

2019 COTTON INSECT LOSSES ESTIMATES

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Background

Since 1978, estimates of losses resulting from cotton insect pests have been compiled based on surveys and observations of county agents, extension specialists, crop consultants, and research entomologists. Over the years additional information has been added to the surveys and report as situations have evolved (ex. introduction of Bt cotton, boll weevil eradication). This report is sponsored by the Cotton Foundation. I personally wish to thank all who contributed to this report.

Explanation of Tables

Data are weighted averages across a reporting unit (state, region within a state). These averages are based on the number of acres reported, the number of acres infested (with losses), and the estimated percent loss. Numbers of bales and numbers of acres are rounded to the nearest whole number, and bale weight was set at 480 lbs. The information included in this report are estimates across an area (portion of a state, state) and may not completely reflect what occurred at the local or individual farm level.

State Coordinators

Alabama – Ron Smith and Barry Freeman
Arizona – Peter Ellsworth
Arkansas – Gus Lorenz, Glenn Studebaker, Ben Thrash, and Nick Bateman
California – Bob Hutmacher and Ian Grettenberger
Florida – Ethan Carter
Georgia – Phillip Roberts
Kansas – Stu Duncan
Louisiana – Sebe Brown
Mississippi – Angus Catchot and Jeff Gore
New Mexico – Jane Pierce
North Carolina – Dominic Reisig
Oklahoma – Jerry Goodson
South Carolina – Jeremy Greene
Tennessee – Scott Stewart
Texas – David Kerns
Virginia – Sally Taylor

Table 1. Cotton insect loss estimates for South Alabama during 2019 Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	90,000	25%	10,800	3%	1.0	\$9.50	0.001	0.03	\$0.29	0.03%	217	\$88,146	\$0.24	0.2%
Beet Armyworm	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	3,600	1%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	198,000	55%	126,000	35%	1.0	\$10.50	0.001	0.35	\$3.68	0.06%	477	\$865,026	\$2.40	2.3%
Cotton Fleahopper	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	360,000	100%	342,000	95%	2.0	\$9.50	0.020	1.90	\$18.05	2.00%	17,340	\$11,491,920	\$31.92	30.1%
Brown Stink Bug	360,000	100%	342,000	95%	1.5	\$11.00	0.020	1.43	\$15.73	2.00%	17,340	\$10,656,720	\$29.60	28.0%
Clouded Plant Bug	36,000	10%	7,200	2%	1.0	\$10.50	0.000	0.02	\$0.21	0.00%	0	\$7,560	\$0.02	0.0%
Leaf Footed Bugs	270,000	75%	18,000	5%	1.0	\$11.00	0.005	0.05	\$0.55	0.38%	3,251	\$1,084,788	\$3.01	2.8%
Spider Mites	162,000	45%	72,000	20%	1.0	\$14.00	0.000	0.20	\$2.80	0.00%	0	\$453,600	\$1.26	1.2%
Thrips	360,000	100%	144,000	40%	1.0	\$9.00	0.030	0.40	\$3.60	3.00%	26,010	\$8,786,880	\$24.41	23.1%
Aphids	270,000	75%	126,000	35%	1.0	\$8.50	0.020	0.35	\$2.98	1.50%	13,005	\$4,548,690	\$12.64	11.9%
Grasshoppers	180,000	50%	18,000	5%	1.0	\$8.00	0.000	0.05	\$0.40	0.00%	0	\$72,000	\$0.20	0.2%
Banded Winged Whitefly	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	18,000	5%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.000	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								4.79	\$48.37	8.98%	77,857	\$38,119,536	\$105.89	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Alabama		Total Acres	360,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	682,500	Foliar Insecticide Costs	\$17,413,200	\$48.37	
Year	2019		Total Bales Lost to Insects	77,857	Seed Treatment Costs	\$4,536,000	\$12.60	
Total Acres (Upland)	360,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	9.0%	In-Furrow Costs	\$540,000	\$1.50
Yield / Acre (Upland)	910	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,000	Scouting Costs	\$2,142,000	\$5.95
Price / lb	\$0.60	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	4.79	Eradication Costs	\$540,000	\$1.50
yield potential (lb/acre)	1,156	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	311,947	Bt Cotton	\$11,620,800	\$32.28
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	36.0%	Total Costs	\$36,792,000	\$102.20
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	360,000	Yield Loss to Insects	\$22,422,816	\$62.29
% Acres Scouted	70%	No. apps by air	2	Boll Weevil Eradication (# acres)	36,000	Total Losses + Costs	\$59,214,816	\$164.49
Fee / Scouted Acre	\$8.50	Cost/app by air	\$6.50	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	85%	# Scouted Acres	252,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	324,000			
Cost/treated acre (Bt) Cotton	\$32.28	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	36,000			
% acres with seed treatment	90%	% Loss to weather	19.0%	Applications by Air (acres)	54,000			
Seed trt. cost/ treated acre	\$14.00	% loss to non-arthropods	4.0%	Applications by Ground (acres)	306,000			
% acres with in-furrow	10%	% loss to other (chemical injury, weeds, diseases, etc.)	4.0%	No. acres with no foliar insecticide applications	0			

Table 1. Cotton insect loss estimates for South Alabama during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	54.0%	194,400	\$60.00	\$35.00	5%	9,720	1.0
Bollgard III	28.0%	100,800	\$63.00	\$35.00	0%	0	0.0
WideStrike	2.0%	7,200	\$45.00	\$15.00	65%	4,680	1.5
WideStrike 3	14.0%	50,400	\$48.00	\$18.00	1%	504	0.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	2.0%	7,200	\$60.00	\$38.00	0%	0	0.0
Total Bt	100.0%	360,000	\$58.86	\$32.28	4.1%	14,904	0.6
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	360,000	\$58.86	\$32.28	4.1%	14,904	0.6
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		360,000	\$58.86	-	4.1%	14,904	0.6

Table 2. Cotton insect loss estimates for North Alabama during 2019 Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	150,440	100%	30,088	20%	1.0	\$10.50	1.10%	0.20	\$2.10	1.10%	4,940	\$1,904,628	\$12.66	14.5%
Beet Armyworm	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	15,044	10%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	15,044	10%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	150,440	100%	135,396	90%	2.3	\$12.25	2.10%	2.07	\$25.36	2.10%	9,432	\$6,848,114	\$45.52	52.2%
Cotton Fleahopper	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	150,440	100%	15,044	10%	1.0	\$11.50	0.30%	0.10	\$1.15	0.30%	1,347	\$606,201	\$4.03	4.6%
Brown Stink Bug	150,440	100%	15,044	10%	1.0	\$12.00	0.25%	0.10	\$1.20	0.25%	1,123	\$541,685	\$3.60	4.1%
Clouded Plant Bug	75,220	50%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	90,264	60%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	112,830	75%	7,522	5%	1.0	\$13.50	0.25%	0.05	\$0.68	0.19%	844	\$347,591	\$2.31	2.6%
Thrips	150,440	100%	90,264	60%	1.0	\$9.50	1.40%	0.60	\$5.70	1.40%	6,288	\$2,879,729	\$19.14	21.9%
Aphids	150,440	100%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	15,044	10%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	75,220	50%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					3.12			\$36.18	5.34%		23,974	\$13,127,948	\$87.26	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Alabama	Total Acres	150,440		Total	Per Acre	
Region	Southeast	Total Bales Harvested	319,685	Foliar Insecticide Costs	\$5,443,295	\$36.18	
Year	2019	Total Bales Lost to Insects	23,974	Seed Treatment Costs	\$1,131,911	\$7.52	
Total Acres (Upland)	150,440	In-furrow cost/treated acre	\$0.00	Percent Yield Loss	5.3%	In-Furrow Costs	\$0
Yield / Acre (Upland)	1,020	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,078	Scouting Costs	\$1,278,740
Price / lb	\$0.67	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	3.12	Eradication Costs	\$225,660
yield potential (lb/acre)	1,433	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	205,870	Bt Cotton	\$5,220,552
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	45.8%	Total Costs	\$13,300,158
Yield / Acre (Pima)	0	% Insect apps by air	58%	Transgenic Cotton (arthropods) (# acres)	150,440	Yield Loss to Insects	\$7,710,038
% Acres Scouted	100%	No. apps by air	0.936	Boll Weevil Eradication (# acres)	150,440	Total Losses + Costs	\$21,010,196
Fee / Scouted Acre	\$8.50	Cost/app by air	\$8.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.1	% insect apps by ground	97%	# Scouted Acres	150,440		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.184	Seed Treatments (arthropods) (# acres)	148,936		
Cost/treated acre (Bt) Cotton	\$34.70	Cost/app by ground	\$6.20	In-Furrow Applications (# acres)	0		
% acres with seed treatment	99%	% Loss to weather	33.0%	Applications by Air (acres)	87,255		
Seed trt. cost/ treated acre	\$7.60	% loss to non-arthropods	0.5%	Applications by Ground (acres)	145,927		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	7.0%	No. acres with no foliar insecticide applications	0		

Table 2. Cotton insect loss estimates for North Alabama during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	86.4%	129,980	\$125.00	\$35.00	18%	23,396	1.0
Bollgard III	9.6%	14,442	\$130.00	\$38.00	0%	0	0.0
WideStrike	2.4%	3,611	\$110.00	\$16.00	21%	758	1.0
WideStrike 3	0.6%	903	\$120.00	\$20.00	5%	45	1.0
TwinLink	0.8%	1,204	\$120.00	\$30.00	15%	181	1.0
TwinLink Plus	0.2%	301	\$125.00	\$35.00	0%	0	0.0
Total Bt	100.0%	150,441	\$125.05	\$34.70	16.2%	24,380	0.9
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	150,441	\$125.05	\$34.70	16.2%	24,380	0.9
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		150,441	\$125.05	-	16.2%	24,380	0.9

Table 3. Cotton insect loss estimates for Alabama during 2019 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	240,440	47%	40,888	8.0%	1.0	\$9.79	0.39%	0.08	\$0.78	0.19%	3,035	\$1,092,883	\$2.14	2.0%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	15,044	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	18,644	4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	348,440	68%	261,396	51.2%	1.4	\$11.02	0.69%	0.71	\$7.80	0.47%	7,683	\$5,007,538	\$9.81	9.1%
Cotton Fleahopper	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	510,440	100%	357,044	69.9%	1.7	\$10.09	1.50%	1.19	\$12.03	1.50%	24,470	\$13,432,838	\$26.32	24.5%
Brown Stink Bug	510,440	100%	357,044	69.9%	1.4	\$11.29	1.48%	0.95	\$10.69	1.48%	24,230	\$12,672,929	\$24.83	23.1%
Clouded Plant Bug	111,220	22%	7,200	1.4%	0.7	\$7.41	0.00%	0.01	\$0.07	0.00%	0	\$8,194	\$0.02	0.0%
Leaf Footed Bugs	360,264	71%	18,000	3.5%	0.7	\$7.76	0.35%	0.02	\$0.19	0.25%	4,063	\$1,279,908	\$2.51	2.3%
Spider Mites	274,830	54%	79,522	15.6%	1.0	\$13.85	0.07%	0.16	\$2.16	0.04%	648	\$786,046	\$1.54	1.4%
Thrips	510,440	100%	234,264	45.9%	1.0	\$9.15	2.53%	0.46	\$4.20	2.53%	41,276	\$14,439,244	\$28.29	26.3%
Aphids	420,440	82%	126,000	24.7%	0.7	\$5.99	1.41%	0.17	\$1.04	1.16%	18,967	\$6,089,089	\$11.93	11.1%
Grasshoppers	195,044	38%	18,000	3.5%	0.7	\$5.64	0.00%	0.02	\$0.14	0.00%	0	\$27,369	\$0.05	0.0%
Banded Winged Whitefly	75,220	15%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	18,000	4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								3.78	\$39.15	7.63%	124,576	\$54,897,115	\$107.55	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results	
State	Alabama			Total Acres	510,440		
Region	Southeast			Total Bales Harvested	1,002,185	Foliar Insecticide Costs	\$19,983,005
Year	2019			Total Bales Lost to Insects	124,576	Seed Treatment Costs	\$5,729,025
Total Acres (Upland)	510,440	In-furrow cost/treated acre	\$10.58	Percent Yield Loss	7.6%	In-Furrow Costs	\$380,848
Yield / Acre (Upland)	942	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,020	Scouting Costs	\$3,420,740
Price / lb	\$0.62	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	3.8	Eradication Costs	\$765,660
yield potential (lb/acre)	1,535	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	517,817	Bt Cotton	\$16,896,754
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	38.6%	Total Costs	\$47,176,032
Yield / Acre (Pima)	0	% Insect apps by air	28%	Transgenic Cotton (arthropods) (# acres)	510,440	Yield Loss to Insects	\$37,111,422
% Acres Scouted	79%	No. apps by air	1.7	Boll Weevil Eradication (# acres)	510,440	Total Losses + Costs	\$84,287,454
Fee / Scouted Acre	\$8.50	Cost/app by air	\$6.94	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.0	% insect apps by ground	89%	# Scouted Acres	402,440		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.4	Seed Treatments (arthropods) (# acres)	472,936		
Cost/treated acre (Bt) Cotton	\$33.10	Cost/app by ground	\$5.71	In-Furrow Applications (# acres)	36,000		
% acres with seed treatment	93%	% Loss to weather	23.1%	Applications by Air (acres)	141,255		
Seed trt. cost/ treated acre	\$12.11	% loss to non-arthropods	3.0%	Applications by Ground (acres)	451,927		
% acres with in-furrow	7%	% loss to other (chemical injury, weeds, diseases, etc.)	4.9%	No. acres with no foliar insecticide applications	0		

Table 3. Cotton insect loss estimates for Alabama during 2018, 2019, and 2020. [2020 Alabama Cotton Conferences, Austin, TX, January 8-10, 2020](#)

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	63.5%	324,380	\$79.16	\$35.00	9%	28,647	1.0
Bollgard III	22.6%	115,242	\$82.75	\$35.88	0%	0	0.0
WideStrike	2.1%	10,811	\$64.16	\$15.29	52%	5,625	1.4
WideStrike 3	10.1%	51,303	\$69.22	\$18.59	2%	1,118	0.3
TwinLink	0.2%	1,204	\$35.37	\$8.84	4%	53	0.3
TwinLink Plus	1.5%	7,501	\$79.16	\$37.12	0%	0	0.0
Total Bt	100.0%	510,440	\$78.55	\$33.10	6.9%	35,443	0.7
Herbicide Traits Only	0.0%	0	\$0.00	-	\$0.00	0	\$0.00
Conventional	0.0%	0	\$0.00	-	\$0.00	0	\$0.00
Organic	0.0%	0	\$0.00	-	\$0.00	0	\$0.00
Total Upland Cotton	100.0%	510,440	\$78.55	\$33.10	6.9%	35,443	0.7
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		510,440	\$78.55	-	6.9%	35,443	0.7

