

Table 1. Cotton insect loss estimates for South 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	162,318	65%	5,993	2%	1.0	\$18.00	0.01%	0.02	\$0.36	0.00%	19	\$66,004	\$0.26	0.4%
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	24,972	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	249,720	100%	237,234	95%	3.0	\$10.00	0.75%	2.85	\$28.50	0.75%	4,776	\$9,019,778	\$36.12	52.6%
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)	249,720	100%	244,726	98%	1.0	\$8.50	0.50%	0.98	\$8.33	0.50%	3,184	\$3,348,673	\$13.41	19.5%
Brown Stink Bug	224,748	90%	124,860	50%	0.5	\$10.00	0.20%	0.25	\$2.50	0.18%	1,146	\$1,018,436	\$4.08	5.9%
Clouded Plant Bug	87,402	35%	24,972	10%	1.0	\$8.00	0.00%	0.10	\$0.80	0.00%	0	\$69,922	\$0.28	0.4%
Leaf Footed Bugs	124,860	50%	12,486	5%	1.0	\$10.00	0.00%	0.05	\$0.50	0.00%	0	\$62,430	\$0.25	0.4%
Thrips	249,720	100%	124,860	50%	1.0	\$7.25	0.50%	0.50	\$3.63	0.50%	3,184	\$2,173,741	\$8.70	12.7%
Aphids	74,916	30%	2,497	1%	1.0	\$7.00	0.00%	0.01	\$0.07	0.00%	0	\$5,244	\$0.02	0.0%
Grasshoppers	149,832	60%	74,916	30%	1.0	\$8.00	0.00%	0.30	\$2.40	0.00%	0	\$359,597	\$1.44	2.1%
Banded Winged Whitefly	4,994	2%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	12,486	5%	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							2.06%	5.41	\$50.94	2.02%	12,850	\$17,156,568	\$68.70	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Alabama	Total Acres		249,720	Total	Per Acre	
Region	Southeast	Total Bales Harvested		397,991	Foliar Insecticide Costs	\$50.93	
Year	2023	Total Bales Lost to Insects		12,850	Seed Treatment Costs	\$11.90	
Total Acres (Upland)	249,720	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	2.0%	In-Furrow Costs	\$561,870
Yield / Acre (Upland)	765	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	781	Scouting Costs	\$1,910,358
Price / lb	\$0.83	Cost/acre Boll Weevil Eradication	\$1.50	Av. # Applications	5.41	Eradication Costs	\$374,580
yield potential (lb/acre)	1,224	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	238,909	Bt Cotton	\$8,815,116
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	37.5%	Total Costs	\$27,353,080
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	249,720	Yield Loss to Insects	\$5,119,440
% Acres Scouted	90%	No. apps by air		Boll Weevil Eradication (# acres)	249,720	Total Losses + Costs	\$32,472,520
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	85%	# Scouted Acres	224,748		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground		Seed Treatments (arthropods) (# acres)	212,262		
Cost/treated acre (Bt) Cotton	\$35.30	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	37,458		
% acres with seed treatment	85%	% Loss to weather	32.0%	Applications by Air (acres)	37,458		
Seed trt. cost/ treated acre	\$14.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	212,262		
% acres with in-furrow	15%	% loss to other (chemical injury, weeds, diseases, etc.)	2.5%	No. acres with no foliar insecticide applications	0		

Table 1. Cotton insect loss estimates for South 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	20.0%	49,944	\$60.00	\$35.00	12%	5,993	1.0
Bollgard III	60.0%	149,832	\$63.00	\$35.00	0%	0	0.0
Bollgard III/Thryvon	10.0%	24,972	\$83.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$45.00	\$0.00	0%	0	0.0
WideStrike 3	10.0%	24,972	\$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%	249,720	\$62.90	\$35.30	2.4%	5,993	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%	249,720	\$62.90	\$35.30	2.4%	5,993	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)		249,720	\$62.90		2.4%	5,993	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%	24,972	2.5