148
Ave. # Spray Applications	16
Bales lost all factors	493,873
% yield loss all factors	27.4%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$37,355,728	\$64.41
At Planting Costs	\$6,380,000	\$11.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$5,272,500	\$9.09
Eradication costs	\$7,340,000	\$12.66
Transgenic cotton	\$8,892,560	\$15.33
Total Costs	\$65,240,788	\$112.48
Yield Lost to insects	\$34,573,571	\$59.61
Total Losses + Costs	\$99,814,359	\$172.09

Table 11A

Northeast Arkansas

Cotton Insect Losses 2012\

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	380,000	95,000	1.0	0.25	\$1.88	0.50%	5,805
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	380,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	380,000	372,400	4.5	4.41	\$39.69	3.50%	40,633
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	304,000	133,000	1.5	0.53	\$3.94	0.04%	464
Thrips	380,000	285,000	1.8	1.31	\$7.88	0.95%	11,029
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	190,000	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	380,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	266,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	304,000	76,000	1.0	0.20	\$1.60	0.00%	0
Banded Winged Whitefly	114,000	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	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	228,000	19,000	1.0	0.05	\$0.10	0.00%	0
Clouded Plant bugs	228,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				6.75	\$55.08	4.99%	57,932

**Yield & Management Results**

Total Acres	380,000
Total bales Harvested	870,833
yield (lbs/acre)	1,100
Total bales Lost to Insects	57,932
Percent Yield Loss	4.99%
Yield w/o Insects (lbs/ac)	1,158
Ave. # Spray Applications	6.75
Bales lost all factors	290,278
% yield loss all factors	25.0%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$20,929,450	\$55.08
At Planting Costs	\$4,180,000	\$11.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$3,429,500	\$9.03
Eradication costs	\$4,940,000	\$13.00
Transgenic cotton	\$7,927,560	\$20.86
Total Costs	\$41,406,510	\$108.96
Yield Lost to insects	\$19,465,058	\$51.22
Total Losses + Costs	\$60,871,568	\$160.19

Table 11B

Southeastern Arkansas

Cotton Insect Losses 2012

<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	200,000	130,000	1.5	0.98	\$7.80	1.00%	6,433
Pink Bollworm	0	0	0.0	0.00	\$0.00	0.00%	0
Cotton Fleahopper	200,000	0	0.0	0.00	\$0.00	0.00%	0
Lygus	200,000	200,000	6.5	6.50	\$58.50	4.95%	31,843
Cotton Leaf Perforator	0	0	0.0	0.00	\$0.00	0.00%	0
Spider Mites	160,000	80,000	1.1	0.44	\$3.30	0.04%	257
Thrips	200,000	200,000	1.8	1.80	\$10.80	1.00%	6,433
Beet Armyworm	0	0	0.0	0.00	\$0.00	0.00%	0
Fall Armyworm	100,000	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	200,000	0	0.0	0.00	\$0.00	0.00%	0
Grasshoppers	140,000	0	0.0	0.00	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0.0	0.00	\$0.00	0.00%	0
Aphids	200,000	40,000	1.0	0.20	\$1.60	0.00%	0
Banded Winged Whitefly	80,000	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	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	120,000	20,000	1.0	0.10	\$0.20	0.00%	0
Clouded Plant bugs	100,000	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
Other Insects	0	0	0.0	0.00	\$0.00	0.00%	0
				10.02	\$82.20	6.99%	44,966

**Yield & Management Results**

Total Acres	200,000
Total bales Harvested	437,500
yield (lbs/acre)	1,050
Total bales Lost to Insects	44,966
Percent Yield Loss	6.99%
Yield w/o Insects (lbs/ac)	1,129
Ave. # Spray Applications	10.0
Bales lost all factors	205,882
% yield loss all factors	31.99%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$16,440,000	\$82.20
At Planting Costs	\$2,200,000	\$11.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$1,843,000	\$9.22
Eradication costs	\$2,400,000	\$12.00
Transgenic cotton	\$965,000	\$4.82
Total Costs	\$23,848,000	\$119.24
Yield Lost to insects	\$15,108,513	\$75.54
Total Losses + Costs	\$38,956,513	\$194.78

Table 12

California

Cotton Insect Losses 2012

<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	18,500	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	0	0	0	0.000	\$0.00	0.00%	0
Lygus	333,000	222,000	1	0.600	\$15.00	0.90%	11,566
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	333,000	222,000	1	0.600	\$12.00	0.05%	578
Thrips	333,000	55,500	1	0.150	\$2.25	0.00%	0
Beet Armyworm	92,500	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	55,500	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	92,500	37,000	1	0.100	\$2.00	0.01%	161
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	74,000	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
Other insects	0	0	0	0.000	\$0.00	0.00%	0
Other insects	0	0	0	0.000	\$0.00	0.00%	0
Other insects	0	0	0	0.000	\$0.00	0.00%	0
Other insects	0	0	0	0.000	\$0.00	0.00%	0
				1.450	\$31.25	0.96%	12,305

**Yield & Management Results**

Total Acres	370,000
Total bales Harvested	1,272,646
yield (lbs/acre)	1,651
Total bales Lost to Insects	12,305
Percent Yield Loss	0.96%
Yield w/o Insects (lbs/ac)	1,667
Ave. # Spray Applications	1.45
Bales lost all factors	11,070
% yield loss all factors	0.97%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$11,562,500	\$31.25
At Planting Costs	\$3,052,500	\$8.25
In-furrow costs	\$2,220,000	\$6.00
Scouting costs	\$3,663,000	\$9.90
Eradication costs	\$2,266,250	\$6.13
Transgenic cotton	\$0	\$0.00
Total Costs	\$22,764,250	\$61.53
Yield Lost to insects	\$5,906,223	\$15.96
Total Losses + Costs	\$28,670,473	\$77.49