2020 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	5,708	3.68%	0	0.0%	0.0	\$0.00	0.02%	0.00	\$0.00	0.00%	6	\$2,016	\$0.01	0.0%
Beet Armyworm	5,189	3.35%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	5,708	3.68%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	26,205	16.90%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0.00%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	1,297	0.84%	0	0.0%	0.0	\$0.00	0.01%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	1,297	0.84%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	145,217	93.64%	118,030	76.1%	1.6	\$26.80	3.39%	1.21	\$32.43	3.17%	18,801	\$11,026,231	\$71.10	62.2%
Cotton Fleahopper	101,065	65.17%	8,294	5.3%	0.6	\$20.50	0.04%	0.03	\$0.62	0.03%	160	\$115,915	\$0.75	0.7%
Stink Bugs (other than brown stink bug)	68,119	43.93%	6,798	4.4%	0.8	\$13.50	0.34%	0.03	\$0.41	0.15%	883	\$324,276	\$2.09	1.8%
Brown Stink Bug	85,523	55.15%	5,403	3.5%	2.0	\$25.00	0.12%	0.07	\$1.75	0.07%	397	\$283,057	\$1.83	1.6%
Clouded Plant Bug	0	0.00%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	259	0.17%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	75,274	48.54%	23,970	15.5%	1.1	\$21.39	0.81%	0.17	\$3.64	0.39%	2,335	\$1,058,266	\$6.82	6.0%
Thrips	155,079	100.00%	15,164	9.8%	1.0	\$10.38	0.02%	0.10	\$1.04	0.02%	113	\$198,862	\$1.28	1.1%
Aphids	24,485	15.79%	6,657	4.3%	0.9	\$21.83	0.08%	0.04	\$0.87	0.01%	77	\$47,256	\$0.30	0.3%
Grasshoppers	23,175	14.94%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	16,844	10.86%	4,616	3.0%	0.2	\$32.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	127,986	82.53%	78,409	50.6%	1.1	\$31.58	1.31%	0.57	\$18.00	1.08%	6,393	\$4,452,120	\$28.71	25.1%
Darkling Beetles	8,085	5.21%	84	0.1%	1.0	\$10.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Pale-Striped Flea Beetle	51,809	33.41%	11,799	7.6%	1.2	\$17.00	0.17%	0.09	\$1.53	0.06%	344	\$194,852	\$1.26	1.1%
Potato leafhoppers	27,498	17.73%	5,770	3.7%	0.2	\$26.00	0.00%	0.01	\$0.26	0.00%	0	\$7,149	\$0.05	0.0%
Mealybugs	1,427	0.92%	1,407	0.9%	1.3	\$15.00	0.01%	0.01	\$0.15	0.00%	0	\$214	\$0.00	0.0%
Other Armyworms	130	0.08%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cockroaches	8,562	5.52%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Crickets	9,211	5.94%	947	0.6%	1.1	\$19.00	0.01%	0.01	\$0.19	0.00%	6	\$3,766	\$0.02	0.0%
Colaspis beetles	12,350	7.96%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton stainers	0	0.00%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bagrada bug	0	0.00%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Thrips	778	0.50%	389	0.3%	1.0	\$20.00	0.03%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
False Chinch Bugs	5,724	3.69%	126	0.1%	1.0	\$14.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other Mirids	0	0.00%	0	0.00%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0.00%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								2.34	\$60.88	4.98%	29,515	\$17,713,980	\$114.23	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results	
State	Arizona			Total Acres	155,079	Total	Per Acre
Region	West			Total Bales Harvested	459,060	Foliar Insecticide Costs	\$60.88
Year	2019			Total Bales Lost to Insects	29,515	Seed Treatment Costs	\$1.58
Total Acres (Upland)	155,079	In-furrow cost/treated acre	\$19.60	Percent Yield Loss	5.0%	In-Furrow Costs	\$1.28
Yield / Acre (Upland)	1,421	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,495	Scouting Costs	\$13.72
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$2.69	Av. # Applications	2.34	Eradiation Costs	\$5.69
yield potential (lb/acre)	1,834	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	172,278	Bt Cotton	\$39.52
Acres (Pima)		Cost/acre Pink Bollworm Eradication	\$3.00	Total % yield Loss	29.1%	Total Costs	\$122.67
Yield / Acre (Pima)		% Insect apps by air	53%	Transgenic Cotton (arthropods) (# acres)	147,667	Yield Loss to Insects	\$63.95
% Acres Scouted	97%	No. apps by air	2.2	Boll Weevil Eradication (# acres)	155,079	Total Losses + Costs	\$186.62
Fee / Scouted Acre	\$14.18	Cost/app by air	\$12.38	Pink Bollworm Eradication (# acres)	155,079		
No. times scouted/week	1.87826087	% insect apps by ground	67%	# Scouted Acres	150,074		
% acres Transgenic (Bt) Cotton	95%	No. apps by ground	2.1	Seed Treatments (arthropods) (# acres)	10,508		
Cost/treated acre (Bt) Cotton	\$41.50	Cost/app by ground	\$9.81	In-Furrow Applications (# acres)	10,124		
% acres with seed treatment	7%	% Loss to weather	19.2%	Applications by Air (acres)	82,903		
Seed trt. cost/ treated acre	\$23.33	% loss to non-arthropods	3.0%	Applications by Ground (acres)	103,161		
% acres with in-furrow	7%	% loss to other (chemical injury, weeds, diseases, etc.)	1.9%	No. acres with no foliar insecticide applications	13,337		

Table 4. Insect loss estimates for Arizona Bt cotton during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	58.1%	90,076	-	\$41.50	-	-	-
Bollgard III	26.6%	41,235	-	\$41.50	-	-	-
WideStrike	0.0%	0	-	\$41.50	-	-	-
WideStrike 3	5.3%	8,203	-	\$41.50	-	-	-
TwinLink	1.3%	1,977	-	\$41.50	-	-	-
TwinLink Plus	4.0%	6,177	-	\$41.50	-	-	-
Total Bt	95.2%	147,668	-	\$41.50	-	-	-
Herbicide Traits Only	4.8%	7,444	-	-	-	-	-
Conventional	0.0%	0	-	-	-	-	-
Organic	0%	0	-	-	-	-	-
Total Upland Cotton	100.0%	155,112	-	-	-	-	-
Non Upland Cotton							
Pima	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Organic	-	-	-	-	-	-	-
Total (all Cotton)	-	155,112	-	-	-	-	-

Table 5. Cotton insect loss estimates for Southeast Arkansas during 2019 Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	244,000	100%	170,800	70%	1.5	\$31.46	4.2%	1.05	\$33.03	4.20%	33,221	\$19,270,146	\$78.98	33.4%
Beet Armyworm	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	24,400	10%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	3,660	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	61,000	25%	12,200	5%	1.0	\$0.90	0.0%	0.05	\$0.05	0.00%	0	\$2,745	\$0.01	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	36,600	15%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	244,000	100%	244,000	100%	4.5	\$20.00	4.1%	4.50	\$90.00	4.10%	32,430	\$32,903,179	\$134.85	57.0%
Cotton Fleahopper	146,400	60%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	170,800	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	170,800	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	122,000	50%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,200	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	146,400	60%	73,200	30%	1.3	\$20.00	1.7%	0.39	\$7.80	1.02%	8,068	\$3,864,386	\$15.84	6.7%
Thrips	244,000	100%	36,600	15%	1.0	\$13.00	0.0%	0.15	\$1.95	0.00%	0	\$475,800	\$1.95	0.8%
Aphids	244,000	100%	61,000	25%	1.0	\$20.00	0.0%	0.25	\$5.00	0.00%	0	\$1,220,000	\$5.00	2.1%
Grasshoppers	24,400	10%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	48,800	20%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					6.39				\$137.83	9.32%	73,719	\$57,736,256	\$236.62	

SUMMARY DATA

Data Input				Yield and Management Results			Economic Results		
State	Arkansas			Total Acres	244,000		Total	Per Acre	
Region	MidSouth			Total Bales Harvested	584,583	Foliar Insecticide Costs	\$33,630,032	\$137.83	
Year	2019			Total Bales Lost to Insects	73,719	Seed Treatment Costs	\$2,897,500	\$11.88	
Total Acres (Upland)	244,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	9.3%	In-Furrow Costs	\$439,200	\$1.80	
Yield / Acre (Upland)	1,150	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,268	Scouting Costs	\$2,440,000	\$10.00	
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	6.39	Eradication Costs	\$732,000	\$3.00	
yield potential (lb/acre)	1,556	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	279,369	Bt Cotton	\$8,411,900	\$34.48	
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	35.3%	Total Costs	\$48,550,632	\$198.98	
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	240,340	Yield Loss to Insects	\$24,875,739	\$101.95	
% Acres Scouted	100%	No. apps by air	3.5	Boll Weevil Eradication (# acres)	244,000	Total Losses + Costs	\$73,426,371	\$300.93	
Fee / Scouted Acre	\$10.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0				
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	244,000				
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4	Seed Treatments (arthropods) (# acres)	231,800				
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	29,280				
% acres with seed treatment	95%	% Loss to weather	16.0%	Applications by Air (acres)	195,200				
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	244,000				
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0				

Table 5. Cotton insect loss estimates for Southeast Arkansas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	81.5%	198,860	\$112.00	\$35.00	85%	169,031	1.3
Bollgard III	7.0%	17,080	\$112.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	5.0%	12,200	\$112.00	\$35.00	2%	244	0.5
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	12,200	\$112.00	\$35.00	0%	0	0.0
Total Bt	98.5%	240,340	\$112.00	\$35.00	70.4%	169,275	1.1
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.5%	3,660	\$26.00	-	100%	3,660	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	244,000	\$110.71	\$35.00	70.9%	172,935	1.1
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		244,000	\$110.71	-	70.9%	172,935	1.1

Table 6. Cotton insect loss estimates for Northeast Arkansas during 2019 **2020 Bt Cotton Conferences, Austin, TX, January 8-10, 2020**

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	366,000	100%	274,500	75%	1.2	\$22.00	3.5%	0.90	\$19.80	3.50%	41,339	\$21,196,232	\$57.91	33.6%
Beet Armyworm	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	18,300	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	5,490	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	73,200	20%	36,600	10%	1.0	\$18.00	0.0%	0.10	\$1.80	0.00%	0	\$131,760	\$0.36	0.2%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	54,900	15%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	366,000	100%	366,000	100%	4.5	\$10.00	3.9%	4.50	\$45.00	3.90%	46,063	\$32,013,499	\$87.47	50.8%
Cotton Fleahopper	274,500	75%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	256,200	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	256,200	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	201,300	55%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	292,800	80%	128,100	35%	1.4	\$20.00	1.6%	0.49	\$9.80	1.28%	15,118	\$7,970,858	\$21.78	12.7%
Thrips	366,000	100%	73,200	20%	1.0	\$13.00	0.0%	0.20	\$2.60	0.00%	0	\$951,600	\$2.60	1.5%
Aphids	366,000	100%	36,600	10%	1.0	\$20.00	0.0%	0.10	\$2.00	0.00%	0	\$732,000	\$2.00	1.2%
Grasshoppers	29,280	8%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	29,280	8%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					6.29	\$81.00				8.68%	102,520	\$62,995,949	\$172.12	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results		
State	Arkansas			Total Acres	366,000				Total	Per Acre
Region	MidSouth			Total Bales Harvested	876,875	Foliar Insecticide Costs		\$29,646,000		\$81.00
Year	2019			Total Bales Lost to Insects	102,520	Seed Treatment Costs		\$4,346,250		\$11.88
Total Acres (Upland)	366,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.7%	In-Furrow Costs		\$658,800		\$1.80
Yield / Acre (Upland)	1,150	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,259	Scouting Costs		\$3,660,000		\$10.00
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	6.29	Eradication Costs		\$1,098,000		\$3.00
yield potential (lb/acre)	1,549	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	409,610	Bt Cotton		\$12,617,850		\$34.48
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	34.7%	Total Costs		\$52,026,900		\$142.15
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	360,510	Yield Loss to Insects		\$34,594,349		\$94.52
% Acres Scouted	100%	No. apps by air	3.5	Boll Weevil Eradication (# acres)	366,000	Total Losses + Costs		\$86,621,249		\$236.67
Fee / Scouted Acre	\$10.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0					
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	366,000					
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4	Seed Treatments (arthropods) (# acres)	347,700					
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	43,920					
% acres with seed treatment	95%	% Loss to weather	16.0%	Applications by Air (acres)	292,800					
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	366,000					
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0					

Table 6. Cotton insect loss estimates for Northeast Arkansas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	81.5%	298,290	\$112.00	\$35.00	75%	223,718	1.5
Bollgard III	7.0%	25,620	\$112.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	5.0%	18,300	\$112.00	\$35.00	2%	366	0.5
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	18,300	\$112.00	\$35.00	0%	0	0.0
Total Bt	98.5%	360,510	\$112.00	\$35.00	62.2%	224,084	1.3
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.5%	5,490	\$26.00	-	100%	5,490	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	366,000	\$110.71	\$35.00	62.7%	229,574	1.3
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		366,000	\$110.71	-	62.7%	229,574	1.3

Table 7. Cotton insect loss estimates for Arkansas during 2020 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	610,000	100%	445,300	73.0%	1.3	\$25.78	3.78%	0.96	\$24.85	3.78%	74,554	\$40,313,301	\$66.09	33.4%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	42,700	7%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	9,150	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	134,200	22%	48,800	8.0%	1.0	\$11.16	0.00%	0.08	\$0.89	0.00%	0	\$119,814	\$0.20	0.1%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	91,500	15%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	610,000	100%	610,000	100.0%	4.5	\$14.00	3.98%	4.50	\$63.00	3.98%	78,499	\$64,918,658	\$106.42	53.9%
Cotton Fleahopper	420,900	69%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	427,000	70%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	427,000	70%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	323,300	53%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,200	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	439,200	72%	201,300	33.0%	1.4	\$20.00	1.64%	0.45	\$8.98	1.18%	23,289	\$11,801,005	\$19.35	9.8%
Thrips	610,000	100%	109,800	18.0%	1.0	\$13.00	0.00%	0.18	\$2.34	0.00%	0	\$1,427,400	\$2.34	1.2%
Aphids	610,000	100%	97,600	16.0%	1.0	\$20.00	0.00%	0.16	\$3.20	0.00%	0	\$1,952,000	\$3.20	1.6%
Grasshoppers	53,680	9%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	78,080	13%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					6.33				\$103.25	8.94%	176,342	\$120,532,177	\$197.59	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Arkansas		Total Acres	610,000		Total	Per Acre	
Region	MidSouth		Total Bales Harvested	1,461,458	Foliar Insecticide Costs	\$62,985,100	\$103.25	
Year	2019		Total Bales Lost to Insects	176,342	Seed Treatment Costs	\$7,243,750	\$11.88	
Total Acres (Upland)	610,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.9%	In-Furrow Costs	\$1,098,000	\$1.80
Yield / Acre (Upland)	1,150	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,263	Scouting Costs	\$6,100,000	\$10.00
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	6.33	Eradication Costs	\$1,830,000	\$3.00
yield potential (lb/acre)	1,552	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	688,979	Bt Cotton	\$21,029,750	\$34.48
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	34.9%	Total Costs	\$100,286,600	\$164.40
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	600,850	Yield Loss to Insects	\$59,504,972	\$97.55
% Acres Scouted	100%	No. apps by air	3.5	Boll Weevil Eradication (# acres)	610,000	Total Losses + Costs	\$159,791,572	\$261.95
Fee / Scouted Acre	\$10.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	610,000			
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4.0	Seed Treatments (arthropods) (# acres)	579,500			
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	73,200			
% acres with seed treatment	95%	% Loss to weather	16.0%	Applications by Air (acres)	488,000			
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	610,000			
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0			

Table 7. Cotton insect loss estimates for Arkansas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	81.5%	497,150	\$112.00	\$35.00	79%	392,749	1.4
Bollgard III	7.0%	42,700	\$112.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	5.0%	30,500	\$112.00	\$35.00	2%	610	0.5
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	30,500	\$112.00	\$35.00	0%	0	0.0
Total Bt	98.5%	600,850	\$112.00	\$35.00	65.5%	393,359	1.2
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.5%	9,150	\$26.00	-	100%	9,150	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	610,000	\$110.71	\$35.00	66.0%	402,509	1.2
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		610,000	\$110.71	-	66.0%	402,509	1.2

