

Table 3. Cotton insect loss estimates for Alabama during 2019.

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		Total	Per Acre
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, 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	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