Table 13

Pest	Florida				Cotton Insect Losses 2012		
	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	94,500	9,450	1	0.090	\$0.72	0.90%	2,642
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	21,000	15,750	1	0.150	\$0.90	0.20%	587
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	15,750	5,250	1	0.050	\$0.43	0.08%	220
Thrips	105,000	84,000	1	0.800	\$2.80	1.00%	2,935
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	105,000	94,500	1	0.900	\$4.95	3.00%	8,805
Grasshoppers	0	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	105,000	84,000	1	0.800	\$4.00	1.00%	2,935
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	21,000	10,500	1	0.100	\$0.62	0.20%	587
Leaf footed bugs	15,750	7,350	1	0.070	\$0.42	0.08%	220
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
				2.960	\$14.84	6.45%	18,931

**Yield & Management Results**

Total Acres	105,000
Total bales Harvested	210,000
yield (lbs/acre)	960
Total bales Lost to Insects	18,931
Percent Yield Loss	6.45%
Yield w/o Insects (lbs/ac)	1,026
Ave. # Spray Applications	2.96
Bales lost all factors	83,505
% yield loss all factors	28.5%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$1,557,675	\$14.84
At Planting Costs	\$727,650	\$6.93
In-furrow costs	\$15,750	\$0.15
Scouting costs	\$546,000	\$5.20
Eradication costs	\$105,000	\$1.00
Transgenic cotton	\$2,559,207	\$24.37
Total Costs	\$5,511,282	\$52.49
Yield Lost to insects	\$6,815,190	\$64.91
Total Losses + Costs	\$12,326,471	\$117.39

Table 14

Pest	Georgia				Cotton Insect Losses 2012		
	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	642,500	38,550	1	0.030	\$0.23	0.05%	1,678
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	192,750	96,375	1	0.075	\$0.49	0.02%	503
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	642,500	38,550	1	0.030	\$0.24	0.10%	3,355
Thrips	1,220,750	514,000	1	0.440	\$2.64	0.48%	15,939
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	1,156,500	1,092,250	2	1.700	\$12.75	1.35%	45,299
Grasshoppers	38,550	12,850	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	1,028,000	192,750	1	0.150	\$1.20	0.16%	5,369
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	257,000	128,500	1	0.130	\$1.56	0.30%	10,066
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	64,250	12,850	1	0.010	\$0.08	0.05%	1,678
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				2.565	\$19.18	2.50%	83,887

**Yield & Management Results**

Total Acres	1,285,000
Total bales Harvested	2,701,177
yield (lbs/acre)	1,009
Total bales Lost to Insects	83,887
Percent Yield Loss	2.50%
Yield w/o Insects (lbs/ac)	1,035
Ave. # Spray Applications	2.57
Bales lost all factors	654,322
% yield loss all factors	19.5%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$24,643,088	\$19.18
At Planting Costs	\$8,095,500	\$6.30
In-furrow costs	\$963,750	\$0.75
Scouting costs	\$7,196,000	\$5.60
Eradication costs	\$1,285,000	\$1.00
Transgenic cotton	\$28,848,764	\$22.45
Total Costs	\$71,032,102	\$55.28
Yield Lost to insects	\$30,199,495	\$23.50
Total Losses + Costs	\$101,231,597	\$78.78



Table 15

Pest	Kansas			Cotton Insect Losses 2012			
	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	0	0	0	0.000	\$0.00	0.00%	0
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	15,600	15,600	1	0.300	\$3.60	1.50%	1,157
Lygus	5,200	0	1	0.000	\$0.00	0.10%	77
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	2,600	0	1	0.000	\$0.00	0.00%	0
Thrips	20,800	0	1	0.000	\$0.00	1.60%	1,234
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	780	0	1	0.000	\$0.00	0.00%	0
Grasshoppers	780	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	260	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
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				0.300	\$3.60	3.20%	2,468

**Yield & Management Results**

Total Acres	52,000
Total bales Harvested	44,958
yield (lbs/acre)	415
Total bales Lost to Insects	2,468
Percent Yield Loss	3.20%
Yield w/o Insects (lbs/ac)	429
Ave. # Spray Applications	0.30
Bales lost all factors	32,157
% yield loss all factors	41.7%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$187,200	\$3.60
At Planting Costs	\$0	\$0.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$166,400	\$3.20
Eradication costs	\$0	\$0.00
Transgenic cotton	\$0	\$0.00
Total Costs	\$353,600	\$6.80
Yield Lost to insects	\$829,146	\$15.95
Total Losses + Costs	\$1,182,746	\$22.75

Table 16

Louisiana

Cotton Insect losses 2012

<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	220,000	66,000	1	0.300	\$3.60	0.50%	4,597
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	66,000	33,000	1	0.150	\$0.30	0.00%	0
Lygus	220,000	220,000	4	3.500	\$38.50	3.00%	27,582
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	220,000	121,000	2	1.100	\$7.70	3.00%	27,582
Thrips	220,000	110,000	1	0.600	\$4.20	2.00%	18,388
Beet Armyworm	0	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	11,000	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	176,000	11,000	1	0.050	\$0.15	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	198,000	154,000	1	0.700	\$7.00	0.45%	4,137
Banded Winged Whitefly	22,000	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
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				6.400	\$61.45	8.95%	82,288

