

Table 23. Cotton insect loss estimates for South Carolina 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	210,000	100%	84,000	40.0%	1.0	\$17.00	1.00%	0.40	\$6.80	1.00%	5,548	\$3,558,432	\$16.94	15.6%
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	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	52,500	25%	4,200	2.0%	1.0	\$9.00	0.01%	0.02	\$0.18	0.00%	17	\$15,978	\$0.08	0.1%
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	210,000	100%	42,000	20.0%	1.0	\$13.00	0.50%	0.20	\$2.60	0.50%	2,774	\$1,611,216	\$7.67	7.1%
Cotton Fleahopper	168,000	80%	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)	210,000	100%	199,500	95.0%	2.0	\$13.00	2.50%	1.90	\$24.70	2.50%	13,869	\$10,512,696	\$50.06	46.2%
Brown Stink Bug	210,000	100%	105,000	50.0%	1.0	\$13.00	1.00%	0.50	\$6.50	1.00%	5,548	\$3,495,432	\$16.64	15.3%
Clouded Plant Bug	21,000	10%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	210,000	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	210,000	100%	10,500	5.0%	1.0	\$18.00	0.10%	0.05	\$0.90	0.10%	555	\$402,120	\$1.91	1.8%
Thrips	210,000	100%	126,000	60.0%	1.0	\$12.00	0.50%	0.60	\$7.20	0.50%	2,774	\$2,577,216	\$12.27	11.3%
Aphids	210,000	100%	21,000	10.0%	1.0	\$12.00	0.00%	0.10	\$1.20	0.00%	0	\$252,000	\$1.20	1.1%
Grasshoppers	210,000	100%	10,500	5.0%	1.0	\$13.00	0.10%	0.05	\$0.65	0.10%	555	\$349,620	\$1.66	1.5%
Banded Winged Whitefly	105,000	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	105,000	50%	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								3.82	\$50.73	5.70%	31,640	\$22,774,710	\$108.45	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	South Carolina	Total Acres		210,000	Total	Per Acre	
Region	Southeast	Total Bales Harvested		378,875	Foliar Insecticide Costs	\$10,653,300	
Year	2023	Total Bales Lost to Insects		31,640	Seed Treatment Costs	\$2,047,500	
Total Acres (Upland)	210,000	In-furrow cost/treated acre	\$25.00	Percent Yield Loss	5.7%	In-Furrow Costs	\$2,100,000
Yield / Acre (Upland)	866	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	918	Scouting Costs	\$1,575,000
Price / lb	\$0.80	Cost/acre Boll Weevil Eradication	\$1.25	Av. # Applications	3.82	Eradication Costs	\$262,500
yield potential (lb/acre)	1,268	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	175,872	Bt Cotton	\$6,426,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	31.7%	Total Costs	\$23,064,300
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	210,000	Yield Loss to Insects	\$12,149,760
% Acres Scouted	75%	No. apps by air	1	Boll Weevil Eradication (# acres)	210,000	Total Losses + Costs	\$35,214,060
Fee / Scouted Acre	\$10.00	Cost/app by air	\$15.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	95%	# Scouted Acres	157,500		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	157,500		
Cost/treated acre (Bt) Cotton	\$30.60	Cost/app by ground	\$7.50	In-Furrow Applications (# acres)	84,000		
% acres with seed treatment	75%	% Loss to weather	10.0%	Applications by Air (acres)	10,500		
Seed trt. cost/ treated acre	\$13.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	199,500		
% acres with in-furrow	40%	% loss to other (chemical injury, weeds, diseases, etc.)	15.0%	No. acres with no foliar insecticide applications	2,100		

Table 23. Cotton insect loss estimates for South Carolina 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	40.0%	84,000	\$108.00	\$30.00	50%	42,000	1.0
Bollgard III	44.0%	92,400	\$106.00	\$30.00	1%	924	1.0
Bollgard III/Thryvon	10.0%	21,000	\$110.00	\$38.00	1%	210	1.0
WideStrike	0.0%	0	\$92.00	\$10.00	0%	0	0.0
WideStrike 3	5.0%	10,500	\$105.00	\$10.00	1%	105	1.0
TwinLink	0.0%	0	\$100.00	\$25.00	0%	0	0.0
TwinLink Plus	1.0%	2,100	\$102.00	\$30.00	1%	21	1.0
Total Bt	100.0%	210,000	\$107.11	\$30.60	20.6%	43,260	0.2
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%	210,000	\$107.11	\$30.60	20.6%	43,260	0.2
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)		210,000	\$107.11		20.6%	43,260	0.2

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	\$8.00	0%	0	0	0%	0	0