Table 8. Cotton insect loss estimates for California Upland and Pima Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	1,100	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	4,125	8%	1,100	2%	1.0	\$11.30	0.0%	0.02	\$0.23	0.00%	0	\$932	\$0.02	0.0%
Fall Armyworm	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,750	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	550	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	550	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	41,250	75%	35,750	65%	2.0	\$21.60	5.5%	1.30	\$28.08	4.13%	9,406	\$5,131,394	\$93.30	79.5%
Cotton Fleahopper	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	4,400	8%	1,100	2%	1.0	\$16.00	0.5%	0.02	\$0.32	0.04%	91	\$39,846	\$0.72	0.6%
Brown Stink Bug	1,100	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	33,000	60%	16,500	30%	1.0	\$17.50	1.0%	0.30	\$5.25	0.60%	1,368	\$751,093	\$13.66	11.6%
Thrips	16,500	30%	5,500	10%	1.0	\$9.00	0.5%	0.10	\$0.90	0.15%	342	\$159,311	\$2.90	2.5%
Aphids	8,250	15%	11,000	20%	1.0	\$20.00	1.0%	0.20	\$4.00	0.15%	342	\$177,461	\$3.23	2.8%
Grasshoppers	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	19,250	35%	13,750	25%	1.2	\$33.00	0.0%	0.30	\$9.90	0.00%	0	\$190,575	\$3.47	3.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					2.24				\$48.68	5.07%	11,549	\$6,450,612	\$117.28	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results		
State	California			Total Acres	55,000			Total	Per Acre	
Region	West			Total Bales Harvested	198,229	Foliar Insecticide Costs		\$2,677,180	\$48.68	
Year	2019			Total Bales Lost to Insects	11,549	Seed Treatment Costs		\$365,750	\$6.65	
Total Acres (Upland)	55,000	In-furrow cost/treated acre	\$21.00	Percent Yield Loss	5.1%	In-Furrow Costs		\$57,750	\$1.05	
Yield / Acre (Upland)	1,730	% acres in Boll Weevil Eradication	0%	Yield w/o Insects (lb/acre)	1,822	Scouting Costs		\$627,000	\$11.40	
Price / lb	\$0.88	Cost/acre Boll Weevil Eradication	\$0.00	Av. # Applications	2.24	Eradication Costs		\$110,000	\$2.00	
yield potential (lb/acre)	1,990	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	27,055	Bt Cotton		\$0	\$0.00	
Acres (Pima)	-	Cost/acre Pink Bollworm Eradication	\$2.00	Total % yield Loss	11.9%	Total Costs		\$3,837,680	\$69.78	
Yield / Acre (Pima)	-	% Insect apps by air	70%	Transgenic Cotton (arthropods) (# acres)	50,287	Yield Loss to Insects		\$4,878,298	\$88.70	
% Acres Scouted	95%	No. apps by air	1.2	Boll Weevil Eradication (# acres)	0	Total Losses + Costs		\$8,715,978	\$158.47	
Fee / Scouted Acre	\$12.00	Cost/app by air	\$16.00	Pink Bollworm Eradication (# acres)	55,000					
No. times scouted/week	1.5	% insect apps by ground	60%	# Scouted Acres	52,250					
% acres Transgenic (Bt) Cotton	91%	No. apps by ground	1.5	Seed Treatments (arthropods) (# acres)	52,250					
Cost/treated acre (Bt) Cotton	\$0.00	Cost/app by ground	\$13.00	In-Furrow Applications (# acres)	2,750					
% acres with seed treatment	95%	% Loss to weather	2.2%	Applications by Air (acres)	38,500					
Seed trt. cost/ treated acre	\$7.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	33,000					
% acres with in-furrow	5%	% loss to other (chemical injury, weeds, diseases, etc.)	4.6%	No. acres with no foliar insecticide applications	0					

Table 8. Cotton insect loss estimates for California Upland during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	20.4%	11,231	-	-	-	-	-
Bollgard III	0.0%	0	-	-	-	-	-
WideStrike	44.7%	24,569	-	-	-	-	-
WideStrike 3	11.3%	6,193	-	-	-	-	-
TwinLink	12.3%	6,787	-	-	-	-	-
TwinLink Plus	2.7%	1,507	-	-	-	-	-
Total Bt	91.4%	50,287	-	-	-	-	-
Herbicide Traits Only	8.6%	4,719	-	-	-	-	-
Conventional	0.0%	0	-	-	-	-	-
Organic	0	0	-	-	-	-	-
Total Upland Cotton	100.0%	55,006	-	-	-	-	-
Non Upland Cotton							
Pima	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Organic	-	-	-	-	-	-	-
Total (all Cotton)		-	-	-	-	-	-

Table 9. Cotton insect loss estimates for California Pima 2019-2020. [2020-2021 Cotton Conferences, Austin, TX, January 8-10, 2020](#)

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	6,150	3%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	20,500	10%	8,200	4%	1.0	\$11.30	0.3%	0.04	\$0.45	0.03%	198	\$113,810	\$0.56	0.4%
Fall Armyworm	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	10,250	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	2,050	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	184,500	90%	153,750	75%	2.0	\$21.60	6.0%	1.50	\$32.40	5.40%	42,666	\$28,505,448	\$139.05	93.2%
Cotton Fleahopper	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	10,250	5%	4,100	2%	1.0	\$20.00	0.3%	0.02	\$0.40	0.01%	103	\$58,484	\$0.29	0.2%
Brown Stink Bug	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	61,500	30%	30,750	15%	1.0	\$17.50	0.5%	0.15	\$2.63	0.15%	1,185	\$787,118	\$3.84	2.6%
Thrips	20,500	10%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Aphids	30,750	15%	30,750	15%	1.0	\$20.00	0.5%	0.15	\$3.00	0.08%	593	\$405,354	\$1.98	1.3%
Grasshoppers	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	71,750	35%	51,250	25%	1.2	\$33.00	0.0%	0.30	\$9.90	0.00%	0	\$710,325	\$3.47	2.3%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					2.16				\$48.78	5.66%	44,745	\$30,580,539	\$149.17	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results			
State	California			Total Acres	205,000				Total	Per Acre	
Region	West			Total Bales Harvested	687,604	Foliar Insecticide Costs			\$9,999,285	\$48.78	
Year	2019			Total Bales Lost to Insects	44,745	Seed Treatment Costs			\$1,363,250	\$6.65	
Total Acres (Pima)	205,000	In-furrow cost/treated acre	\$21.00	Percent Yield Loss	5.7%	In-Furrow Costs			\$344,400	\$1.68	
Yield / Acre (Pima)	1,610	% acres in Boll Weevil Eradication	0%	Yield w/o Insects (lb/acre)	1,707	Scouting Costs			\$2,337,000	\$11.40	
Price / lb	\$1.10	Cost/acre Boll Weevil Eradication	\$0.00	Av. # Applications	2.16	Eradication Costs			\$410,000	\$2.00	
yield potential (lb/acre)	1,850	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	101,631	Bt Cotton			\$0	\$0.00	
Acres (Upland)	-	Cost/acre Pink Bollworm Eradication	\$2.00	Total % yield Loss	12.9%	Total Costs			\$14,453,935	\$70.51	
Yield / Acre (Upland)	-	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	0	Yield Loss to Insects			\$23,625,360	\$115.25	
% Acres Scouted	95%	No. apps by air	1.5	Boll Weevil Eradication (# acres)	0	Total Losses + Costs			\$38,079,295	\$185.75	
Fee / Scouted Acre	\$12.00	Cost/app by air	\$16.00	Pink Bollworm Eradication (# acres)	205,000						
No. times scouted/week	1.5	% insect apps by ground	60%	# Scouted Acres	194,750						
% acres Transgenic (Bt) Cotton	0%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	194,750						
Cost/treated acre (Bt) Cotton	\$0.00	Cost/app by ground	\$13.00	In-Furrow Applications (# acres)	16,400						
% acres with seed treatment	95%	% Loss to weather	3.0%	Applications by Air (acres)	164,000						
Seed trt. cost/ treated acre	\$7.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	123,000						
% acres with in-furrow	8%	% loss to other (chemical injury, weeds, diseases, etc.)	4.2%	No. acres with no foliar insecticide applications	0						

Table 10. Cotton insect loss estimates for Florida during 2019 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	120,000	100%	18,000	15.0%	1.0	\$8.00	0.80%	0.15	\$1.20	0.80%	2,200	\$809,280	\$6.74	5.7%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	6,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,400	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	120,000	100%	108,000	90.0%	1.5	\$8.50	3.00%	1.35	\$11.48	3.00%	8,250	\$3,871,800	\$32.27	27.0%
Cotton Fleahopper	15,600	13%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	120,000	100%	108,000	90.0%	2.0	\$7.50	3.50%	1.80	\$13.50	3.50%	9,625	\$4,530,600	\$37.76	31.6%
Brown Stink Bug	120,000	100%	108,000	90.0%	1.5	\$8.50	2.00%	1.35	\$11.48	2.00%	5,500	\$3,040,200	\$25.34	21.2%
Clouded Plant Bug	30,000	25%	18,000	15.0%	1.0	\$8.50	0.08%	0.15	\$1.28	0.02%	55	\$54,882	\$0.46	0.4%
Leaf Footed Bugs	96,000	80%	60,000	50.0%	1.0	\$9.00	1.00%	0.50	\$4.50	0.80%	2,200	\$1,097,280	\$9.14	7.7%
Spider Mites	36,000	30%	30,000	25.0%	1.2	\$8.50	0.00%	0.30	\$2.55	0.00%	0	\$91,800	\$0.77	0.6%
Thrips	120,000	100%	72,000	60.0%	1.0	\$3.25	0.00%	0.60	\$1.95	0.00%	0	\$234,000	\$1.95	1.6%
Aphids	120,000	100%	72,000	60.0%	1.0	\$8.00	0.00%	0.60	\$4.80	0.00%	0	\$576,000	\$4.80	4.0%
Grasshoppers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	60,000	50%	600	0.5%	1.0	\$21.50	0.00%	0.01	\$0.22	0.00%	0	\$12,900	\$0.11	0.1%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					6.81				\$52.94	10.12%	27,830	\$14,318,742	\$119.32	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Florida	Total Acres	120,000		Total	Per Acre	
Region	Southeast	Total Bales Harvested	187,500	Foliar Insecticide Costs	\$6,352,800	\$52.94	
Year	2019	Total Bales Lost to Insects	27,830	Seed Treatment Costs	\$1,575,000	\$13.13	
Total Acres (Upland)	120,000	Percent Yield Loss	10.1%	In-Furrow Costs	\$1,800,000	\$15.00	
Yield / Acre (Upland)	750	Yield w/o Insects (lb/acre)	834	Scouting Costs	\$518,400	\$4.32	
Price / lb	\$0.63	Av. # Applications	6.81	Eradication Costs	\$240,000	\$2.00	
yield potential (lb/acre)	1,100	Total Bales lost (all factors)	58,080	Bt Cotton	\$4,184,640	\$34.87	
Acres (Pima)	0	Total % yield Loss	21.1%	Total Costs	\$14,670,840	\$122.26	
Yield / Acre (Pima)	0	Transgenic Cotton (arthropods) (# acres)	120,000	Yield Loss to Insects	\$8,415,792	\$70.13	
% Acres Scouted	48%	Boll Weevil Eradication (# acres)	120,000	Total Losses + Costs	\$23,086,632	\$192.39	
Fee / Scouted Acre	\$9.00	Pink Bollworm Eradication (# acres)	0				
No. times scouted/week	1	# Scouted Acres	57,600				
% acres Transgenic (Bt) Cotton	100%	Seed Treatments (arthropods) (# acres)	90,000				
Cost/treated acre (Bt) Cotton	\$34.87	In-Furrow Applications (# acres)	72,000				
% acres with seed treatment	75%	Applications by Air (acres)	24,000				
Seed trt. cost/ treated acre	\$17.50	Applications by Ground (acres)	120,000				
% acres with in-furrow	60%	No. acres with no foliar insecticide applications	0				

Table 10. Cotton insect loss estimates for Florida during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	87.0%	104,400	\$114.00	\$35.00	7%	7,308	1.0
Bollgard III	7.0%	8,400	\$110.00	\$35.00	0%	0	0.0
WideStrike	4.0%	4,800	\$103.18	\$38.15	5%	240	1.0
WideStrike 3	1.0%	1,200	\$109.58	\$44.60	0%	0	0.0
TwinLink	1.0%	1,200	-	-	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
Total Bt	100.0%	120,000	\$112.10	\$34.87	6.3%	7,548	0.9
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	120,000	\$112.10	\$34.87	6.3%	7,548	0.9
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		120,000	\$112.10	-	6.3%	7,548	0.9

Table 11. Cotton insect loss estimates for Georgia during 2019 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	695,000	50%	69,500	5.0%	1.0	\$8.00	0.20%	0.05	\$0.40	0.10%	3,831	\$1,473,272	\$1.06	3.0%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	6,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	695,000	50%	208,500	15.0%	1.2	\$8.00	0.10%	0.18	\$1.44	0.05%	1,916	\$1,598,592	\$1.15	3.2%
Cotton Fleahopper	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	1,181,500	85%	1,112,000	80.0%	1.0	\$8.00	1.00%	0.80	\$6.40	0.85%	32,565	\$17,721,880	\$12.75	35.5%
Brown Stink Bug	1,181,500	85%	1,112,000	80.0%	1.0	\$9.00	1.00%	0.80	\$7.20	0.85%	32,565	\$18,667,080	\$13.43	37.4%
Clouded Plant Bug	556,000	40%	27,800	2.0%	1.0	\$8.00	0.10%	0.02	\$0.16	0.04%	1,532	\$566,944	\$0.41	1.1%
Leaf Footed Bugs	69,500	5%	6,950	0.5%	1.0	\$8.00	0.50%	0.01	\$0.08	0.03%	958	\$304,456	\$0.22	0.6%
Spider Mites	208,500	15%	41,700	3.0%	1.0	\$8.00	0.10%	0.03	\$0.24	0.02%	575	\$229,440	\$0.17	0.5%
Thrips	1,376,100	99%	528,200	38.0%	1.0	\$6.00	0.10%	0.38	\$2.28	0.10%	3,793	\$4,320,924	\$3.11	8.7%
Aphids	1,251,000	90%	139,000	10.0%	1.0	\$7.00	0.00%	0.10	\$0.70	0.00%	0	\$875,700	\$0.63	1.8%
Grasshoppers	27,800	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	13,900	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	417,000	30%	83,400	6.0%	1.5	\$14.00	1.00%	0.09	\$1.26	0.30%	11,494	\$4,111,548	\$2.96	8.2%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					2.46			\$20.16	2.33%		89,229	\$49,869,836	\$35.88	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Georgia		Total Acres	1,390,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	2,600,458	Foliar Insecticide Costs	\$28,022,400	\$20.16	
Year	2019		Total Bales Lost to Insects	89,229	Seed Treatment Costs	\$7,506,000	\$5.40	
Total Acres (Upland)	1,390,000	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	2.3%	In-Furrow Costs	\$1,251,000	\$0.90
Yield / Acre (Upland)	898	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	919	Scouting Costs	\$7,784,000	\$5.60
Price / lb	\$0.65	Cost/acre Boll Weevil Eradication	\$1.40	Av. # Applications	2.46	Eradication Costs	\$1,946,000	\$1.40
yield potential (lb/acre)	1,323	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,813,263	Bt Cotton	\$21,452,426	\$15.43
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	47.3%	Total Costs	\$67,961,826	\$48.89
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	1,389,166	Yield Loss to Insects	\$27,839,448	\$20.03
% Acres Scouted	70%	No. apps by air	2	Boll Weevil Eradication (# acres)	1,390,000	Total Losses + Costs	\$95,801,274	\$68.92
Fee / Scouted Acre	\$8.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.1	% insect apps by ground	85%	# Scouted Acres	973,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	1,251,000			
Cost/treated acre (Bt) Cotton	\$15.44	Cost/app by ground	\$4.00	In-Furrow Applications (# acres)	208,500			
% acres with seed treatment	90%	% Loss to weather	35.0%	Applications by Air (acres)	208,500			
Seed trt. cost/ treated acre	\$6.00	% loss to non-arthropods	5.0%	Applications by Ground (acres)	1,181,500			
% acres with in-furrow	15%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	278,000			

Table 11. Cotton insect loss estimates for Georgia during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	62.3%	865,275	\$85.00	\$15.00	3%	25,958	1.0
Bollgard III	20.8%	289,398	\$90.00	\$17.00	0%	0	0.0
WideStrike	6.9%	95,771	\$82.00	\$14.00	30%	28,731	1.0
WideStrike 3	8.1%	112,729	\$83.00	\$16.00	0%	0	0.0
TwinLink	1.2%	16,402	\$85.00	\$15.00	3%	492	1.0
TwinLink Plus	0.7%	9,591	\$90.00	\$17.00	0%	0	0.0
Total Bt	99.9%	1,389,166	\$85.71	\$15.44	4.0%	55,182	0.7
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.1%	1,390	\$25.00	-	50%	695	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	1,390,556	\$85.65	\$15.44	4.0%	55,877	0.7
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		1,390,556	\$85.65	-	4.0%	55,877	0.7

