

Table 2. Cotton insect loss estimates for North 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	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	
	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