

Table 23. Cotton insect loss estimates for South Carolina during 2022.

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	270,000	100%	108,000	40.0%	1.0	\$16.00	1.00%	0.40	\$6.40	1.00%	7,729	\$4,807,234	\$17.80	19.0%
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	67,500	25%	8,100	3.0%	1.0	\$9.00	0.01%	0.03	\$0.27	0.00%	23	\$27,388	\$0.10	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	270,000	100%	40,500	15.0%	1.0	\$12.00	0.25%	0.15	\$1.80	0.25%	1,932	\$1,255,709	\$4.65	5.0%
Cotton Fleahopper	202,500	75%	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)	270,000	100%	256,500	95.0%	2.0	\$12.00	2.00%	1.90	\$22.80	2.00%	15,458	\$12,314,467	\$45.61	48.7%
Brown Stink Bug	270,000	100%	135,000	50.0%	1.0	\$12.00	0.25%	0.50	\$6.00	0.25%	1,932	\$2,389,709	\$8.85	9.4%
Clouded Plant Bug	40,500	15%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	270,000	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	270,000	100%	27,000	10.0%	1.0	\$17.00	0.10%	0.10	\$1.70	0.10%	773	\$766,963	\$2.84	3.0%
Thrips	270,000	100%	162,000	60.0%	1.0	\$11.00	0.50%	0.60	\$6.60	0.50%	3,864	\$3,321,418	\$12.30	13.1%
Aphids	270,000	100%	27,000	10.0%	1.0	\$11.00	0.00%	0.10	\$1.10	0.00%	0	\$297,000	\$1.10	1.2%
Grasshoppers	270,000	100%	8,100	3.0%	1.0	\$12.00	0.01%	0.03	\$0.36	0.01%	77	\$127,877	\$0.47	0.5%
Banded Winged Whitefly	135,000	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	135,000	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								3.81	\$47.03	4.11%	31,788	\$25,307,765	\$93.73	

SUMMARY DATA

Data Input		Yield and Management Results				Economic Results		
State	South Carolina	Total Acres			270,000	Total	Per Acre	
Region	Southeast	Total Bales Harvested			540,000	Foliar Insecticide Costs	\$12,698,100	\$47.03
Year	2022	Total Bales Lost to Insects			31,788	Seed Treatment Costs	\$2,983,500	\$11.05
Total Acres (Upland)	270,000	In-furrow cost/treated acre	\$20.00	Percent Yield Loss	4.1%	In-Furrow Costs	\$810,000	\$3.00
Yield / Acre (Upland)	960	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,001	Scouting Costs	\$1,620,000	\$6.00
Price / lb	\$0.83	Cost/acre Boll Weevil Eradication	\$1.75	Av. # Applications	3.81	Eradication Costs	\$472,500	\$1.75
yield potential (lb/acre)	1,374	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	232,736	Bt Cotton	\$7,830,000	\$29.00
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	30.1%	Total Costs	\$26,414,100	\$97.83
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	270,000	Yield Loss to Insects	\$12,664,339	\$46.90
% Acres Scouted	75%	No. apps by air	1	Boll Weevil Eradication (# acres)	270,000	Total Losses + Costs	\$39,078,439	\$144.73
Fee / Scouted Acre	\$8.00	Cost/app by air	\$12.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	95%	# Scouted Acres	202,500			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	229,500			
Cost/treated acre (Bt) Cotton	\$29.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	40,500			
% acres with seed treatment	85%	% Loss to weather	15.0%	Applications by Air (acres)	13,500			
Seed trt. cost/ treated acre	\$13.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	256,500			
% acres with in-furrow	15%	% loss to other (chemical injury, weeds, diseases, etc.)	10.0%	No. acres with no foliar insecticide applications	675			

Table 23. Cotton insect loss estimates for South Carolina during 2022, 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	50.0%	135,000	\$108.00	\$30.00	50%	67,500	1.0
Bollgard III	44.7%	120,690	\$106.00	\$30.00	1%	1,207	1.0
WideStrike	0.0%	0	\$92.00	\$10.00	0%	0	0.0
WideStrike 3	5.0%	13,500	\$105.00	\$10.00	1%	135	1.0
TwinLink	0.0%	0	\$99.00	\$25.00	50%	0	1.0
TwinLink Plus	0.3%	810	\$102.00	\$30.00	1%	8	1.0
Total Bt	100.0%	270,000	\$106.94	\$29.00	25.5%	68,850	0.3
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%	270,000	\$106.94	\$29.00	25.5%	68,850	0.3
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)		270,000	\$106.94		25.5%	68,850	0.3