Table 12. Cotton insect loss estimates for Kansas during 2019 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	48,000	30%	16,000	10.0%	1.0	\$11.00	2.00%	0.10	\$1.10	0.60%	2,040	\$640,320	\$4.00	7.4%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	80,000	50%	16,000	10.0%	15.0	\$7.00	1.00%	1.50	\$10.50	0.50%	1,700	\$1,329,600	\$8.31	15.3%
Cotton Fleahopper	128,000	80%	40,000	25.0%	25.0	\$5.00	3.00%	6.25	\$31.25	2.40%	8,160	\$6,350,080	\$39.69	73.1%
Stink Bugs (other than brown stink bug)	8,000	5%	1,600	1.0%	0.0	\$5.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	8,000	5%	3,200	2.0%	0.0	\$12.00	1.00%	0.00	\$0.00	0.05%	170	\$48,960	\$0.31	0.6%
Thrips	128,000	80%	16,000	10.0%	5.0	\$5.00	0.00%	0.50	\$2.50	0.00%	0	\$320,000	\$2.00	3.7%
Aphids	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	4,800	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								8.35	\$45.35	3.55%	12,070	\$8,688,960	\$54.31	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Kansas	Total Acres	160,000		Total	Per Acre	
Region	Central	Total Bales Harvested	266,667	Foliar Insecticide Costs	\$7,256,000	\$45.35	
Year	2019	Total Bales Lost to Insects	12,070	Seed Treatment Costs	\$1,280,000	\$8.00	
Total Acres (Upland)	160,000	In-furrow cost/treated acre	\$6.50	Percent Yield Loss	3.6%	In-Furrow Costs	\$52,000
Yield / Acre (Upland)	800	% acres in Boll Weevil Eradication	0%	Yield w/o Insects (lb/acre)	829	Scouting Costs	\$960,000
Price / lb	\$0.60	Cost/acre Boll Weevil Eradication	\$0.00	Av. # Applications	8.35	Eradication Costs	\$0
yield potential (lb/acre)	1,020	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	93,670	Bt Cotton	\$1,600,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	27.6%	Total Costs	\$11,148,000
Yield / Acre (Pima)	0	% Insect apps by air	70%	Transgenic Cotton (arthropods) (# acres)	160,000	Yield Loss to Insects	\$3,476,160
% Acres Scouted	75%	No. apps by air	1.5	Boll Weevil Eradication (# acres)	0	Total Losses + Costs	\$14,624,160
Fee / Scouted Acre	\$8.00	Cost/app by air	\$8.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.5	% insect apps by ground	30%	# Scouted Acres	120,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	1.5	Seed Treatments (arthropods) (# acres)	160,000		
Cost/treated acre (Bt) Cotton	\$10.00	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	8,000		
% acres with seed treatment	100%	% Loss to weather	15.0%	Applications by Air (acres)	112,000		
Seed trt. cost/ treated acre	\$8.00	% loss to non-arthropods	2.0%	Applications by Ground (acres)	48,000		
% acres with in-furrow	5%	% loss to other (chemical injury, weeds, diseases, etc.)	7.0%	No. acres with no foliar insecticide applications	88,000		

Table 12. Cotton insect loss estimates for Kansas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	20.0%	32,000	\$65.00	\$10.00	10%	3,200	1.0
Bollgard III	25.0%	40,000	\$65.00	\$10.00	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	55.0%	88,000	\$75.00	\$10.00	10%	8,800	1.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
Total Bt	100.0%	160,000	\$70.50	\$10.00	7.5%	12,000	0.8
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	160,000	\$70.50	\$10.00	7.5%	12,000	0.8
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		160,000	\$70.50	-	7.5%	12,000	0.8

Table 13. Cotton insect loss estimates for Louisiana during 2019-2020.

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	264,000	100%	198,000	75.0%	1.2	\$22.00	2.50%	0.90	\$19.80	2.50%	26,400	\$12,830,400	\$48.60	28.2%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	2,640	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	2,640	1%	2,640	1.0%	1.0	\$7.00	0.00%	0.01	\$0.07	0.00%	0	\$185	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	264,000	100%	264,000	100.0%	3.5	\$12.50	4.00%	3.50	\$43.75	4.00%	42,240	\$23,715,120	\$89.83	52.2%
Cotton Fleahopper	39,600	15%	39,600	15.0%	1.0	\$9.00	0.00%	0.15	\$1.35	0.00%	0	\$53,460	\$0.20	0.1%
Stink Bugs (other than brown stink bug)	26,400	10%	5,280	2.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	198,000	75%	3,960	1.5%	2.0	\$12.00	0.00%	0.03	\$0.36	0.00%	0	\$71,280	\$0.27	0.2%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.50%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	158,400	60%	132,000	50.0%	1.0	\$15.00	0.50%	0.50	\$7.50	0.30%	3,168	\$2,100,384	\$7.96	4.6%
Thrips	264,000	100%	52,800	20.0%	1.0	\$6.25	1.00%	0.20	\$1.25	1.00%	10,560	\$3,371,280	\$12.77	7.4%
Aphids	264,000	100%	211,200	80.0%	1.0	\$10.00	0.40%	0.80	\$8.00	0.40%	4,224	\$3,328,512	\$12.61	7.3%
Grasshoppers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Whitefly														
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								6.09	\$82.08	8.20%	86,592	\$45,470,621	\$172.24	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results	
State	Louisiana			Total Acres	264,000		
Region	Midsouth			Total Bales Harvested	566,500	Foliar Insecticide Costs	\$21,669,120
Year	2019			Total Bales Lost to Insects	86,592	Seed Treatment Costs	\$2,640,000
Total Acres (Upland)	264,000	In-furrow cost/treated acre	\$7.50	Percent Yield Loss	8.2%	In-Furrow Costs	\$39,600
Yield / Acre (Upland)	1,030	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,122	Scouting Costs	\$2,112,000
Price / lb	\$0.60	Cost/acre Boll Weevil Eradication	\$5.00	Av. # Applications	6.09	Eradication Costs	\$1,320,000
yield potential (lb/acre)	1,920	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	487,872	Bt Cotton	\$9,193,800
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	46.2%	Total Costs	\$36,974,520
Yield / Acre (Pima)	0	% Insect apps by air	55%	Transgenic Cotton (arthropods) (# acres)	262,680	Yield Loss to Insects	\$24,938,496
% Acres Scouted	100%	No. apps by air	3.5	Boll Weevil Eradication (# acres)	264,000	Total Losses + Costs	\$61,913,016
Fee / Scouted Acre	\$8.00	Cost/app by air	\$6.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	45%	# Scouted Acres	264,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	264,000		
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	5,280		
% acres with seed treatment	100%	% Loss to weather	35.0%	Applications by Air (acres)	145,200		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.0%	Applications by Ground (acres)	118,800		
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	0		

Table 13. Cotton insect loss estimates for Louisiana during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	74.0%	195,360	\$85.00	\$35.00	95%	185,592	1.5
Bollgard III	15.5%	40,920	\$90.00	\$35.00	20%	8,184	0.5
WideStrike	0.0%	0	\$80.00	\$30.00	0%	0	0.0
WideStrike 3	9.5%	25,080	\$85.00	\$35.00	20%	5,016	0.5
TwinLink	0.0%	0	\$80.00	\$30.00	0%	0	0.0
TwinLink Plus	0.5%	1,320	\$85.00	\$35.00	5%	66	0.2
Total Bt	99.5%	262,680	\$85.78	\$35.00	75.7%	198,858	1.2
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.5%	1,320	\$25.00	-	100%	1,320	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	264,000	\$85.48	\$35.00	75.8%	200,178	1.3
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		264,000	\$85.48	-	75.8%	200,178	1.3

Table 14. Cotton insect loss estimates for the Hills region of Mississippi during 2019-2020. [Mississippi Cotton Eradication Project, Austin, TX, January 8-10, 2020](#)

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	259,200	90%	224,640	78.0%	1.5	\$20.00	1.50%	1.17	\$23.40	1.35%	11,162	\$9,815,712	\$34.08	24.0%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.10%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	28,800	10%	5,760	2.0%	1.0	\$11.50	1.00%	0.02	\$0.23	0.10%	827	\$284,496	\$0.99	0.7%
Loopers	2,880	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	28,800	10%	43,200	15.0%	1.0	\$6.00	0.10%	0.15	\$0.90	0.01%	83	\$53,808	\$0.19	0.1%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	288,000	100%	216,000	75.0%	2.2	\$11.00	4.00%	1.65	\$18.15	4.00%	33,072	\$16,339,392	\$56.73	39.9%
Cotton Fleahopper	43,200	15%	0	0.0%	1.0	\$0.00	0.10%	0.00	\$0.00	0.02%	124	\$41,664	\$0.14	0.1%
Stink Bugs (other than brown stink bug)	72,000	25%	8,640	3.0%	1.0	\$9.00	1.00%	0.03	\$0.27	0.25%	2,067	\$713,952	\$2.48	1.7%
Brown Stink Bug	115,200	40%	43,200	15.0%	1.0	\$9.00	1.50%	0.15	\$1.35	0.60%	4,961	\$1,822,416	\$6.33	4.4%
Clouded Plant Bug	34,560	12%	2,880	1.0%	1.0	\$9.00	3.00%	0.01	\$0.09	0.36%	2,976	\$1,003,046	\$3.48	2.4%
Leaf Footed Bugs	14,400	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	172,800	60%	129,600	45.0%	1.1	\$12.00	2.25%	0.50	\$6.00	1.35%	11,162	\$4,787,232	\$16.62	11.7%
Thrips	288,000	100%	57,600	20.0%	1.0	\$9.00	1.00%	0.20	\$1.80	1.00%	8,268	\$3,296,448	\$11.45	8.0%
Aphids	244,800	85%	172,800	60.0%	1.1	\$10.00	0.50%	0.66	\$6.60	0.43%	3,514	\$2,796,384	\$9.71	6.8%
Grasshoppers	14,400	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	2,880	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	2,880	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					4.54	\$58.79			\$9.46	9.46%	78,216	\$40,954,550	\$142.20	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Mississippi	Total Acres	288,000		Total	Per Acre	
Region	MidSouth	Total Bales Harvested	615,000	Foliar Insecticide Costs	\$16,931,520	\$58.79	
Year	2019	Total Bales Lost to Insects	78,216	Seed Treatment Costs	\$2,681,280	\$9.31	
Total Acres (Upland)	288,000	In-furrow cost/treated acre	\$12.50	Percent Yield Loss	9.5%	In-Furrow Costs	\$54,000
Yield / Acre (Upland)	1,025	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,132	Scouting Costs	\$1,975,680
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$4.00	Av. # Applications	4.54	Eradication Costs	\$1,152,000
yield potential (lb/acre)	1,378	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	284,915	Bt Cotton	\$9,216,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	34.5%	Total Costs	\$32,010,480
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	288,000	Yield Loss to Insects	\$26,280,576
% Acres Scouted	98%	No. apps by air	1	Boll Weevil Eradication (# acres)	288,000	Total Losses + Costs	\$58,291,056
Fee / Scouted Acre	\$7.00	Cost/app by air	\$7.50	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.5	% insect apps by ground	80%	# Scouted Acres	282,240		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	282,240		
Cost/treated acre (Bt) Cotton	\$32.00	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	4,320		
% acres with seed treatment	98%	% Loss to weather	15.0%	Applications by Air (acres)	57,600		
Seed trt. cost/ treated acre	\$9.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	230,400		
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	2,880		

Table 14. Cotton insect loss estimates for the Hills region of Mississippi during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	77.8%	224,064	\$140.00	\$32.00	70%	156,845	1.5
Bollgard III	10.0%	28,800	\$140.00	\$32.00	0%	0	0.1
WideStrike	5.0%	14,400	\$140.00	\$32.00	95%	13,680	2.0
WideStrike 3	6.0%	17,280	\$140.00	\$32.00	5%	864	0.1
TwinLink	0.2%	576	\$140.00	\$32.00	90%	518	2.0
TwinLink Plus	1.0%	2,880	\$140.00	\$32.00	0%	0	0.1
Total Bt	100%	288,000	\$140.00	\$32.00	59.7%	171,907	1.3
Herbicide Traits Only	0.00%	0	\$108.00	-	100%	0	2.0
Conventional	0.00%	0	\$22.00	-	100%	0	2.0
Organic	0.00%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	288,000	\$140.00	\$32.00	59.7%	171,907	1.3
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		288,000	\$140.00	-	59.7%	171,907	1.3

Table 15. Cotton insect loss estimates for the Delta region of Mississippi during 2019, 2020 and 2021. [2020 Bt Cotton Conference, Austin, TX, January 8-10, 2020](#)

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	410,400	95%	388,800	90.0%	1.9	\$20.00	2.50%	1.71	\$34.20	2.38%	36,338	\$26,245,248	\$60.75	27.6%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	21,600	5%	4,320	1.0%	1.0	\$11.50	1.00%	0.01	\$0.12	0.05%	765	\$259,524	\$0.60	0.3%
Loopers	4,320	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	108,000	25%	64,800	15.0%	1.0	\$6.00	0.10%	0.15	\$0.90	0.03%	383	\$225,888	\$0.52	0.2%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	432,000	100%	427,680	99.0%	3.3	\$11.00	4.00%	3.27	\$35.97	4.00%	61,200	\$36,102,240	\$83.57	37.9%
Cotton Fleahopper	43,200	10%	0	0.0%	0.0	\$0.00	0.10%	0.00	\$0.00	0.01%	153	\$51,408	\$0.12	0.1%
Stink Bugs (other than brown stink bug)	43,200	10%	8,640	2.0%	1.0	\$9.00	1.00%	0.02	\$0.18	0.10%	1,530	\$521,856	\$1.21	0.5%
Brown Stink Bug	259,200	60%	64,800	15.0%	1.0	\$9.00	1.50%	0.15	\$1.35	0.90%	13,770	\$4,976,640	\$11.52	5.2%
Clouded Plant Bug	21,600	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	21,600	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	367,200	85%	302,400	70.0%	2.1	\$12.00	2.25%	1.47	\$17.64	1.91%	29,269	\$16,311,792	\$37.76	17.1%
Thrips	432,000	100%	108,000	25.0%	1.0	\$9.00	1.00%	0.25	\$2.25	1.00%	15,300	\$6,112,800	\$14.15	6.4%
Aphids	367,200	85%	259,200	60.0%	1.0	\$10.00	0.50%	0.60	\$6.00	0.43%	6,503	\$4,388,208	\$10.16	4.6%
Grasshoppers	21,600	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	4,320	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	432	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					7.63	\$98.61				10.80%	165,211	\$95,195,604	\$220.36	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Mississippi	Total Acres	432,000		Total	Per Acre	
Region	MidSouth	Total Bales Harvested	1,008,000	Foliar Insecticide Costs	\$42,597,360	\$98.61	
Year	2019	Total Bales Lost to Insects	165,211	Seed Treatment Costs	\$4,062,960	\$9.41	
Total Acres (Upland)	432,000	In-furrow cost/treated acre	\$12.50	Percent Yield Loss	10.8%	In-Furrow Costs	\$270,000
Yield / Acre (Upland)	1,120	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,256	Scouting Costs	\$3,421,440
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$4.00	Av. # Applications	7.63	Eradication Costs	\$1,728,000
yield potential (lb/acre)	1,700	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	792,509	Bt Cotton	\$13,810,176
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	51.8%	Total Costs	\$65,889,936
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	431,568	Yield Loss to Insects	\$55,510,896
% Acres Scouted	99%	No. apps by air	6	Boll Weevil Eradication (# acres)	432,000	Total Losses + Costs	\$121,400,832
Fee / Scouted Acre	\$8.00	Cost/app by air	\$6.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.8	% insect apps by ground	50%	# Scouted Acres	427,680		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	427,680		
Cost/treated acre (Bt) Cotton	\$32.00	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	21,600		
% acres with seed treatment	99%	% Loss to weather	25.0%	Applications by Air (acres)	345,600		
Seed trt. cost/ treated acre	\$9.50	% loss to non-arthropods	2.0%	Applications by Ground (acres)	216,000		
% acres with in-furrow	5%	% loss to other (chemical injury, weeds, diseases, etc.)	14.0%	No. acres with no foliar insecticide applications	0		