**Yield & Management Results**

Total Acres	220,000
Total bales Harvested	460,167
yield (lbs/acre)	1,004
Total bales Lost to Insects	82,288
Percent Yield Loss	8.95%
Yield w/o Insects (lbs/ac)	1,103
Ave. # Spray Applications	6.40
Bales lost all factors	459,247
% yield loss all factors	50.0%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$13,519,000	\$61.45
At Planting Costs	\$2,860,000	\$13.00
In-furrow costs	\$0	\$0.00
Scouting costs	\$1,320,000	\$6.00
Eradication costs	\$1,320,000	\$6.00
Transgenic cotton	\$5,867,400	\$26.67
Total Costs	\$24,886,400	\$113.12
Yield Lost to insects	\$27,648,615	\$125.68
Total Losses + Costs	\$52,535,015	\$238.80

Table 17

## Mississippi Summary

## Cotton Insect losses 2012

<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	323,125	211,500	2	0.713	\$6.77	0.69%	11,707
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	94,000	52,875	1	0.113	\$1.58	0.02%	341
Lygus	442,975	414,775	5	4.615	\$64.61	4.71%	80,243
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	337,225	162,150	2	0.745	\$8.94	1.26%	21,380
Thrips	465,300	370,125	2	1.691	\$16.91	0.30%	5,057
Beet Armyworm	8,225	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	9,400	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	141,000	43,475	1	0.093	\$0.88	0.23%	3,831
Grasshoppers	25,850	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	4,700	0	0	0.000	\$0.00	0.00%	0
Aphids	329,000	193,875	1	0.514	\$7.19	0.07%	1,192
Banded Winged Whitefly	41,125	3,525	1	0.008	\$0.11	0.01%	149
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	99,875	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	29,375	0	0	0.000	\$0.00	0.00%	0
Cutworms	19,975	252,625	1	0.538	\$3.23	0.00%	7
Clouded Plant bugs	104,575	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
				9.027	\$110.20	7.28%	123,907

**Yield & Management Results**

Total Acres	470,000
Total bales Harvested	991,406
yield (lbs/acre)	1,013
Total bales Lost to Insects	123,907
Percent Yield Loss	7.28%
Yield w/o Insects (lbs/ac)	1,092
Ave. # Spray Applications	9.03
Bales lost all factors	711,362
% yield loss all factors	41.78%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$51,796,115	\$110.20
At Planting Costs	\$6,979,500	\$14.85
In-furrow costs	\$42,300	\$0.09
Scouting costs	\$3,496,800	\$7.44
Eradication costs	\$2,115,000	\$4.50
Transgenic cotton	\$12,358,838	\$26.30
Total Costs	\$76,788,553	\$163.38
Yield Lost to insects	\$44,606,538	\$94.91
Total Losses + Costs	\$121,395,091	\$258.29

Table 17A

Mississippi Delta

Cotton Insect Losses 2012

<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	264,375	176,250	2	0.850	\$8.08	0.75%	10,532
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	88,125	52,875	1	0.150	\$2.10	0.03%	351
Lygus	348,975	334,875	6	5.700	\$79.80	4.95%	69,513
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	299,625	144,525	2	0.943	\$11.32	1.49%	20,889
Thrips	348,975	299,625	2	1.955	\$19.55	0.30%	4,171
Beet Armyworm	7,050	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	7,050	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	88,125	35,250	1	0.100	\$0.95	0.19%	2,633
Grasshoppers	17,625	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	3,525	0	0	0.000	\$0.00	0.00%	0
Aphids	264,375	158,625	1	0.585	\$8.19	0.08%	1,053
Banded Winged Whitefly	38,775	3,525	1	0.010	\$0.14	0.01%	154
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	88,125	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	17,625	0	0	0.000	\$0.00	0.00%	0
Cutworms	14,100	176,250	1	0.500	\$3.00	0.00%	6
Clouded Plant bugs	63,450	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				10.793	\$133.12	7.78%	109,303

**Yield & Management Results**

Total Acres	352,500
Total bales Harvested	789,453
yield (lbs/acre)	1,075
Total bales Lost to Insects	109,303
Percent Yield Loss	7.78%
Yield w/o Insects (lbs/ac)	1,166
Ave. # Spray Applications	10.79
Bales lost all factors	614,853
% yield loss all factors	43.8%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$46,925,153	\$133.12
At Planting Costs	\$5,234,625	\$14.85
In-furrow costs	\$42,300	\$0.12
Scouting costs	\$2,791,800	\$7.92
Eradication costs	\$1,410,000	\$4.00
Transgenic cotton	\$9,286,754	\$26.35
Total Costs	\$65,690,631	\$186.36
Yield Lost to insects	\$39,348,993	\$111.63
Total Losses + Costs	\$105,039,624	\$297.98

Table 17B

Mississippi Hills

Cotton Insect Losses 2012

<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	58,750	35,250	1	0.300	\$2.85	0.50%	1,572
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	5,875	0	0	0.000	\$0.00	0.01%	16
Lygus	94,000	79,900	2	1.360	\$19.04	4.00%	12,574
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	37,600	17,625	1	0.150	\$1.80	0.56%	1,760
Thrips	116,325	70,500	2	0.900	\$9.00	0.30%	934
Beet Armyworm	1,175	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	2,350	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	52,875	8,225	1	0.070	\$0.67	0.34%	1,061
Grasshoppers	8,225	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	1,175	0	0	0.000	\$0.00	0.00%	0
Aphids	64,625	35,250	1	0.300	\$4.20	0.06%	173
Banded Winged Whitefly	2,350	0	1	0.000	\$0.00	0.00%	6
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	11,750	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	11,750	0	0	0.000	\$0.00	0.00%	0
Cutworms	5,875	76,375	1	0.650	\$3.90	0.00%	2
Clouded Plant bugs	41,125	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				3.730	\$41.46	5.76%	18,098

