

Table 2. Cotton insect loss estimates for North Alabama during 2023.

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	82,800	65%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
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	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	12,738	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	127,384	100%	121,015	95%	2.0	\$13.25	0.75%	1.90	\$25.18	0.75%	2,677	\$4,273,409	\$33.55	50.9%
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)	127,384	100%	82,800	65%	1.5	\$8.50	1.00%	0.98	\$8.33	1.00%	3,569	\$2,482,998	\$19.49	29.5%
Brown Stink Bug	114,646	90%	63,692	50%	0.5	\$10.00	0.30%	0.25	\$2.50	0.27%	964	\$670,672	\$5.26	8.0%
Clouded Plant Bug	12,738	10%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,738	10%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	44,584	35%	6,369	5%	1.0	\$9.00	0.00%	0.05	\$0.45	0.00%	0	\$20,063	\$0.16	0.2%
Thrips	127,384	100%	82,800	65%	1.0	\$7.25	0.25%	0.65	\$4.71	0.25%	892	\$955,670	\$7.50	11.4%
Aphids	38,215	30%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	12,738	10%	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	\$0.00	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							2.30%	3.83	\$41.17	2.27%	8,102	\$8,402,812	\$65.96	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Alabama	Total Acres		127,384	Total	Per Acre	
Region	Southeast	Total Bales Harvested		318,460	Foliar Insecticide Costs	\$5,244,081	
Year	2023	Total Bales Lost to Insects		8,102	Seed Treatment Costs	\$1,605,038	
Total Acres (Upland)	127,384	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	2.3%	In-Furrow Costs	\$191,076
Yield / Acre (Upland)	1,200	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,228	Scouting Costs	\$920,349
Price / lb	\$0.83	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	3.83	Eradication Costs	\$191,076
yield potential (lb/acre)	1,345	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	38,443	Bt Cotton	\$4,565,433
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	10.8%	Total Costs	\$12,717,053
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	127,384	Yield Loss to Insects	\$3,227,837
% Acres Scouted	85%	No. apps by air		Boll Weevil Eradication (# acres)	127,384	Total Losses + Costs	\$15,944,890
Fee / Scouted Acre	\$8.50	Cost/app by air	\$7.50	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground		# Scouted Acres	108,276		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground		Seed Treatments (arthropods) (# acres)	114,646		
Cost/treated acre (Bt) Cotton	\$35.84	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	12,738		
% acres with seed treatment	90%	% Loss to weather	5.0%	Applications by Air (acres)	19,108		
Seed trt. cost/ treated acre	\$14.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	0		
% acres with in-furrow	10%	% loss to other (chemical injury, weeds, diseases, etc.)	2.5%	No. acres with no foliar insecticide applications	0		

Table 2. Cotton insect loss estimates for North Alabama during 2023, 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	10.0%	12,738	\$60.00	\$35.00	12%	1,529	1.0
Bollgard III	71.0%	90,443	\$63.00	\$35.00	0%	0	0.0
Bollgard III/Thryvon	11.0%	14,012	\$83.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$45.00	\$0.00	0%	0	0.0
WideStrike 3	8.0%	10,191	\$48.00	\$18.00	0%	0	0.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$60.00	\$38.00	0%	0	0.0
Total Bt	100.0%	127,384	\$63.70	\$35.84	1.2%	1,529	0.0
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%	127,384	\$63.70	\$35.84	1.2%	1,529	0.0
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)		127,384	\$63.70		1.2%	1,529	0.0

Upland Cotton	Thryvon Bt cost/acre	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	\$20.00	0%	0	0.0	100%	14,012	1.5