

Table 13. Cotton insect loss estimates for Georgia during 2017.

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	512,000	40%	256,000	20.0%	1.0	\$8.00	0.50%	0.20	\$1.60	0.20%	8,000	\$3,507,200	\$2.74	2.1%
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	12,800	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	576,000	45%	115,200	9.0%	1.0	\$8.00	0.10%	0.09	\$0.72	0.05%	1,800	\$1,019,520	\$0.80	0.6%
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)	1,088,000	85%	1,088,000	85.0%	1.2	\$8.00	0.50%	1.02	\$8.16	0.43%	17,000	\$14,590,080	\$11.40	8.6%
Brown Stink Bug	960,000	75%	960,000	75.0%	1.0	\$9.00	1.00%	0.75	\$6.75	0.75%	30,000	\$16,560,000	\$12.94	9.7%
Clouded Plant Bug	192,000	15%	12,800	1.0%	1.0	\$8.00	0.10%	0.01	\$0.08	0.02%	600	\$216,960	\$0.17	0.1%
Leaf Footed Bugs	51,200	4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	640,000	50%	64,000	5.0%	1.0	\$9.00	0.10%	0.05	\$0.45	0.05%	2,000	\$960,000	\$0.75	0.6%
Thrips	1,267,200	99%	448,000	35.0%	1.0	\$6.00	0.10%	0.35	\$2.10	0.10%	3,960	\$3,991,680	\$3.12	2.3%
Aphids	960,000	75%	64,000	5.0%	1.0	\$7.00	0.00%	0.05	\$0.35	0.00%	0	\$336,000	\$0.26	0.2%
Grasshoppers	25,600	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	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	1,088,000	85%	896,000	70.0%	1.9	\$18.00	9.00%	1.33	\$23.94	7.65%	306,000	\$128,862,720	\$100.67	75.8%
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								3.85	\$44.15	9.23%	369,360	\$170,044,160	\$132.85	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results	
State	Georgia		Total Acres	1,280,000		Total	Per Acre
Region	Southeast		Total Bales Harvested	2,133,333		Foliar Insecticide Costs	\$56,512,000
Year	2017		Total Bales Lost to Insects	369,360		Seed Treatment Costs	\$6,144,000
Total Acres (Upland)	1,280,000	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	9.2%	In-Furrow Costs	\$1,152,000
Yield / Acre (Upland)	800	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	881	Scouting Costs	\$6,272,000
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$1.20	Av. # Applications	3.85	Eradication Costs	\$1,536,000
yield potential (lb/acre)	1,500	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,849,360	Bt Cotton	\$18,817,920
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	46.2%	Total Costs	\$90,433,920
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	1,269,120	Yield Loss to Insects	\$124,104,960
% Acres Scouted	70%	No. apps by air	2	Boll Weevil Eradication (# acres)	1,280,000	Total Losses + Costs	\$214,538,880
Fee / Scouted Acre	\$7.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.1	% insect apps by ground	90%	# Scouted Acres	896,000		
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4	Seed Treatments (arthropods) (# acres)	1,024,000		
Cost/treated acre (Bt) Cotton	\$14.83	Cost/app by ground	\$4.00	In-Furrow Applications (# acres)	192,000		
% acres with seed treatment	80%	% Loss to weather	29.0%	Applications by Air (acres)	192,000		
Seed trt. cost/ treated acre	\$6.00	% loss to non-arthropods	7.0%	Applications by Ground (acres)	1,152,000		
% acres with in-furrow	15%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	128,000		

Table 13. Cotton insect loss estimates for Georgia during 2017, 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	% of Population Bollworm
Bollgard II	79.0%	1,011,200	\$85.00	\$15.00	10%	101,120	1.0	100%
Bollgard III	0.1%	1,280	\$90.00	\$17.00	0%	0	0.0	100%
WideStrike	18.3%	234,240	\$82.00	\$14.00	65%	152,256	1.0	100%
WideStrike 3	0.5%	6,400	\$83.00	\$16.00	0%	0	0.0	100%
TwinLink	1.0%	12,800	\$85.00	\$15.00	10%	1,280	1.0	100%
TwinLink Plus	0.3%	3,200	\$90.00	\$17.00	0%	0	0.0	100%
Total Bt	99.2%	1,269,120	\$84.45	\$14.83	20.1%	254,656	1.0	100.0%
Herbicide Traits Only	0.0%	0	-	-	-	-	-	-
Conventional	0.3%	3,200	\$25.00	-	75%	2,400	2.0	50%
Organic	0.0%	0	-	-	-	-	-	-
Total Upland Cotton	99.5%	1,272,320	\$84.21	\$14.83	20.2%	257,056	1.0	99.9%
Non Upland Cotton								
Pima	0%	0	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total (all Cotton)		1,272,320	\$84.21		20.2%	257,056	1.0	