**Yield & Management Results**

Total Acres	117,500
Total bales Harvested	201,953
yield (lbs/acre)	825
Total bales Lost to Insects	18,098
Percent Yield Loss	5.76%
Yield w/o Insects (lbs/ac)	875
Ave. # Spray Applications	3.73
Bales lost all factors	112,405
% yield loss all factors	35.76%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$4,870,963	\$41.46
At Planting Costs	\$1,744,875	\$14.85
In-furrow costs	\$0	\$0.00
Scouting costs	\$705,000	\$6.00
Eradication costs	\$705,000	\$6.00
Transgenic cotton	\$3,072,085	\$26.15
Total Costs	\$11,097,922	\$94.45
Yield Lost to insects	\$6,515,136	\$55.45
Total Losses + Costs	\$17,613,058	\$149.90

Table 18

Missouri Cotton Insect Losses 2012

<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	87,500	35,000	1	0.100	\$0.50	0.25%	2,460
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	350,000	346,500	3	2.970	\$19.31	4.00%	39,358
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	35,000	35,000	2	0.200	\$1.25	0.10%	984
Thrips	210,000	140,000	1	0.400	\$1.20	0.45%	4,428
Beet Armyworm	17,500	7,000	1	0.020	\$0.24	0.05%	492
Fall Armyworm	17,500	7,000	1	0.020	\$0.24	0.05%	492
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	17,500	3,500	1	0.010	\$0.05	0.05%	492
Grasshoppers	0	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	7,000	0	0	0.000	\$0.00	0.02%	197
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
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				3.720	\$22.79	4.97%	48,902

**Yield & Management Results**

Total Acres	350,000
Total bales Harvested	689,063
yield (lbs/acre)	945
Total bales Lost to Insects	48,902
Percent Yield Loss	4.97%
Yield w/o Insects (lbs/ac)	994
Ave. # Spray Applications	3.72
Bales lost all factors	294,891
% yield loss all factors	29.97%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$7,974,750	\$22.79
At Planting Costs	\$5,250,000	\$15.00
In-furrow costs	\$17,500	\$0.05
Scouting costs	\$2,380,000	\$6.80
Eradication costs	\$1,750,000	\$5.00
Transgenic cotton	\$8,118,180	\$23.19
Total Costs	\$25,490,430	\$72.83
Yield Lost to insects	\$15,257,574	\$43.59
Total Losses + Costs	\$40,748,004	\$116.42

Table 19

Pest	New Mexico			Cotton Insect losses 2012			
	acres infested	acres treated	#apps/ acre trtd	#apps/ tot acres	cost/ acre	% Reduction	Bales Lost
Boll Weevil	0	0	0	0.000	\$0.00	0.000%	0
Bollworm/Budworm	3,267	980	1	0.021	\$0.23	0.000%	0
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	3,734	1,353	1	0.029	\$0.35	0.006%	6
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	8,401	653	1	0.014	\$0.10	0.000%	0
Beet Armyworm	0	0	0	0.000	\$0.00	0.000%	0
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	233	0	1	0.000	\$0.00	0.000%	0
Grasshoppers	0	0	0	0.000	\$0.00	0.000%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.000%	0
Aphids	327	0	0	0.000	\$0.00	0.000%	0
Banded Winged Whitefly	467	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	560	0	0	0.000	\$0.00	0.000%	0
Other Insects	0	0	0	0.000	\$0.00	0.000%	0
Other Insects	0	0	0	0.000	\$0.00	0.000%	0
Other Insects	0	0	0	0.000	\$0.00	0.000%	0
Other Insects	0	0	0	0.000	\$0.00	0.000%	0
				0.064	\$0.68	0.006%	6

Yield & Management Results				Economic Results	
Total Acres	46,670	BW erad	\$5.95	Total	Per Acre
Total bales Harvested	98,007			Foliar Insecticides Costs	\$31,592 \$0.68
yield (lbs/acre)	1,008	PBW erad	\$1.67	At Planting Costs	\$372,893 \$7.99
Total bales Lost to Insects	6			In-furrow costs	\$82,326 \$1.76
Percent Yield Loss	0.01%			Scouting costs	\$214,607 \$4.60
Yield w/o Insects (lbs/ac)	1,008			Eradication costs	\$355,542 \$7.62
Ave. # Spray Applications	0.064			Transgenic cotton	\$581,078 \$12.45
Bales lost all factors	2,410			Total Costs	\$1,638,039 \$35.10
% yield loss all factors	1.106%			Yield Lost to insects	\$305 \$0.01
				Total Losses + Costs	\$1,638,344 \$35.10

Table 20

North Carolina

Cotton Insect losses 2012

<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	580,000	145,000	1	0.240	\$1.92	0.64%	7,318
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	580,000	116,000	1	0.240	\$2.18	0.02%	229
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	290,000	19,720	1	0.034	\$0.41	0.02%	229
Thrips	580,000	551,000	1	1.100	\$7.70	0.20%	2,287
Beet Armyworm	87,000	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	145,000	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	580,000	435,000	1	0.950	\$6.40	1.90%	21,726
Grasshoppers	58	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	580,000	34,800	1	0.060	\$0.66	0.00%	11
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	116,000	1,160	1	0.002	\$0.02	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
				2.626	\$19.29	2.78%	31,800