Table 15. Cotton insect loss estimates for the Delta region of Mississippi during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	79.9%	345,168	\$140.00	\$32.00	98%	338,265	1.9
Bollgard III	14.0%	60,480	\$140.00	\$32.00	10%	6,048	0.2
WideStrike	1.0%	4,320	\$140.00	\$32.00	99%	4,277	3.0
WideStrike 3	3.0%	12,960	\$140.00	\$32.00	11%	1,426	0.2
TwinLink	0.5%	2,160	\$140.00	\$32.00	90%	1,944	3.0
TwinLink Plus	1.5%	6,480	\$140.00	\$32.00	10%	648	0.2
Total Bt	99.9%	431,568	\$140.00	\$32.00	81.7%	352,607	1.6
Herbicide Traits Only	0.10%	432	\$108.00	-	100%	432	3.0
Conventional	0.01%	43	\$22.00	-	100%	43	3.0
Organic	0.00%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	432,043	\$139.96	\$32.00	81.7%	353,082	1.6
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		432,043	\$139.96	-	81.7%	353,082	1.6

during 2019 Worldwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	669,600	93%	613,440	85.2%	1.7	\$20.00	2.10%	1.48	\$29.65	1.95%	45,905	\$35,277,541	\$49.00	26.5%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.04%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	50,400	7%	10,080	1.4%	1.0	\$11.50	1.00%	0.01	\$0.16	0.07%	1,645	\$560,952	\$0.78	0.4%
Loopers	7,200	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	136,800	19%	108,000	15.0%	1.0	\$6.00	0.10%	0.15	\$0.90	0.02%	447	\$273,176	\$0.38	0.2%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	720,000	100%	643,680	89.4%	2.9	\$11.00	4.00%	2.56	\$28.13	4.00%	94,020	\$51,840,893	\$72.00	38.9%
Cotton Fleahopper	86,400	12%	0	0.0%	0.4	\$0.00	0.10%	0.00	\$0.00	0.01%	282	\$94,772	\$0.13	0.1%
Stink Bugs (other than brown stink bug)	115,200	16%	17,280	2.4%	1.0	\$9.00	1.00%	0.02	\$0.22	0.16%	3,761	\$1,288,512	\$1.79	1.0%
Brown Stink Bug	374,400	52%	108,000	15.0%	1.0	\$9.00	1.50%	0.15	\$1.35	0.78%	18,334	\$6,665,630	\$9.26	5.0%
Clouded Plant Bug	56,160	8%	2,880	0.4%	0.4	\$3.60	1.20%	0.00	\$0.01	0.09%	2,200	\$739,546	\$1.03	0.6%
Leaf Footed Bugs	36,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	540,000	75%	432,000	60.0%	1.7	\$12.00	2.25%	1.02	\$12.24	1.69%	39,665	\$19,936,935	\$27.69	15.0%
Thrips	720,000	100%	165,600	23.0%	1.0	\$9.00	1.00%	0.23	\$2.07	1.00%	23,505	\$9,388,080	\$13.04	7.0%
Aphids	612,000	85%	432,000	60.0%	1.0	\$10.00	0.50%	0.62	\$6.24	0.43%	9,990	\$7,175,394	\$9.97	5.4%
Grasshoppers	36,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	7,200	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	3,312	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								6.25	\$80.96	10.20%	239,753	\$133,241,432	\$185.06	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results	
State	Mississippi			Total Acres	720,000		
Region	MidSouth			Total Bales Harvested	1,623,000	Foliar Insecticide Costs	\$58,289,472
Year	2019			Total Bales Lost to Insects	239,753	Seed Treatment Costs	\$6,744,240
Total Acres (Upland)	720,000	In-furrow cost/treated acre	\$12.50	Percent Yield Loss	10.2%	In-Furrow Costs	\$324,000
Yield / Acre (Upland)	1,082	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,205	Scouting Costs	\$5,395,392
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$4.00	Av. # Applications	6.3	Eradication Costs	\$2,880,000
yield potential (lb/acre)	1,567	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,077,424	Bt Cotton	\$23,026,176
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	44.8%	Total Costs	\$96,659,280
Yield / Acre (Pima)	0	% Insect apps by air	56%	Transgenic Cotton (arthropods) (# acres)	719,568	Yield Loss to Insects	\$80,557,126
% Acres Scouted	99%	No. apps by air	4.0	Boll Weevil Eradication (# acres)	720,000	Total Losses + Costs	\$177,216,406
Fee / Scouted Acre	\$7.60	Cost/app by air	\$6.60	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.7	% insect apps by ground	62%	# Scouted Acres	709,920		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.6	Seed Treatments (arthropods) (# acres)	709,920		
Cost/treated acre (Bt) Cotton	\$32.00	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	25,920		
% acres with seed treatment	99%	% Loss to weather	21.0%	Applications by Air (acres)	403,200		
Seed trt. cost/ treated acre	\$9.50	% loss to non-arthropods	3.2%	Applications by Ground (acres)	446,400		
% acres with in-furrow	4%	% loss to other (chemical injury, weeds, diseases, etc.)	10.4%	No. acres with no foliar insecticide applications	2,880		

Table 16. Cotton insect loss estimates for Mississippi during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	79.1%	569,232	\$140.00	\$32.00	87%	494,093	1.7
Bollgard III	12.4%	89,280	\$140.00	\$32.00	6%	5,357	0.2
WideStrike	2.6%	18,720	\$140.00	\$32.00	97%	18,233	2.6
WideStrike 3	4.2%	30,240	\$140.00	\$32.00	9%	2,601	0.2
TwinLink	0.4%	2,736	\$140.00	\$32.00	90%	2,462	2.6
TwinLink Plus	1.3%	9,360	\$140.00	\$32.00	6%	562	0.2
Total Bt	99.9%	719,568	\$140.00	\$32.00	72.7%	523,308	1.5
Herbicide Traits Only	0.1%	432	\$108.00	-	100%	432	2.6
Conventional	0.0%	43	\$22.00	-	100%	43	2.6
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	720,043	\$139.97	\$32.00	72.7%	523,783	1.5
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		720,043	\$139.97	-	72.7%	523,783	1.5

Table 17. Cotton insect loss estimates for New Mexico 2019, 2019-2020 and 2020-2021

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	5,775	8%	1,444	2.0%	1.0	\$10.78	1.10%	0.02	\$0.22	0.09%	140	\$51,645	\$0.72	3.7%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	2,887	4%	722	1.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	22,377	31%	3,609	5.0%	1.0	\$12.42	1.60%	0.05	\$0.62	0.50%	787	\$297,216	\$4.12	21.5%
Cotton Fleahopper	16,602	23%	722	1.0%	1.0	\$10.85	0.80%	0.01	\$0.11	0.18%	292	\$106,921	\$1.48	7.7%
Stink Bugs (other than brown stink bug)	5,053	7%	722	1.0%	1.0	\$9.92	1.70%	0.01	\$0.10	0.12%	189	\$68,541	\$0.95	4.9%
Brown Stink Bug	722	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	722	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	722	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	217	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	51,251	71%	10,106	14.0%	1.0	\$6.89	2.00%	0.14	\$0.96	1.42%	2,253	\$860,516	\$11.92	62.1%
Aphids	722	1%	144	0.2%	1.0	\$10.57	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	2,166	3%	217	0.3%	1.0	\$10.72	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	1,444	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.23	\$2.01	2.31%	3,661	\$1,384,839	\$19.18	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results		
State	New Mexico			Total Acres	78,681			Total		Per Acre
Region	West			Total Bales Harvested	142,263			Foliar Insecticide Costs	\$145,010	\$2.01
Year	2019			Total Bales Lost to Insects	3,661			Seed Treatment Costs	\$488,411	\$6.77
Total Acres (Upland)	72,184	In-furrow cost/treated acre		\$1.96	Percent Yield Loss	2.3%		In-Furrow Costs	\$8,489	\$0.12
Yield / Acre (Upland)	946	% acres in Boll Weevil Eradication		100%	Yield w/o Insects (lb/acre)	968		Scouting Costs	\$386,776	\$5.36
Price / lb	\$0.75	Cost/acre Boll Weevil Eradication		\$5.95	Av. # Applications	0.23		Eradication Costs	\$429,495	\$5.95
yield potential (lb/acre)	1,055	% acres in Pink Bollworm Eradication		0%	Total Bales lost (all factors)	18,256		Bt Cotton	\$897,784	\$12.44
Acres (Pima)	6,497	Cost/acre Pink Bollworm Eradication		\$0.00	Total % yield Loss	11.5%		Total Costs	\$2,355,965	\$32.64
Yield / Acre (Pima)	-	% Insect apps by air		24%	Transgenic Cotton (arthropods) (# acres)	58,469		Yield Loss to Insects	\$1,317,960	\$18.26
% Acres Scouted	73%	No. apps by air		1.1	Boll Weevil Eradication (# acres)	72,184		Total Losses + Costs	\$3,673,925	\$50.90
Fee / Scouted Acre	\$7.34	Cost/app by air		\$6.37	Pink Bollworm Eradication (# acres)	0				
No. times scouted/week	1	% insect apps by ground		16%	# Scouted Acres	52,694				
% acres Transgenic (Bt) Cotton	81%	No. apps by ground		1	Seed Treatments (arthropods) (# acres)	45,476				
Cost/treated acre (Bt) Cotton	\$15.35	Cost/app by ground		\$4.69	In-Furrow Applications (# acres)	4,331				
% acres with seed treatment	63%	% Loss to weather		5.0%	Applications by Air (acres)	17,324				
Seed trt. cost/ treated acre	\$10.74	% loss to non-arthropods		2.2%	Applications by Ground (acres)	11,549				
% acres with in-furrow	6%	% loss to other (chemical injury, weeds, diseases, etc.)		2.0%	No. acres with no foliar insecticide applications	38,979				

Table 17. Cotton insect loss estimates for New Mexico during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	12.0%	8,662	\$40.25	\$14.24	2%	173	1.0
Bollgard III	41.0%	29,595	\$42.10	\$16.22	0%	0	0.0
WideStrike	4.0%	2,887	\$35.03	\$12.11	3%	87	1.0
WideStrike 3	20.0%	14,437	\$37.24	\$14.21	0%	0	0.0
TwinLink	1.0%	722	\$55.22	\$17.51	2%	14	1.0
TwinLink Plus	3.0%	2,166	\$58.31	\$19.23	0%	0	0.0
Total Bt	81.0%	58,469	\$41.04	\$15.35	0.5%	274	0.2
Herbicide Traits Only	12.0%	8,662	\$26.31	-	43%	3,725	1.0
Conventional	6.0%	4,331	\$12.10	-	28%	1,213	1.0
Organic	1.0%	722	\$12.10	-	0%	0	0.0
Total Upland Cotton	100.0%	72,184	\$37.25	\$15.35	7.2%	5,212	0.4
Non Upland Cotton							
Pima	9.0%	6,497	\$38.31	-	2%	130	1.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		78,681	\$37.33	-	6.8%	5,342	0.5

Table 18. Cotton insect loss estimates for North Carolina during 2019. Cotton Conferences, Austin, TX, January 8-10, 2020

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	396,000	80%	59,400	12.0%	1.1	\$22.00	3.00%	0.13	\$2.86	2.40%	30,022	\$10,499,424	\$21.21	25.5%
Beet Armyworm	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	396,000	80%	247,500	50.0%	2.5	\$15.00	0.20%	1.25	\$18.75	0.16%	2,001	\$8,049,312	\$16.26	19.6%
Cotton Fleahopper	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	188,100	38%	99,000	20.0%	2.3	\$12.00	1.90%	0.46	\$5.52	0.72%	9,032	\$3,856,296	\$7.79	9.4%
Brown Stink Bug	306,900	62%	148,500	30.0%	2.3	\$12.00	1.90%	0.69	\$8.28	1.18%	14,736	\$7,138,764	\$14.42	17.3%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	4,950	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	495,000	100%	4,604	0.9%	0.0	\$18.00	0.04%	0.00	\$0.00	0.04%	500	\$156,000	\$0.32	0.4%
Thrips	495,000	100%	379,665	76.7%	1.2	\$15.00	1.00%	0.92	\$13.80	1.00%	12,509	\$10,733,808	\$21.68	26.1%
Aphids	495,000	100%	42,570	8.6%	1.0	\$16.00	0.00%	0.09	\$1.44	0.00%	0	\$712,800	\$1.44	1.7%
Grasshoppers	24,750	5%	4,950	1.0%	1.0	\$12.00	0.00%	0.01	\$0.12	0.00%	0	\$2,970	\$0.01	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					3.55			\$50.77	5.50%		68,800	\$41,149,374	\$83.13	

SUMMARY DATA

Data Input				Yield and Management Results			Economic Results		
State	North Carolina			Total Acres	495,000				
Region	Southeast			Total Bales Harvested	1,020,938		Foliar Insecticide Costs	Total	Per Acre
Year	2019			Total Bales Lost to Insects	68,800		Seed Treatment Costs	\$25,131,150	\$50.77
Total Acres (Upland)	495,000	In-furrow cost/treated acre		Percent Yield Loss	5.5%		In-Furrow Costs	\$6,452,325	\$13.04
Yield / Acre (Upland)	990	% acres in Boll Weevil Eradication		Yield w/o Insects (lb/acre)	1,048		Scouting Costs	\$4,568,850	\$9.23
Price / lb	\$0.65	Cost/acre Boll Weevil Eradication		Av. # Applications	3.55		Eradication Costs	\$2,376,000	\$4.80
yield potential (lb/acre)	1,213	% acres in Pink Bollworm Eradication		Total Bales lost (all factors)	281,454		Bt Cotton	\$371,250	\$0.75
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication		Total % yield Loss	22.5%		Total Costs	\$16,013,250	\$32.35
Yield / Acre (Pima)	0	% Insect apps by air		Transgenic Cotton (arthropods) (# acres)	495,000		Yield Loss to Insects	\$54,912,825	\$110.94
% Acres Scouted	60%	No. apps by air		Boll Weevil Eradication (# acres)	495,000		Total Losses + Costs	\$21,465,600	\$43.36
Fee / Scouted Acre	\$8.00	Cost/app by air		Pink Bollworm Eradication (# acres)	0			\$76,378,425	\$154.30
No. times scouted/week	1	% insect apps by ground		# Scouted Acres	297,000				
% acres Transgenic (Bt) Cotton	100%	No. apps by ground		Seed Treatments (arthropods) (# acres)	391,050				
Cost/treated acre (Bt) Cotton	\$32.35	Cost/app by ground		In-Furrow Applications (# acres)	351,450				
% acres with seed treatment	79%	% Loss to weather		Applications by Air (acres)	99,000				
Seed trt. cost/ treated acre	\$16.50	% loss to non-arthropods		Applications by Ground (acres)	396,000				
% acres with in-furrow	71%	% loss to other (chemical injury, weeds, diseases, etc.)		No. acres with no foliar insecticide applications	24,750				

Table 18. Cotton insect loss estimates for North Carolina during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	44.0%	217,800	\$90.00	\$30.00	18%	39,204	1.2
Bollgard III	18.0%	89,100	\$100.00	\$35.00	0%	0	1.0
WideStrike	4.5%	22,275	\$85.00	\$30.00	23%	5,123	1.2
WideStrike 3	28.0%	138,600	\$100.00	\$35.00	1%	1,386	1.0
TwinLink	4.5%	22,275	\$90.00	\$30.00	23%	5,123	1.2
TwinLink Plus	1.0%	4,950	\$100.00	\$35.00	0%	0	1.0
Total Bt	100.0%	495,000	\$94.48	\$32.35	10.3%	50,837	1.1
Herbicide Traits Only	0.0%	0	\$80.00	-	0%	0	0.0
Conventional	1.0%	4,950	\$25.00	-	25%	1,238	2.0
Organic	1.0%	4,950	\$25.00	-	25%	1,238	2.0
Total Upland Cotton	102.0%	504,900	\$93.11	\$32.35	10.6%	53,313	1.1
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		504,900	\$93.11	-	10.6%	53,313	1.1