**Yield & Management Results**

Total Acres	580,000
Total bales Harvested	1,111,667
yield (lbs/acre)	920
Total bales Lost to Insects	31,800
Percent Yield Loss	2.78%
Yield w/o Insects (lbs/ac)	946
Ave. # Spray Applications	2.63
Bales lost all factors	31,800
% yield loss all factors	2.78%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$11,188,490	\$19.29
At Planting Costs	\$8,519,040	\$14.69
In-furrow costs	\$870,000	\$1.50
Scouting costs	\$2,784,000	\$4.80
Eradication costs	\$522,000	\$0.90
Transgenic cotton	\$11,426,302	\$19.70
Total Costs	\$35,309,832	\$60.88
Yield Lost to insects	\$11,447,929	\$19.74
Total Losses + Costs	\$46,757,761	\$80.62



Table 21

Oklahoma

Cotton Insect Losses 2012

<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	135,000	105,000	1	0.350	\$3.15	0.68%	2,490
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	30,000	15,000	1	0.050	\$0.10	0.05%	184
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	15,000	27,426	2	0.056	\$0.51	0.08%	277
Grasshoppers	9,000	0	0	0.000	\$0.00	0.00%	6
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
Leaf footed bug	75,000	15,000	1	0.050	\$0.45	0.03%	92
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
other	0	0	0	0.000	\$0.00	0.00%	0
				0.506	\$4.21	0.83%	3,049

**Yield & Management Results**

Total Acres	300,000
Total bales Harvested	115,000
yield (lbs/acre)	184
Total bales Lost to Insects	3,049
Percent Yield Loss	0.83%
Yield w/o Insects (lbs/ac)	186
Ave. # Spray Applications	0.51
Bales lost all factors	253,903
% yield loss all factors	68.83%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$1,261,875	\$4.21
At Planting Costs	\$1,848,750	\$6.16
In-furrow costs	\$165,000	\$0.55
Scouting costs	\$292,500	\$0.98
Eradication costs	\$600,000	\$2.00
Transgenic cotton	\$2,554,200	\$8.51
Total Costs	\$6,722,325	\$22.41
Yield Lost to insects	\$951,283	\$3.17
Total Losses + Costs	\$7,673,608	\$25.58

Table 22

South Carolina

Cotton Insect Losses 2012

Pest	acres infested	acres treated	#apps/		cost/ acre	%red	Bales lost
			acre trtd	#apps/ tot acres			
Boll Weevil	0	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	296,000	207,200	1	0.700	\$5.60	0.90%	6,241
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	296,000	0	0	0.000	\$0.00	0.00%	0
Lygus	296,000	29,600	1	0.100	\$0.70	0.10%	693
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	296,000	59,200	1	0.200	\$2.80	0.10%	693
Thrips	296,000	266,400	1	0.900	\$5.85	1.00%	6,935
Beet Armyworm	14,800	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	266,400	14,800	0	0.000	\$0.00	0.09%	624
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	296,000	266,400	1	0.900	\$7.20	1.00%	6,935
Grasshoppers	266,400	8,880	0	0.003	\$0.02	0.00%	0
Saltmarsh Caterpillars	14,800	0	0	0.000	\$0.00	0.00%	0
Aphids	296,000	44,400	1	0.150	\$1.35	0.00%	0
Banded Winged Whitefly	207,200	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemesia)	44,400	0	0	0.000	\$0.00	0.00%	0
Loopers	14,800	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	5,920	0	0	0.000	\$0.00	0.00%	0
Cutworms	266,400	29,600	1	0.100	\$0.50	0.00%	0
Clouded Plant bugs	5,920	0	0	0.000	\$0.00	0.00%	0
Other Insects 1	0	0	0	0.000	\$0.00	0.00%	0
Other Insects 2	0	0	0	0.000	\$0.00	0.00%	0
Other Insects 3	0	0	0	0.000	\$0.00	0.00%	0
Other Insects 4	0	0	0	0.000	\$0.00	0.00%	0
Other Insects 5	0	0	0	0.000	\$0.00	0.00%	0
				3.053	\$24.02	3.19%	22,121

**Yield & Management Results**

Total Acres	296,000
Total bales Harvested	539,583
yield (lbs/acre)	875
Total bales Lost to Insects	22,121
Percent Yield Loss	3.19%
Yield w/o Insects (lbs/ac)	904
Ave. # Spray Applications	3.05
Bales lost all factors	153,879
% yield loss all factors	22.19%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$7,110,216	\$24.02
At Planting Costs	\$2,664,000	\$9.00
In-furrow costs	\$1,184,000	\$4.00
Scouting costs	\$1,864,800	\$6.30
Eradication costs	\$370,000	\$1.25
Transgenic cotton	\$5,639,718	\$19.05
Total Costs	\$18,832,734	\$63.62
Yield Lost to insects	\$7,963,726	\$26.90
Total Losses + Costs	\$26,796,459	\$90.53

Table 23

Tennessee

Cotton Insect Losses 2012

<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	300,000	93,750	1	0.275	\$1.79	0.56%	5,566
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	375,000	375,000	4	3.900	\$29.25	3.30%	32,800
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.00%	0
Spider Mites	150,000	93,750	1	0.300	\$2.10	0.40%	3,976
Thrips	375,000	300,000	1	0.960	\$2.40	2.10%	20,873
Beet Armyworm	3,750	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	11,250	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	300,000	123,750	1	0.330	\$1.49	0.40%	3,976
Grasshoppers	3,750	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	300,000	7,500	1	0.020	\$0.10	0.04%	398
Banded Winged Whitefly	30,000	3,750	1	0.010	\$0.07	0.00%	8
Silverleaf Whitefly (Bemesia)	0	0	0	0.000	\$0.00	0.00%	0
Loopers	3,750	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	0	0	0	0.000	\$0.00	0.00%	0
Cutworms	11,250	262,500	1	0.700	\$1.33	0.00%	3
Clouded Plant bugs	206,250	37,500	1	0.100	\$0.00	0.08%	820
False Chinch Bugs	56,250	30,000	1	0.096	\$0.82	0.38%	3,727
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
Other Insects	0	0	0	0.000	\$0.00	0.00%	0
				6.691	\$39.33	7.26%	72,146

**Yield & Management Results**

Total Acres	375,000
Total bales Harvested	703,125
yield (lbs/acre)	900
Total bales Lost to Insects	72,146
Percent Yield Loss	7.26%
Yield w/o Insects (lbs/ac)	970
Ave. # Spray Applications	6.69
Bales lost all factors	290,812
% yield loss all factors	29.3%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$14,750,063	\$39
At Planting Costs	\$3,341,250	\$8.91
In-furrow costs	\$36,750	\$0.10
Scouting costs	\$2,850,000	\$7.13
Eradication costs	\$375,000	\$1.50
Transgenic cotton	\$6,675,938	\$16.10
Total Costs	\$28,029,000	\$67.28
Yield Lost to insects	\$24,933,629	\$115.13
Total Losses + Costs	\$52,962,629	\$182.40

Table 24

## Texas Summary

## Cotton Insect Losses 2012

<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	23,894	0	0	0.000	\$0.00	0.000%	0
Bollworm/Budworm	3,222,415	206,576	1	0.040	\$0.29	0.065%	6,238
Pink Bollworm	0	0	0	0.000	\$0.00	0.000%	0
Cotton Fleahopper	3,656,997	1,092,206	1	0.279	\$1.74	0.236%	25,098
Lygus	2,021,637	190,062	1	0.027	\$0.21	0.002%	246
Cotton Leaf Perforator	9,190	0	0	0.000	\$0.00	0.000%	0
Spider Mites	703,305	279,035	1	0.040	\$0.27	0.028%	3,830
Thrips	3,792,718	1,251,466	1	0.181	\$1.10	0.098%	9,199
Beet Armyworm	10,050	860	0	0.000	\$0.00	0.000%	0
Fall Armyworm	9,190	0	0	0.000	\$0.00	0.000%	0
European Cornborer	0	0	0	0.000	\$0.00	0.000%	0
Stink Bugs	944,459	202,178	1	0.029	\$0.15	0.023%	3,351
Grasshoppers	273,136	3,441	1	0.000	\$0.00	0.001%	115
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.000%	0
Aphids	1,993,655	117,713	1	0.017	\$0.12	0.000%	0
Banded Winged Whitefly	275,697	0	0	0.000	\$0.00	0.000%	0
Silverleaf Whitefly (Bemisia)	45,949	1,838	1	0.000	\$0.00	0.000%	0
Loopers	133,666	0	0	0.000	\$0.00	0.000%	0
Southern Armyworms	9,190	0	0	0.000	\$0.00	0.000%	0
Cutworms	18,380	18,380	1	0.003	\$0.01	0.000%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.000%	0
Verde Plant bugs	229,747	64,329	1	0.009	\$0.06	0.000%	0
Leaf-footed bugs	174,608	91,899	1	0.013	\$0.09	0.000%	0
Other	0	0	0	0.000	\$0.00	0.000%	0
Other	0	0	0	0.000	\$0.00	0.000%	0
Kurtomathrips	430,238	860	1	0.000	\$0.00	0.002%	213
				0.640	\$4.05	0.455%	48289

**Yield & Management Results**

Total Acres	6,920,157
Total bales Harvested	5,782,671
yield (lbs/acre)	401
Total bales Lost to Insects	48,289
Percent Yield Loss	0.46%
Yield w/o Insects (lbs/ac)	403
Ave. # Spray Applications	0.64
Bales lost all factors	5,871,779
% yield loss all factors	50%

BW erad \$3.99  
PBW erad \$0.03

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$28,026,650	\$4.05
At Planting Costs	\$46,460,503	\$6.71
In-furrow costs	\$3,610,470	\$0.52
Scouting costs	\$15,959,589	\$2.31
Eradication costs	\$27,877,640	\$4.03
Transgenic cotton	\$87,762,413	\$12.68
Total Costs	\$209,697,266	\$30.30
Yield Lost to insects	\$15,994,244	\$2.31
Total Losses + Costs	\$225,691,510	\$32.61

Table 24A

Texas Coast and Blacklands

Cotton Insect losses 2012

Pest	acres infested	acres treated	#apps/		cost/ acre	%red	Bales lost
			acre	#apps/ tot acres			
Boll Weevil	23,894	0	0	0.000	\$0.00	0.00%	0
Bollworm/Budworm	781,141	137,848	2	0.225	\$2.03	0.03%	488
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	918,989	836,280	2	1.820	\$12.74	0.43%	8,233
Lygus	533,014	147,038	1	0.160	\$1.23	0.00%	0
Cotton Leaf Perforator	9,190	0	0	0.000	\$0.00	0.00%	0
Spider Mites	404,355	192,988	1	0.210	\$1.89	0.18%	3,370
Thrips	918,989	340,026	1	0.370	\$2.09	0.00%	0
Beet Armyworm	9,190	0	0	0.000	\$0.00	0.00%	0
Fall Armyworm	9,190	0	0	0.000	\$0.00	0.00%	0
European Cornborer	0	0	0	0.000	\$0.00	0.00%	0
Stink Bugs	643,292	202,178	1	0.220	\$1.71	0.18%	3,351
Grasshoppers	0	0	0	0.000	\$0.00	0.00%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.00%	0
Aphids	634,102	91,899	1	0.100	\$0.80	0.00%	0
Banded Winged Whitefly	275,697	0	0	0.000	\$0.00	0.00%	0
Silverleaf Whitefly (Bemisia)	45,949	1,838	1	0.002	\$0.02	0.00%	0
Loopers	4,595	0	0	0.000	\$0.00	0.00%	0
Southern Armyworms	9,190	0	0	0.000	\$0.00	0.00%	0
Cutworms	18,380	18,380	1	0.020	\$0.10	0.00%	0
Clouded Plant bugs	0	0	0	0.000	\$0.00	0.00%	0
Verde Plant bug	229,747	64,329	1	0.070	\$0.46	0.00%	0
leaffooted bug	174,608	91,899	1	0.100	\$0.65	0.00%	0
other insects	0	0	0	0.000	\$0.00	0.00%	0
other insects	0	0	0	0.000	\$0.00	0.00%	0
Kurtomathrips	0	0	0	0.000	\$0.00	0.00%	0
				3.197	\$23.05	0.807%	15,442