Table 19. Cotton insect loss estimates for Oklahoma during 2019-2020 **2019-2020 Cotton Conferences, Austin, TX, January 8-10, 2020**

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	59,965	10%	5,996	1.0%	1.0	\$20.00	15.00%	0.01	\$0.20	1.50%	13,904	\$4,216,563	\$7.03	33.3%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	5,996	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	89,947	15%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	419,753	70%	479,718	80.0%	1.5	\$12.00	1.00%	1.20	\$14.40	0.70%	6,489	\$8,006,715	\$13.35	63.2%
Stink Bugs (other than brown stink bug)	89,947	15%	41,975	7.0%	1.0	\$9.00	0.05%	0.07	\$0.63	0.01%	74	\$79,044	\$0.13	0.6%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	29,982	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	17,989	3%	5,996	1.0%	1.0	\$12.50	0.01%	0.01	\$0.13	0.00%	0	\$2,249	\$0.00	0.0%
Thrips	149,912	25%	59,965	10.0%	1.0	\$5.00	0.01%	0.10	\$0.50	0.00%	28	\$83,423	\$0.14	0.7%
Aphids	101,940	17%	107,936	18.0%	1.0	\$15.00	0.01%	0.18	\$2.70	0.00%	19	\$280,984	\$0.47	2.2%
Grasshoppers	59,965	10%	5,996	1.0%	1.0	\$10.00	0.01%	0.01	\$0.10	0.00%	9	\$8,718	\$0.01	0.1%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								1.58	\$18.66	2.21%	20,523	\$12,677,696	\$21.14	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Oklahoma	Total Acres	599,647		Total	Per Acre	
Region	Central	Total Bales Harvested	759,553	Foliar Insecticide Costs	\$11,186,415	\$18.66	
Year	2019	Total Bales Lost to Insects	20,523	Seed Treatment Costs	\$899,471	\$1.50	
Total Acres (Upland)	599,647	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	2.2%	In-Furrow Costs	\$0
Yield / Acre (Upland)	608	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	622	Scouting Costs	\$2,248,676
Price / lb	\$0.63	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	1.58	Eradication Costs	\$1,499,118
yield potential (lb/acre)	742	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	224,453	Bt Cotton	\$10,962,351
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	24.2%	Total Costs	\$26,796,031
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	599,407	Yield Loss to Insects	\$6,206,155
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	599,647	Total Losses + Costs	\$33,002,186
Fee / Scouted Acre	\$7.50	Cost/app by air	\$8.50	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	85%	# Scouted Acres	299,824		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	89,947		
Cost/treated acre (Bt) Cotton	\$18.29	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	0		
% acres with seed treatment	15%	% Loss to weather	20.0%	Applications by Air (acres)	119,929		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	509,700		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	137,919		

Table 19. Cotton insect loss estimates for Oklahoma during 2019, continued

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	29.9%	179,294	\$68.00	\$18.00	3%	5,737	1.0
Bollgard III	44.8%	268,642	\$68.42	\$18.42	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	23.9%	143,316	\$64.00	\$18.42	0%	0	0.0
TwinLink	1.4%	8,155	\$68.00	\$18.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
Total Bt	100.0%	599,407	\$67.23	\$18.29	1.0%	5,737	0.3
Herbicide Traits Only	0.01%	36	\$50.97	-	0%	0	0.0
Conventional	0.00%	0	\$0.00	-	0%	0	0.0
Organic	0.00%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	599,443	\$67.23	\$18.29	1.0%	5,737	0.3
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		599,443	\$67.23	-	1.0%	5,737	0.3

2020 Cotton Conferences, Austin, TX, January 8-10, 2020

Table 20. Cotton insect loss estimates for South Carolina during 2019. Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	300,000	100%	75,000	25.0%	1.0	\$10.00	1.00%	0.25	\$2.50	1.00%	6,913	\$3,072,768	\$10.24	15.9%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	3,000	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	15,000	5%	9,000	3.0%	1.0	\$6.00	0.10%	0.03	\$0.18	0.01%	35	\$14,460	\$0.05	0.1%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	300,000	100%	30,000	10.0%	1.0	\$9.00	0.25%	0.10	\$0.90	0.25%	1,728	\$850,608	\$2.84	4.4%
Cotton Fleahopper	300,000	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	300,000	100%	270,000	90.0%	1.5	\$9.00	2.00%	1.35	\$12.15	2.00%	13,825	\$8,290,200	\$27.63	42.8%
Brown Stink Bug	300,000	100%	150,000	50.0%	1.0	\$9.00	0.25%	0.50	\$4.50	0.25%	1,728	\$1,930,608	\$6.44	10.0%
Clouded Plant Bug	15,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	150,000	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	300,000	100%	30,000	10.0%	1.0	\$0.00	0.10%	0.10	\$0.00	0.10%	691	\$232,176	\$0.77	1.2%
Thrips	300,000	100%	225,000	75.0%	1.0	\$6.00	1.00%	0.75	\$4.50	1.00%	6,913	\$3,672,768	\$12.24	19.0%
Aphids	300,000	100%	60,000	20.0%	1.0	\$9.00	0.25%	0.20	\$1.80	0.25%	1,728	\$1,120,608	\$3.74	5.8%
Grasshoppers	300,000	100%	3,000	1.0%	1.0	\$9.00	0.01%	0.01	\$0.09	0.01%	69	\$50,184	\$0.17	0.3%
Banded Winged Whitefly	150,000	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	150,000	50%	3,000	1.0%	1.0	\$15.00	0.10%	0.01	\$0.15	0.05%	346	\$138,756	\$0.46	0.7%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					3.30			\$26.77	4.92%		33,976	\$19,373,136	\$64.58	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	South Carolina		Total Acres	300,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	508,750	Foliar Insecticide Costs	\$8,031,000	\$26.77	
Year	2019		Total Bales Lost to Insects	33,976	Seed Treatment Costs	\$3,510,000	\$11.70	
Total Acres (Upland)	300,000	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	4.9%	In-Furrow Costs	\$1,080,000	\$3.60
Yield / Acre (Upland)	814	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	856	Scouting Costs	\$1,680,000	\$5.60
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$1.25	Av. # Applications	3.3	Eradication Costs	\$375,000	\$1.25
yield potential (lb/acre)	1,106	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	248,262	Bt Cotton	\$8,625,000	\$28.75
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	35.9%	Total Costs	\$23,301,000	\$77.67
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	300,000	Yield Loss to Insects	\$11,415,936	\$38.05
% Acres Scouted	80%	No. apps by air	1	Boll Weevil Eradication (# acres)	300,000	Total Losses + Costs	\$34,716,936	\$115.72
Fee / Scouted Acre	\$7.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	95%	# Scouted Acres	240,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	270,000			
Cost/treated acre (Bt) Cotton	\$28.75	Cost/app by ground	\$6.50	In-Furrow Applications (# acres)	60,000			
% acres with seed treatment	90%	% Loss to weather	20.0%	Applications by Air (acres)	15,000			
Seed trt. cost/ treated acre	\$13.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	285,000			
% acres with in-furrow	20%	% loss to other (chemical injury, weeds, diseases, etc.)	10.0%	No. acres with no foliar insecticide applications	750			

Table 20. Cotton insect loss estimates for South Carolina during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	72.0%	216,000	\$108.00	\$30.00	50%	108,000	1.0
Bollgard III	20.0%	60,000	\$106.00	\$30.00	5%	3,000	1.0
WideStrike	0.0%	0	\$92.00	\$10.00	100%	0	0.0
WideStrike 3	6.0%	18,000	\$105.00	\$10.00	10%	1,800	1.0
TwinLink	1.0%	3,000	\$99.00	\$25.00	50%	1,500	1.0
TwinLink Plus	1.0%	3,000	\$102.00	\$30.00	5%	150	1.0
Total Bt	100.0%	300,000	\$107.27	\$28.75	38.2%	114,450	1.0
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	300,000	\$107.27	\$28.75	38.2%	114,450	1.0
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		300,000	\$107.27	-	38.2%	114,450	1.0

Table 21. Cotton insect loss estimates for Tennessee during 2019-2020 **2019-2020 Cotton Conferences, Austin, TX, January 8-10, 2020**

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	348,000	87%	300,000	75.0%	1.3	\$19.50	2.30%	0.98	\$19.11	2.00%	21,177	\$13,257,504	\$33.14	25.2%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	60,000	15%	8,000	2.0%	1.0	\$13.50	0.10%	0.02	\$0.27	0.02%	159	\$65,808	\$0.16	0.1%
Loopers	4,000	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	20,000	5%	240,000	60.0%	1.0	\$4.00	0.00%	0.60	\$2.40	0.00%	0	\$48,000	\$0.12	0.1%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	4,000	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	400,000	100%	400,000	100.0%	3.3	\$14.00	2.70%	3.30	\$46.20	2.70%	28,575	\$27,395,400	\$68.49	52.0%
Cotton Fleahopper	4,000	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	400,000	100%	220,000	55.0%	1.0	\$10.50	0.60%	0.55	\$5.78	0.60%	6,350	\$4,291,200	\$10.73	8.1%
Brown Stink Bug	400,000	100%	48,000	12.0%	1.0	\$11.00	0.10%	0.12	\$1.32	0.10%	1,058	\$858,096	\$2.15	1.6%
Clouded Plant Bug	360,000	90%	28,000	7.0%	1.0	\$10.00	0.10%	0.07	\$0.70	0.09%	953	\$549,336	\$1.37	1.0%
Leaf Footed Bugs	12,000	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	340,000	85%	132,000	33.0%	1.2	\$11.00	0.30%	0.40	\$4.40	0.26%	2,699	\$2,338,088	\$5.85	4.4%
Thrips	400,000	100%	280,000	70.0%	1.2	\$7.50	0.20%	0.84	\$6.30	0.20%	2,117	\$3,180,504	\$7.95	6.0%
Aphids	400,000	100%	32,000	8.0%	1.0	\$12.00	0.10%	0.08	\$0.96	0.10%	1,058	\$714,096	\$1.79	1.4%
Grasshoppers	12,000	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	20,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					6.96			\$87.44	6.06%		64,146	\$52,698,032	\$131.75	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Tennessee	Total Acres	400,000		Total	Per Acre	
Region	Midsouth	Total Bales Harvested	920,000	Foliar Insecticide Costs	\$34,974,000	\$87.44	
Year	2019	Total Bales Lost to Insects	64,146	Seed Treatment Costs	\$4,200,000	\$10.50	
Total Acres (Upland)	400,000	In-furrow cost/treated acre	\$8.75	Percent Yield Loss	6.1%	In-Furrow Costs	\$35,000
Yield / Acre (Upland)	1,104	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,175	Scouting Costs	\$3,825,000
Price / lb	\$0.65	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	6.96	Eradication Costs	\$600,000
yield potential (lb/acre)	1,270	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	159,396	Bt Cotton	\$9,528,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	15.1%	Total Costs	\$53,162,000
Yield / Acre (Pima)	0	% Insect apps by air	25%	Transgenic Cotton (arthropods) (# acres)	398,000	Yield Loss to Insects	\$20,013,552
% Acres Scouted	85%	No. apps by air	2	Boll Weevil Eradication (# acres)	400,000	Total Losses + Costs	\$73,175,552
Fee / Scouted Acre	\$11.25	Cost/app by air	\$9.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.5	% insect apps by ground	75%	# Scouted Acres	340,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	5	Seed Treatments (arthropods) (# acres)	400,000		
Cost/treated acre (Bt) Cotton	\$23.94	Cost/app by ground	\$5.25	In-Furrow Applications (# acres)	4,000		
% acres with seed treatment	100%	% Loss to weather	6.0%	Applications by Air (acres)	100,000		
Seed trt. cost/ treated acre	\$10.50	% loss to non-arthropods	1.0%	Applications by Ground (acres)	300,000		
% acres with in-furrow	1%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0		

Table 21. Cotton insect loss estimates for Tennessee during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	80.0%	320,000	\$110.00	\$24.00	90%	288,000	1.2
Bollgard III	7.0%	28,000	\$112.00	\$26.00	0%	0	0.0
WideStrike	1.5%	6,000	\$82.00	\$16.00	100%	6,000	1.5
WideStrike 3	9.0%	36,000	\$105.00	\$24.00	0%	0	0.0
TwinLink	1.0%	4,000	\$82.00	\$16.00	90%	3,600	1.2
TwinLink Plus	1.0%	4,000	\$110.00	\$24.00	0%	0	0.0
Total Bt	99.5%	398,000	\$108.98	\$23.94	74.8%	297,600	1.0
Herbicide Traits Only	0.0%	0	\$0	-	-	0	-
Conventional	0.5%	2,000	\$22.00	-	0%	0	2.3
Organic	0.0%	0	\$0	-	-	0	-
Total Upland Cotton	100.0%	400,000	\$108.55	\$23.94	74.4%	297,600	1.0
Non Upland Cotton							
Pima	0.0%	0	-	-	-	0	-
Other	0.0%	0	-	-	-	0	-
Organic	0.0%	0	-	-	-	0	-
Total (all Cotton)		400,000	\$108.55	-	74.4%	297,600	1.0

Table 22. Cotton insect loss estimates for South Texas 2019-2020 **2020-2019 Wide Cotton Conferences, Austin, TX, January 8-10, 2020**

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	738,649	90%	205,180	25.0%	1.0	\$20.50	0.10%	0.25	\$5.13	0.09%	3,078	\$4,790,233	\$5.84	2.6%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	41,036	5%	0	0.0%	1.0	\$20.50	0.10%	0.00	\$0.00	0.01%	171	\$55,814	\$0.07	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	820,721	100%	328,288	40.0%	1.0	\$15.00	0.50%	0.40	\$6.00	0.50%	17,098	\$10,505,111	\$12.80	5.6%
Cotton Fleahopper	820,721	100%	738,649	90.0%	1.5	\$11.00	10.00%	1.35	\$14.85	10.00%	341,967	\$123,805,730	\$150.85	66.1%
Stink Bugs (other than brown stink bug)	328,288	40%	131,315	16.0%	1.0	\$11.00	1.00%	0.16	\$1.76	0.40%	13,679	\$5,042,613	\$6.14	2.7%
Brown Stink Bug	328,288	40%	164,144	20.0%	1.0	\$11.00	2.00%	0.20	\$2.20	0.80%	27,357	\$9,651,559	\$11.76	5.2%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	270,838	33%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	517,054	63%	123,108	15.0%	1.0	\$14.00	0.50%	0.15	\$2.10	0.32%	10,772	\$4,601,794	\$5.61	2.5%
Thrips	820,721	100%	188,766	23.0%	1.0	\$11.00	0.00%	0.23	\$2.53	0.00%	0	\$2,076,423	\$2.53	1.1%
Aphids	820,721	100%	476,018	58.0%	1.0	\$13.50	0.50%	0.58	\$7.83	0.50%	17,098	\$12,007,029	\$14.63	6.4%
Grasshoppers	738,649	90%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	492,432	60%	328,288	40.0%	1.0	\$10.00	1.00%	0.40	\$4.00	0.60%	20,518	\$8,666,805	\$10.56	4.6%
Verde Plant Bug	180,559	22%	180,559	22.0%	1.0	\$8.00	1.00%	0.22	\$1.76	0.22%	7,523	\$2,773,290	\$3.38	1.5%
Boll Weevil	820,721	100%	656,576	80.0%	1.0	\$0.00	0.30%	0.80	\$0.00	0.30%	10,259	\$3,348,538	\$4.08	1.8%
TOTAL								4.74	\$48.16	13.73%	469,520	\$187,324,939	\$228.24	

SUMMARY DATA

Data Input				Yield and Management Results			Economic Results		
State	Texas			Total Acres	820,721			Total	Per Acre
Region	Central			Total Bales Harvested	1,444,810	Foliar Insecticide Costs		\$39,521,800	\$48.15
Year	2019			Total Bales Lost to Insects	469,520	Seed Treatment Costs		\$7,386,485	\$9.00
Total Acres (Upland)	820,721	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	13.7%	In-Furrow Costs		\$443,189	\$0.54
Yield / Acre (Upland)	845	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	979	Scouting Costs		\$6,155,405	\$7.50
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$7.60	Av. # Applications	4.74	Eradication Costs		\$6,237,480	\$7.60
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,430,448	Bt Cotton		\$16,857,604	\$20.54
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	41.8%	Total Costs		\$76,601,963	\$93.34
Yield / Acre (Pima)	0	% Insect apps by air	90%	Transgenic Cotton (arthropods) (# acres)	820,721	Yield Loss to Insects		\$153,251,328	\$186.73
% Acres Scouted	75%	No. apps by air	2	Boll Weevil Eradication (# acres)	820,721	Total Losses + Costs		\$229,853,291	\$280.06
Fee / Scouted Acre	\$10.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0				
No. times scouted/week	1.2	% insect apps by ground	100%	# Scouted Acres	615,540				
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	738,649				
Cost/treated acre (Bt) Cotton	\$20.54	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	24,622				
% acres with seed treatment	90%	% Loss to weather	25.1%	Applications by Air (acres)	738,649				
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	820,721				
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0				

Table 22 Cotton insect loss estimates for South Texas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	47.0%	385,739	\$81.00	\$19.00	35%	135,009	1.2
Bollgard III	6.0%	49,243	\$93.00	\$26.00	0%	0	0.0
WideStrike	6.0%	49,243	\$67.00	\$5.00	99%	48,751	1.2
WideStrike 3	38.5%	315,977	\$87.00	\$24.00	5%	15,799	1.0
TwinLink	2.0%	16,414	\$76.00	\$19.00	35%	5,745	1.2
TwinLink Plus	0.5%	4,104	\$86.00	\$26.00	0%	0	0.0
Total Bt	100%	820,720	\$83.12	\$20.54	25.0%	205,303	1.0
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	820,720	\$83.12	\$20.54	25.0%	205,303	1.0
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		820,720	\$83.12	-	25.0%	205,303	1.0

Table 23. Cotton insect loss estimates for the Blackland Belt and Upland Cotton of Texas during 2019, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	404,558	100%	80,912	20.0%	1.0	\$21.50	0.05%	0.20	\$4.30	0.05%	843	\$2,014,755	\$4.98	1.1%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	80,912	20%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	343,874	85%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	404,558	100%	372,193	92.0%	2.5	\$11.25	15.00%	2.30	\$25.88	15.00%	252,849	\$92,997,852	\$229.88	48.8%
Stink Bugs (other than brown stink bug)	364,102	90%	40,456	10.0%	1.0	\$11.00	0.00%	0.10	\$1.10	0.00%	0	\$400,512	\$0.99	0.2%
Brown Stink Bug	404,558	100%	283,191	70.0%	1.0	\$11.00	10.00%	0.70	\$7.70	10.00%	168,566	\$58,135,039	\$143.70	30.5%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	384,330	95%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	283,191	70%	101,140	25.0%	1.0	\$13.50	5.00%	0.25	\$3.38	3.50%	58,998	\$20,212,715	\$49.96	10.6%
Thrips	404,558	100%	121,367	30.0%	1.0	\$11.00	2.00%	0.30	\$3.30	2.00%	33,713	\$12,338,965	\$30.50	6.5%
Aphids	404,558	100%	202,279	50.0%	1.5	\$13.50	0.05%	0.75	\$10.13	0.05%	843	\$4,371,305	\$10.81	2.3%
Grasshoppers	404,558	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					4.60				\$55.78	30.60%	515,812	\$190,471,143	\$470.81	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results		
State	Texas			Total Acres	404,558				Total	Per Acre
Region	Central			Total Bales Harvested	699,548	Foliar Insecticide Costs		\$22,564,222		\$55.77
Year	2019			Total Bales Lost to Insects	515,812	Seed Treatment Costs		\$4,045,580		\$10.00
Total Acres (Upland)	404,558	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	30.6%	In-Furrow Costs		\$145,641		\$0.36
Yield / Acre (Upland)	830	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,196	Scouting Costs		\$3,236,464		\$8.00
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$3.46	Av. # Applications	4.6	Eradication Costs		\$1,399,771		\$3.46
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,655,316	Bt Cotton		\$7,947,553		\$19.65
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	98.2%	Total Costs		\$39,339,231		\$97.24
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	404,558	Yield Loss to Insects		\$168,361,037		\$416.16
% Acres Scouted	80%	No. apps by air	3	Boll Weevil Eradication (# acres)	404,558	Total Losses + Costs		\$207,700,268		\$513.40
Fee / Scouted Acre	\$10.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0					
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	323,646					
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	404,558					
Cost/treated acre (Bt) Cotton	\$19.65	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	8,091					
% acres with seed treatment	100%	% Loss to weather	65.1%	Applications by Air (acres)	404,558					
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	0.5%	Applications by Ground (acres)	404,558					
% acres with in-furrow	2.0%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0					

Table 23. Cotton insect loss estimates for the Blacklands-Winter Garden area of Texas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	65.5%	264,985	\$81.00	\$19.00	20%	52,997	1.0
Bollgard III	10.0%	40,456	\$93.00	\$26.00	1%	405	1.0
WideStrike	6.0%	24,273	\$67.00	\$5.00	100%	24,273	1.0
WideStrike 3	15.0%	60,684	\$87.00	\$24.00	1%	607	1.0
TwinLink	3.0%	12,137	\$76.00	\$19.00	20%	2,427	1.0
TwinLink Plus	0.5%	2,023	\$86.00	\$26.00	0%	0	0.0
Total Bt	100%	404,558	\$82.14	\$19.65	19.9%	80,709	1.0
Herbicide Traits Only	0%	0	\$0.00	-	0%	0	0.0
Conventional	0%	0	\$0.00	-	0%	0	0.0
Organic	0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	404,558	\$82.14	\$19.65	19.9%	80,709	1.0
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		404,558	\$82.14	-	19.9%	80,709	1.0

Table 24. Cotton insect loss estimates for the Rolling Plains Region of Texas during August 2019 TX, January 8-10, 2020

725

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	308,603	20%	15,430	1.0%	1.0	\$17.00	2.00%	0.01	\$0.17	0.40%	25,717	\$8,446,491	\$5.47	18.4%
Beet Armyworm	15,430	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	30,860	2%	0	0.0%	0.0	\$0.00	0.05%	0.00	\$0.00	0.00%	64	\$20,890	\$0.01	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	46,290	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	925,808	60%	154,301	10.0%	1.0	\$10.00	1.50%	0.10	\$1.00	0.90%	57,863	\$19,812,292	\$12.84	43.1%
Stink Bugs (other than brown stink bug)	154,301	10%	30,860	2.0%	1.0	\$12.00	0.50%	0.02	\$0.24	0.05%	3,215	\$1,086,408	\$0.70	2.4%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	0	0%	7,715	0.5%	1.0	\$15.00	5.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	925,808	60%	154,301	10.0%	1.0	\$6.00	0.00%	0.10	\$0.60	0.00%	0	\$555,485	\$0.36	1.2%
Aphids	385,754	25%	15,430	1.0%	1.0	\$15.00	1.00%	0.01	\$0.15	0.25%	16,073	\$5,304,090	\$3.44	11.5%
Grasshoppers	154,301	10%	77,151	5.0%	2.0	\$17.00	5.00%	0.10	\$1.70	0.50%	32,146	\$10,754,767	\$6.97	23.4%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	772	0%	772	0.1%	4.0	\$17.00	2.00%	0.00	\$0.00	0.00%	64	\$20,890	\$0.01	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					0.34			\$3.86		2.10%	135,142	\$46,001,313	\$29.81	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Texas	Total Acres	1,551,043		Total	Per Acre	
Region	Central	Total Bales Harvested	964,384	Foliar Insecticide Costs	\$5,956,034	\$3.86	
Year	2019	Total Bales Lost to Insects	135,142	Seed Treatment Costs	\$14,658,633	\$9.50	
Total Acres (Upland)	1,543,014	In-furrow cost/treated acre	\$0.00	Percent Yield Loss	2.1%	In-Furrow Costs	\$0
Yield / Acre (Upland)	300	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	306	Scouting Costs	\$1,465,863
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$0.62	Av. # Applications	0.34	Eradication Costs	\$956,669
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	6,410,066	Bt Cotton	\$29,070,379
Acres (Pima)	8,029	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	99.7%	Total Costs	\$52,107,578
Yield / Acre (Pima)	1,200	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	1,450,433	Yield Loss to Insects	\$44,110,349
% Acres Scouted	10%	No. apps by air	1	Boll Weevil Eradication (# acres)	1,543,014	Total Losses + Costs	\$96,217,927
Fee / Scouted Acre	\$9.50	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	15%	# Scouted Acres	154,301		
% acres Transgenic (Bt) Cotton	94%	No. apps by ground	1	Seed Treatments (arthropods) (# acres)	1,463,863		
Cost/treated acre (Bt) Cotton	\$20.04	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	0		
% acres with seed treatment	95%	% Loss to weather	91.6%	Applications by Air (acres)	77,151,		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	4.0%	Applications by Ground (acres)	231,452		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	1,234,411		

Table 24 Cotton insect loss estimates for the Rolling Plains-Trans Pecos area of Texas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	55.0%	848,658	\$81.00	\$19.00	1.0%	8,487	1.0
Bollgard III	13.0%	200,592	\$93.00	\$26.00	0.0%	0	0.0
WideStrike	5.5%	84,866	\$67.00	\$5.00	5.0%	4,243	1.0
WideStrike 3	14.0%	216,022	\$87.00	\$24.00	0.0%	0	0.0
TwinLink	4.5%	69,436	\$76.00	\$19.00	1.0%	694	1.0
TwinLink Plus	2.0%	30,860	\$86.00	\$26.00	0.0%	0	0.0
Total Bt	94%	1,450,434	\$82.60	\$20.04	0.9%	13,424	0.7
Herbicide Traits Only	5.0%	77,151	\$65.00	-	2.0%	1,543	1.0
Conventional	1.0%	15,430	\$25.00	-	2.0%	309	1.0
Organic	0.0%	0	\$0.00	-	2.0%	0	0.0
Total Upland Cotton	100.0%	1,543,015	\$81.14	\$20.04	1.0%	15,276	0.7
Non Upland Cotton							
Pima	0.5%	8,029	\$60.00	-	0.0%	0	0.0
Other	0.0%	0	\$0.00	-	0.0%	0	0.0
Organic	0.0%	0	\$0.00	-	0.0%	0	0.0
Total (all Cotton)		1,551,044	\$81.04	-	1.0%	15,276	0.7

Table 25. Cotton insect loss estimates for the High Plains area 2019-2020. ~~2020 Boll Weevil Eradication Conference, Austin, TX, January 8-10, 2020~~

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	1,288,112	30%	30,284	0.7%	1.0	\$20.00	0.250%	0.01	\$0.20	0.08%	13,418	\$4,637,258	\$1.08	5.7%
Beet Armyworm	429,371	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	257,622	6%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	429,371	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	215	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	858,742	20%	42,937	1.0%	1.0	\$17.00	0.800%	0.01	\$0.17	0.16%	28,625	\$9,489,186	\$2.21	11.7%
Cotton Fleahopper	1,288,112	30%	128,811	3.0%	1.0	\$15.00	1.000%	0.03	\$0.45	0.30%	53,671	\$18,097,865	\$4.21	22.4%
Stink Bugs (other than brown stink bug)	1,288,112	30%	42,937	1.0%	1.0	\$11.00	0.600%	0.01	\$0.11	0.18%	32,203	\$10,652,752	\$2.48	13.2%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	4,294	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	128,811	3%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	4,293,708	100%	644,056	15.0%	1.0	\$9.00	0.500%	0.15	\$1.35	0.50%	89,452	\$34,993,638	\$8.15	43.3%
Aphids	1,288,112	30%	214,685	5.0%	1.0	\$18.00	0.100%	0.05	\$0.90	0.03%	5,367	\$2,911,090	\$0.68	3.6%
Grasshoppers	429,371	10%	4,294	0.1%	0.0	\$20.00	0.010%	0.00	\$0.00	0.00%	179	\$58,426	\$0.01	0.1%
Banded Winged Whitefly	85,874	2%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Wireworms	107,343	3%	0	0.0%	0.0	\$0.00	0.006%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.26	\$3.18	1.25%	222,915	\$80,840,215	\$18.83	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results		
State	Texas			Total Acres	4,303,708			
Region	Central			Total Bales Harvested	4,651,517	Foliar Insecticide Costs	Total	Per Acre
Year	2019			Total Bales Lost to Insects	222,915	Seed Treatment Costs	\$13,653,990	\$3.18
Total Acres (Upland)	4,293,708	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	1.2%	In-Furrow Costs	\$38,643,369	\$9.00
Yield / Acre (Upland)	520	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	527	Scouting Costs	\$19,321,685	\$4.50
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$1.08	Av. # Applications	0.26	Eradication Costs	\$4,637,205	\$1.08
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	17,898,678	Bt Cotton	\$71,743,568	\$16.71
Acres (Pima)	10,000	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	100.0%	Total Costs	\$150,318,419	\$35.01
Yield / Acre (Pima)	900	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	3,611,008	Yield Loss to Insects	\$72,759,456	\$16.95
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	4,293,708	Total Losses + Costs	\$223,077,875	\$51.95
Fee / Scouted Acre	\$9.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	10%	# Scouted Acres	2,146,854			
% acres Transgenic (Bt) Cotton	84%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	3,864,337			
Cost/treated acre (Bt) Cotton	\$19.87	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	128,811			
% acres with seed treatment	90%	% Loss to weather	90.8%	Applications by Air (acres)	214,685			
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.0%	Applications by Ground (acres)	429,371			
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	6.0%	No. acres with no foliar insecticide applications	3,649,652			

Table 25. Cotton insect loss estimates for the High Plains area of Texas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	48.6%	2,086,742	\$81.00	\$19.00	0%	0	0.0
Bollgard III	8.0%	343,497	\$93.00	\$26.00	0%	0	0.0
WideStrike	3.0%	128,811	\$67.00	\$5.00	0%	0	0.0
WideStrike 3	9.0%	386,434	\$87.00	\$24.00	0%	0	0.0
TwinLink	13.5%	579,651	\$76.00	\$19.00	0%	0	0.0
TwinLink Plus	2.0%	85,874	\$86.00	\$26.00	0%	0	0.0
Total Bt	84%	3,611,009	\$81.60	\$19.87	0.0%	0	0.0
Herbicide Traits Only	11.0%	472,308	\$64.00	-	3%	14,169	1.0
Conventional	4.0%	171,748	\$23.00	-	3%	5,152	1.0
Organic	1.0%	42,937	\$23.00	-	0%	0	0.0
Total Upland Cotton	100.1%	4,298,002	\$76.74	\$19.87	0.4%	19,321	0.1
Non Upland Cotton							
Pima	0.1%	4,294	\$60.00	-	1%	43	1.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.5%	21,469	\$23.00	-	2%	429	1.0
Total (all Cotton)		4,323,765	\$76.46	-	0.5%	19,793	0.2