**Yield & Management Results**

Total Acres	918,989
Total bales Harvested	1,357,423
yield (lbs/acre)	709
Total bales Lost to Insects	15,442
Percent Yield Loss	0.81%
Yield w/o Insects (lbs/ac)	715
Ave. # Spray Applications	3.20
Bales lost all factors	557,313
% yield loss all factors	29.1%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$21,181,134	\$23.05
At Planting Costs	\$7,175,282	\$7.81
In-furrow costs	\$1,026,051	\$1.12
Scouting costs	\$5,018,139	\$5.46
Eradication costs	\$17,405,652	\$18.94
Transgenic cotton	\$13,680,070	\$14.89
Total Costs	\$65,486,329	\$71.26
Yield Lost to insects	\$5,262,751	\$5.73
Total Losses + Costs	\$70,749,080	\$76.99

Table 24B

## Texas Rolling Plains

## Cotton Insect losses 2012

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	849,394	8,494	1	0.005	\$0.03	0.25%	5,749
Pink Bollworm	0	0	0	0.000	\$0.00	0.00%	0
Cotton Fleahopper	1,189,151	169,879	1	0.100	\$0.60	0.70%	16,098
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	169,879	0	0	0.000	\$0.00	0.02%	460
Thrips	679,515	50,964	1	0.030	\$0.17	0.40%	9,199
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	169,879	3,398	1	0.002	\$0.02	0.01%	115
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
Verde Plant Bug	0	0	0	0.000	\$0.00	0.00%	0
Leaf-footed bug	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
				0.137	\$0.82	1.38%	31,622

**Yield & Management Results**

Total Acres	1,698,787
Total bales Harvested	750,298
yield (lbs/acre)	212
Total bales Lost to Insects	31,622
Percent Yield Loss	1.38%
Yield w/o Insects (lbs/ac)	215
Ave. # Spray Applications	0.137
Bales lost all factors	1,549,922
% yield loss all factors	67.38%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$1,389,608	\$0.82
At Planting Costs	\$16,308,355	\$9.60
In-furrow costs	\$166,481	\$0.10
Scouting costs	\$951,321	\$0.56
Eradication costs	\$4,569,737	\$2.69
Transgenic cotton	\$21,724,088	\$12.79
Total Costs	\$45,109,590	\$26.55
Yield Lost to insects	\$11,080,257	\$6.52
Total Losses + Costs	\$56,189,847	\$33.08

Table 24C

Texas Far West and Panhandle

Cotton Insect Losses 2012

<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	0.000%	0
Bollworm/Budworm	1,591,881	60,233	1	0.014	\$0.10	0.000%	0
Pink Bollworm	0	0	0	0.000	\$0.00	0.000%	0
Cotton Fleahopper	1,548,857	86,048	1	0.020	\$0.12	0.011%	766
Lygus	1,488,624	43,024	1	0.010	\$0.08	0.003%	246
Cotton Leaf Perforator	0	0	0	0.000	\$0.00	0.000%	0
Spider Mites	129,071	86,048	1	0.020	\$0.16	0.000%	0
Thrips	2,194,214	860,476	1	0.200	\$1.28	0.000%	0
Beet Armyworm	860	860	1	0.000	\$0.00	0.000%	0
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	301,167	0	0	0.000	\$0.00	0.000%	0
Grasshoppers	103,257	43	1	0.000	\$0.00	0.000%	0
Saltmarsh Caterpillars	0	0	0	0.000	\$0.00	0.000%	0
Aphids	1,359,552	25,814	1	0.006	\$0.04	0.000%	0
Banded Winged Whitefly	0	0	0	0.000	\$0.00	0.000%	0
Silverleaf Whitefly (Bemisia)	0	0	0	0.000	\$0.00	0.000%	0
Loopers	129,071	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
Other	0	0	0	0.000	\$0.00	0.000%	0
Other	0	0	0	0.000	\$0.00	0.000%	0
Other	0	0	0	0.000	\$0.00	0.000%	0
Other	0	0	0	0.000	\$0.00	0.000%	0
Kurtomathrips	430,238	860	1	0.000	\$0.00	0.003%	213
				0.270	\$1.77	0.014%	1,225

**Yield & Management Results**

Total Acres	4,302,381
Total bales Harvested	3,674,950
yield (lbs/acre)	410
Total bales Lost to Insects	1,012
Percent Yield Loss	0.014%
Yield w/o Insects (lbs/ac)	410
Ave. # Spray Applications	0.270
Bales lost all factors	3,421,502
% yield loss all factors	48.21%