Table 26. Cotton insect loss estimates for Texas during 2019 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	2,739,922	39%	331,805	5%	1.0	\$19.49	0.60%	0.05	\$0.92	0.23%	34,826	\$13,876,185	\$1.96	7.6%
Beet Armyworm	444,801	6%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	379,570	5%	0	0%	0.1	\$2.38	0.01%	0.00	\$0.00	0.00%	93	\$30,326	\$0.00	0.0%
Loopers	429,371	6%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	30,860	0%	0	0%	0.0	\$0.00	0.01%	0.00	\$0.00	0.00%	7	\$2,318	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	215	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	2,069,627	29%	371,225	5%	0.7	\$12.08	0.54%	0.04	\$0.46	0.16%	23,736	\$8,699,155	\$1.23	4.8%
Cotton Fleahopper	3,439,199	49%	1,393,955	20%	1.1	\$13.23	2.96%	0.23	\$2.99	1.44%	214,215	\$80,192,899	\$11.36	44.2%
Stink Bugs (other than brown stink bug)	2,134,804	30%	245,568	3%	1.0	\$11.22	0.59%	0.03	\$0.39	0.18%	26,541	\$9,495,732	\$1.34	5.2%
Brown Stink Bug	732,846	10%	447,335	6%	0.2	\$1.91	0.81%	0.01	\$0.02	0.08%	12,430	\$4,072,606	\$0.58	2.2%
Clouded Plant Bug	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	659,462	9%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	929,056	13%	231,963	3%	0.4	\$5.68	1.44%	0.01	\$0.07	0.19%	28,120	\$9,246,258	\$1.31	5.1%
Thrips	6,444,795	91%	1,108,491	16%	1.0	\$8.69	0.42%	0.16	\$1.36	0.38%	56,819	\$27,338,057	\$3.87	15.1%
Aphids	2,899,144	41%	908,412	13%	1.0	\$16.56	0.34%	0.13	\$2.19	0.14%	20,778	\$13,135,917	\$1.86	7.2%
Grasshoppers	1,726,879	24%	81,444	1%	0.4	\$15.87	1.10%	0.01	\$0.08	0.27%	39,957	\$13,180,159	\$1.87	7.3%
Banded Winged Whitefly	85,874	1%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	493,204	7%	329,060	5%	1.0	\$4.88	0.55%	0.05	\$0.23	0.04%	5,747	\$1,986,719	\$0.28	1.1%
Verde Plant Bug	180,559	3%	180,559	3%	0.1	\$0.93	0.12%	0.00	\$0.00	0.00%	442	\$144,759	\$0.02	0.1%
Wireworms	107,343	2%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	8	\$2,692	\$0.00	0.0%
Boll Weevil	820,721	12%	656,576	9%	0.1	\$0.00	0.03%	0.01	\$0.00	0.00%	603	\$196,718	\$0.03	0.1%
TOTAL								0.72	\$8.71	3.12%	464,321	\$181,600,500	\$25.72	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results			
State	Texas			Total Acres	7,080,029					Total	Per Acre
Region	Central			Total Bales Harvested	7,760,259	Foliar Insecticide Costs		\$61,513,750			\$8.71
Year	2019			Total Bales Lost to Insects	464,321	Seed Treatment Costs		\$64,734,068			\$9.17
Total Acres (Upland)	7,062,000	In-furrow cost/treated acre	\$14.07	Percent Yield Loss	3.1%	In-Furrow Costs		\$2,272,172			\$0.32
Yield / Acre (Upland)	527	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	544	Scouting Costs		\$30,079,288			\$4.26
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$1.87	Av. # Applications	0.7	Eradication Costs		\$13,231,120			\$1.87
yield potential (lb/acre)	1,011	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	27,394,508	Bt Cotton		\$125,619,089			\$17.79
Acres (Pima)	18,029	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	91.7%	Total Costs		\$297,449,487			\$42.12
Yield / Acre (Pima)	1,034	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	6,286,720	Yield Loss to Insects		\$151,554,524			\$21.46
% Acres Scouted	46%	No. apps by air	1.2	Boll Weevil Eradication (# acres)	7,062,000	Total Losses + Costs		\$449,004,011			\$63.58
Fee / Scouted Acre	\$9.28	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0						
No. times scouted/week	1.1	% insect apps by ground	27%	# Scouted Acres	3,240,342						
% acres Transgenic (Bt) Cotton	89%	No. apps by ground	1.8	Seed Treatments (arthropods) (# acres)	6,473,407						
Cost/treated acre (Bt) Cotton	\$19.98	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	161,524						
% acres with seed treatment	92%	% Loss to weather	81.9%	Applications by Air (acres)	1,435,043						
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.2%	Applications by Ground (acres)	1,886,101						
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	4.4%	No. acres with no foliar insecticide applications	4,884,063						

Table 26. Cotton insect loss estimates for Texas during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	50.78%	3,586,124	\$81.00	\$19.00	5.4%	194,791	0.4
Bollgard III	8.97%	633,787	\$93.00	\$26.00	0.1%	363	0.1
WideStrike	4.07%	287,194	\$67.00	\$5.00	18.3%	52,633	0.4
WideStrike 3	13.86%	979,117	\$87.00	\$24.00	0.6%	6,250	0.2
TwinLink	9.60%	677,637	\$76.00	\$19.00	5.4%	36,808	0.4
TwinLink Plus	1.74%	122,861	\$86.00	\$26.00	0.0%	0	0.0
Total Bt	89.02%	6,286,720	\$82.06	\$19.98	4.6%	290,845	0.3
Herbicide Traits Only	7.78%	549,459	\$53.11	-	2.3%	12,423	0.8
Conventional	2.65%	187,178	\$19.45	-	2.3%	4,232	0.8
Organic	0.61%	42,937	\$13.98	-	0.4%	188	0.0
Total Upland Cotton	100.06%	7,066,294	\$77.74	\$19.98	4.4%	307,688	0.4
Non Upland Cotton							
Pima	0.2%	12,322	\$49.59	-	1%	75	0.6
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.3%	21,469	\$13.98	-	1%	261	0.6
Total (all Cotton)		7,100,085	\$77.50	-	4.3%	308,024	0.4

Table 27. Cotton insect loss estimates for Virginia during 2020 Beltwide Cotton Conferences, Austin, TX, January 8-10, 2020

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Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	52,500	50%	60,113	57.3%	1.0	\$18.00	3.00%	0.57	\$10.26	1.50%	4,594	\$1,949,927	\$18.57	12.9%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	105,000	100%	84,000	80.0%	1.5	\$10.00	5.00%	1.20	\$12.00	5.00%	15,313	\$5,964,154	\$56.80	39.6%
Cotton Fleahopper	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	94,500	90%	15,750	15.0%	1.0	\$10.00	3.00%	0.15	\$1.50	2.70%	8,269	\$2,681,987	\$25.54	17.8%
Brown Stink Bug	94,500	90%	15,750	15.0%	1.0	\$10.00	3.00%	0.15	\$1.50	2.70%	8,269	\$2,681,987	\$25.54	17.8%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	5,250	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	105,000	100%	105,000	100.0%	1.0	\$8.00	1.00%	1.00	\$8.00	1.00%	3,063	\$1,780,954	\$16.96	11.8%
Aphids	10,500	10%	5,250	5.0%	1.0	\$10.00	0.00%	0.05	\$0.50	0.00%	0	\$5,250	\$0.05	0.0%
Grasshoppers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					3.12			\$33.76	12.90%		39,508	\$15,064,259	\$143.47	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Virginia	Total Acres	105,000		Total	Per Acre	
Region	Southeast	Total Bales Harvested	273,438	Foliar Insecticide Costs	\$3,544,800	\$33.76	
Year	2019	Total Bales Lost to Insects	39,508	Seed Treatment Costs	\$1,197,000	\$11.40	
Total Acres (Upland)	105,000	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	12.9%	In-Furrow Costs	\$189,000
Yield / Acre (Upland)	1,250	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,435	Scouting Costs	\$189,000
Price / lb	\$0.64	Cost/acre Boll Weevil Eradication	\$4.00	Av. # Applications	3.12	Eradication Costs	\$420,000
yield potential (lb/acre)	1,400	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	76,256	Bt Cotton	\$1,627,500
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	24.9%	Total Costs	\$7,167,300
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	105,000	Yield Loss to Insects	\$12,136,858
% Acres Scouted	15%	No. apps by air	1	Boll Weevil Eradication (# acres)	105,000	Total Losses + Costs	\$19,304,158
Fee / Scouted Acre	\$12.00	Cost/app by air	\$15.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	95%	# Scouted Acres	15,750		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	99,750		
Cost/treated acre (Bt) Cotton	\$15.50	Cost/app by ground	\$7.50	In-Furrow Applications (# acres)	31,500		
% acres with seed treatment	95%	% Loss to weather	10.0%	Applications by Air (acres)	5,250		
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	99,750		
% acres with in-furrow	30%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0		

Table 27. Cotton insect loss estimates for Virginia during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	80.0%	84,000	\$130.00	\$15.00	60%	50,400	1.0
Bollgard III	5.0%	5,250	\$130.00	\$20.00	10%	525	1.0
WideStrike	5.0%	5,250	\$130.00	\$15.00	90%	4,725	1.0
WideStrike 3	5.0%	5,250	\$130.00	\$20.00	10%	525	1.0
TwinLink	5.0%	5,250	\$130.00	\$15.00	75%	3,938	1.0
TwinLink Plus	0.0%	0	\$130.00	\$20.00	0%	0	0.0
Total Bt	100.0%	105,000	\$130.00	\$15.50	57.3%	60,113	1.0
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	105,000	\$130.00	\$15.50	57.3%	60,113	1.0
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		105,000	\$130.00	-	57.3%	60,113	1.0

Table 28. Cotton insect loss estimates for the United States during 2019 Cotton Conferences, Austin, TX, January 8-10, 2020

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	6,556,009	50%	2,234,886	17.2%	1.3	\$20.12	1.50%	0.23	\$4.59	0.75%	269,801	\$116,949,730	\$8.98	18.4%
Beet Armyworm	459,065	4%	1,100	0.0%	1.0	\$11.30	0.00%	0.00	\$0.00	0.00%	0	\$438	\$0.00	0.0%
Fall Armyworm	585,846	5%	18,802	0.1%	1.0	\$11.91	0.10%	0.00	\$0.02	0.00%	1,897	\$620,605	\$0.05	0.1%
Loopers	486,026	4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	363,644	3%	408,440	3.1%	1.0	\$5.45	0.04%	0.03	\$0.17	0.00%	489	\$219,513	\$0.02	0.0%
Cotton Leaf Perforator	91,794	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$92	\$0.00	0.0%
Saltmarsh Caterpillar	101,962	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	6,316,911	49%	3,401,690	26.1%	2.7	\$12.75	1.70%	0.70	\$8.96	0.83%	335,091	\$164,523,838	\$12.64	25.9%
Cotton Fleahopper	4,971,119	38%	1,962,288	15.1%	1.7	\$12.70	2.21%	0.26	\$3.28	0.84%	229,711	\$90,263,862	\$6.93	14.2%
Stink Bugs (other than brown stink bug)	5,673,463	44%	2,502,117	19.2%	1.2	\$9.11	0.93%	0.23	\$2.09	0.40%	132,446	\$54,529,275	\$4.19	8.6%
Brown Stink Bug	4,732,931	36%	2,341,992	18.0%	1.0	\$8.09	0.88%	0.17	\$1.39	0.32%	111,285	\$42,391,302	\$3.26	6.7%
Clouded Plant Bug	1,452,402	11%	83,880	0.6%	1.0	\$8.57	0.11%	0.01	\$0.05	0.01%	4,740	\$1,602,839	\$0.12	0.3%
Leaf Footed Bugs	1,431,339	11%	84,950	0.7%	0.9	\$8.66	0.09%	0.01	\$0.06	0.01%	3,158	\$1,099,275	\$0.08	0.2%
Spider Mites	3,860,716	30%	1,364,755	10.5%	1.2	\$12.20	0.94%	0.12	\$1.52	0.28%	103,115	\$39,089,112	\$3.00	6.1%
Thrips	11,846,076	91%	3,367,555	25.9%	1.1	\$8.63	0.44%	0.27	\$2.36	0.40%	130,814	\$70,111,325	\$5.39	11.0%
Aphids	7,517,481	58%	2,251,770	17.3%	1.0	\$13.05	0.21%	0.17	\$2.26	0.12%	39,787	\$29,832,840	\$2.29	4.7%
Grasshoppers	2,466,258	19%	113,607	0.9%	0.5	\$13.58	0.77%	0.00	\$0.06	0.15%	40,035	\$13,051,391	\$1.00	2.1%
Banded Winged Whitefly	448,562	3%	4,616	0.0%	0.2	\$32.00	0.00%	0.00	\$0.00	0.00%	0	\$763	\$0.00	0.0%
Silverleaf Whitefly	1,288,752	10%	508,218	3.9%	1.1	\$11.33	0.68%	0.04	\$0.49	0.07%	23,975	\$8,347,430	\$0.64	1.3%
Other insect pests	413,474	320%	201,081	150.0%	0.5	\$8.60	120.00%	0.34	\$3.89	0.28%	7,873	\$2,979,271	\$4.71	2.6%
See individual states for details														
Boll Weevil	820,721	6%	656,576	5.0%	0.1	\$0.00	0.03%	0.01	\$0.00	0.00%	603	\$194,065	\$0.01	0.0%
TOTAL								2.60	\$31.20	4.47%	1,434,820	\$635,806,970	\$53.32	

SUMMARY DATA

Data Input				Yield and Management Results			Economic Results		
				Total Acres		13,042,876	Total		Per Acre
Year	2019			Total Bales Harvested	19,789,079		Foliar Insecticide Costs	\$406,216,777	\$31.20
Total Acres (Upland)	13,018,350	In-furrow cost/treated acre	\$12.15	Total Bales Lost to Insects	1,434,820		Seed Treatment Costs	\$114,810,229	\$8.82
Yield / Acre (Upland)	728	% acres in Boll Weevil Eradication	98%	Percent Yield Loss	4.5%		In-Furrow Costs	\$12,815,141	\$0.98
Price / lb	\$0.67	Cost/acre Boll Weevil Eradication	\$2.06	Yield w/o Insects (lb/acre)	762		Scouting Costs	\$69,830,593	\$5.36
yield potential (lb/acre)	1,155	% acres in Pink Bollworm Eradication	2%	Av. # Applications	2.6		Eradication Costs	\$26,900,042	\$2.07
Acres (Pima)	*	Cost/acre Pink Bollworm Eradication	\$2.74	Total Bales lost (all factors)	33,325,088		Bt Cotton	\$273,269,273	\$20.99
Yield / Acre (Pima)	*	% Insect apps by air	26%	Total % yield Loss	65.9%		Total Costs	\$903,842,055	\$69.43
% Acres Scouted	60%	No. apps by air	1.6	Transgenic Cotton (arthropods) (# acres)	12,203,254		Yield Loss to Insects	\$462,010,100	\$35.49
Fee / Scouted Acre	\$8.92	Cost/app by air	\$7.80	Boll Weevil Eradication (# acres)	12,803,350		Total Losses + Costs	\$1,365,852,155	\$104.92
No. times scouted/week	1.2	% insect apps by ground	51%	Pink Bollworm Eradication (# acres)	210,079				
% acres Transgenic (Bt) Cotton	94%	No. apps by ground	2.3	# Scouted Acres	7,824,894				
Cost/treated acre (Bt) Cotton	\$22.39	Cost/app by ground	\$5.65	Seed Treatments (arthropods) (# acres)	11,359,743				
% acres with seed treatment	87%	% Loss to weather	53.9%	In-Furrow Applications (# acres)	1,054,579				
Seed trt. cost/ treated acre	\$10.11	% loss to non-arthropods	2.7%	Applications by Air (acres)	3,435,103				
% acres with in-furrow	8%	% loss to other (chemical injury, weeds, diseases, etc.)	4.8%	Applications by Ground (acres)	6,600,889				
				No. acres with no foliar insecticide applications	5,468,678				

*See individual states for Pima cotton data.

Table 28. Cotton insect loss estimates for the United States during 2019, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	56.1%	7,300,984	\$86.38	\$21.94	19.5%	1,421,778	0.8
Bollgard III	13.7%	1,781,550	\$94.05	\$26.31	1.0%	17,181	0.1
WideStrike	3.7%	478,276	\$71.59	\$11.72	27.6%	132,061	0.6
WideStrike 3	13.0%	1,688,166	\$89.07	\$23.99	1.9%	31,715	0.2
TwinLink	5.8%	751,344	\$79.01	\$20.02	13.8%	103,880	0.6
TwinLink Plus	1.6%	202,932	\$84.98	\$25.02	0.5%	1,113	0.1
Total Bt	94%	12,203,254	\$86.81	\$22.39	14.0%	1,707,728	0.6
Herbicide Traits Only	4.4%	570,751	\$40.32	-	7.0%	39,927	0.6
Conventional	1.6%	210,363	\$17.85	-	19.9%	41,894	1.1
Organic	0.4%	48,609	\$8.60	-	1.2%	577	0.1
Total Upland Cotton	100.1%	13,032,977	\$83.37	\$22.39	13.7%	1,790,127	0.6

See individual states for Pima cotton data.