**Economic Results**

	Total	Per Acre
Foliar Insecticides Costs	\$7,618,527	\$1.77
At Planting Costs	\$22,976,866	\$5.34
In-furrow costs	\$2,417,938	\$0.56
Scouting costs	\$9,990,129	\$2.32
Eradication costs	\$5,902,252	\$1.37
Transgenic cotton	\$52,014,926	\$12.09
Total Costs	\$100,920,637	\$23.46
Yield Lost to insects	\$325,444	\$0.08
Total Losses + Costs	\$101,246,082	\$23.53

Figure 1

Texas Areas

Cotton Insect Losses 2012

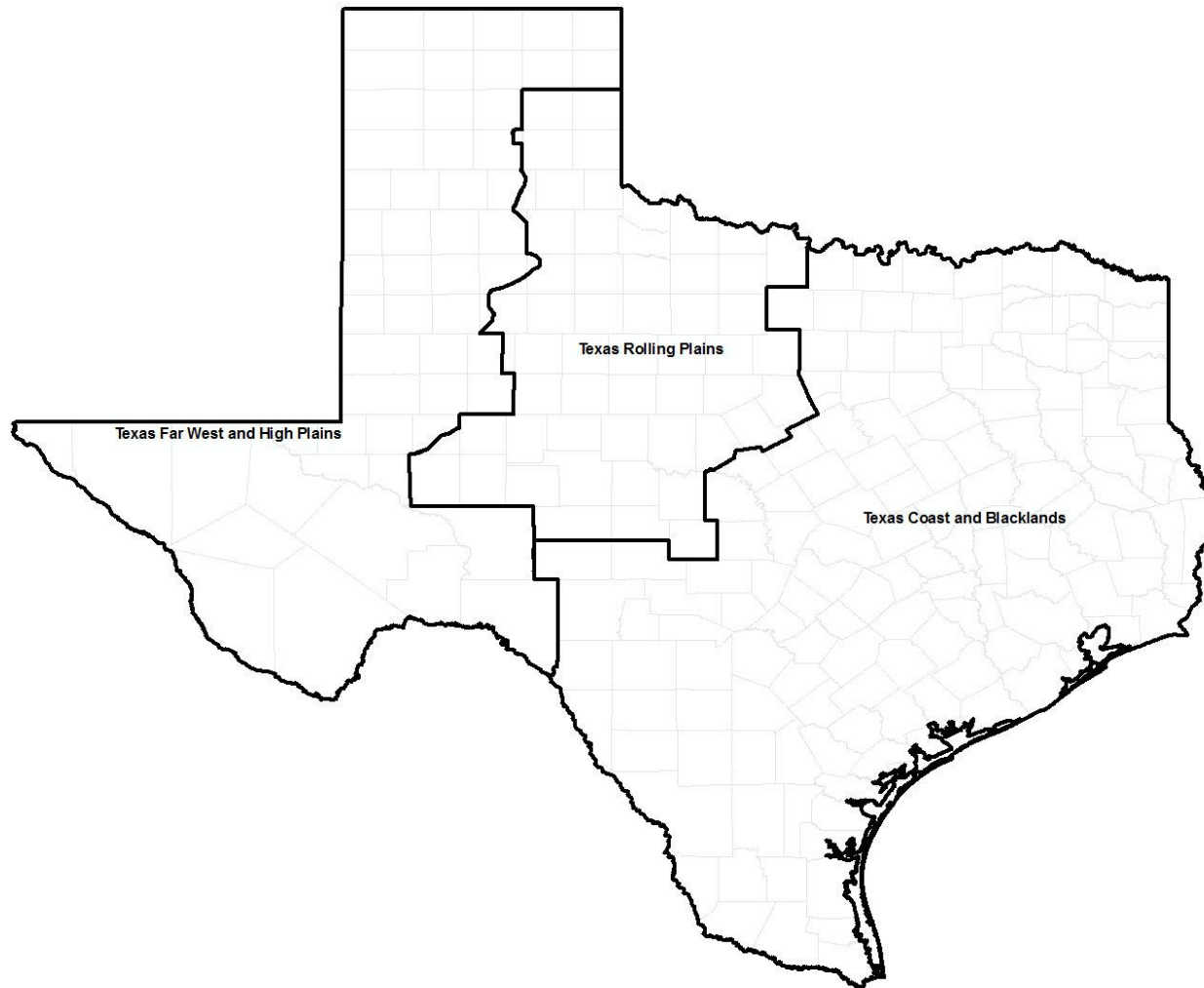




Table 25

## Virginia Summary

## Cotton Insect Losses 2012

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	72,250	85,000	1	1.000	\$8.00	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	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	85,000	85,000	1	1.000	\$8.00	1.00%	2,304
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	85,000	68,000	1	0.800	\$6.40	1.00%	2,304
Grasshoppers	0	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	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
Other	0	0	0	0.000	\$0.00	0.00%	0
				2.800	\$22.40	2.00%	4,608

Yield & Management Results		
Total Acres	85,000	
Total bales Harvested	191,250	
yield (lbs/acre)	1,080	
Total bales Lost to Insects	4,608	
Percent Yield Loss	2.00%	
Yield w/o Insects (lbs/ac)	1,102	
Ave. # Spray Applications	2.80	
Bales lost all factors	39,172	
% yield loss all factors	17.00%	

Economic Results		Total	Per Acre
Foliar Insecticides Costs		\$1,904,000	\$22.40
At Planting Costs		\$1,105,000	\$13.00
In-furrow costs		\$12,750	\$0.15
Scouting costs		\$108,375	\$1.28
Eradication costs		\$42,500	\$0.50
Transgenic cotton		\$1,384,820	\$16.29
Total Costs		\$4,557,445	\$53.62
Yield Lost to insects		\$1,659,036	\$19.52
Total Losses + Costs		\$6,216,481	\$73.14