

Table 24. Cotton insect loss estimates for South Carolina during 2018.

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	300,000	100.0%	90,000	30.0%	1.0	\$10.00	1.30%	0.30	\$3.00	1.25%	9,375	\$4,455,000	\$14.85	20.8%
Beet Armyworm	1,500	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	15,000	5.0%	3,000	1.0%	1.0	\$10.00	0.10%	0.01	\$0.10	0.01%	38	\$15,910	\$0.05	0.1%
Loopers	1,500	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	15,000	5.0%	15,000	5.0%	1.0	\$6.00	0.10%	0.05	\$0.30	0.01%	38	\$18,910	\$0.06	0.1%
Cotton Leaf Perforator	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	300,000	100.0%	30,000	10.0%	1.0	\$8.00	0.20%	0.10	\$0.80	0.20%	1,500	\$808,800	\$2.70	3.8%
Cotton Fleahopper	225,000	75.0%	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)	300,000	100.0%	270,000	90.0%	1.5	\$9.00	2.00%	1.35	\$12.15	2.00%	15,000	\$9,333,000	\$31.11	43.6%
Brown Stink Bug	300,000	100.0%	150,000	50.0%	1.0	\$9.00	0.30%	0.50	\$4.50	0.25%	1,875	\$2,061,000	\$6.87	9.6%
Clouded Plant Bug	1,500	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	225,000	75.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	300,000	100.0%	45,000	15.0%	1.0	\$12.00	0.10%	0.15	\$1.80	0.10%	750	\$824,400	\$2.75	3.9%
Thrips	300,000	100.0%	240,000	80.0%	1.0	\$6.00	0.50%	0.80	\$4.80	0.50%	3,750	\$2,862,000	\$9.54	13.4%
Aphids	300,000	100.0%	30,000	10.0%	1.0	\$9.00	0.10%	0.10	\$0.90	0.10%	750	\$554,400	\$1.85	2.6%
Grasshoppers	300,000	100.0%	3,000	1.0%	1.0	\$9.00	0.10%	0.01	\$0.09	0.10%	750	\$311,400	\$1.04	1.5%
Banded Winged Whitefly	150,000	50.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	150,000	50.0%	1,500	1.0%	1.0	\$15.00	0.10%	0.01	\$0.15	0.05%	375	\$164,700	\$0.55	0.8%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								3.38	\$28.59	4.56%	34,201	\$21,409,520	\$71.37	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results	
State	South Carolina		Total Acres	300,000		Total	Per Acre
Region	Southeast		Total Bales Harvested	481,875	Foliar Insecticide Costs	\$8,577,000	\$28.59
Year	2018		Total Bales Lost to Insects	34,201	Seed Treatment Costs	\$3,510,000	\$11.70
Total Acres (Upland)	300,000	In-furrow cost/treated acre	Percent Yield Loss	4.6%	In-Furrow Costs	\$1,080,000	\$3.60
Yield / Acre (Upland)	771	% acres in Boll Weevil Eradication	Yield w/o Insects (lb/acre)	808	Scouting Costs	\$1,575,000	\$5.25
Price / lb	\$0.79	Cost/acre Boll Weevil Eradication	Av. # Applications	3.38	Eradication Costs	\$375,000	\$1.25
yield potential (lb/acre)	1,200	% acres in Pink Bollworm Eradication	Total Bales lost (all factors)	266,700	Bt Cotton	\$8,769,000	\$29.23
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	Total % yield Loss	35.6%	Total Costs	\$23,886,000	\$79.62
Yield / Acre (Pima)	0	% Insect apps by air	Transgenic Cotton (arthropods) (# acres)	300,000	Yield Loss to Insects	\$12,969,019	\$43.23
% Acres Scouted	75%	No. apps by air	Boll Weevil Eradication (# acres)	300,000	Total Losses + Costs	\$36,855,019	\$122.85
Fee / Scouted Acre	\$7.00	Cost/app by air	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	# Scouted Acres	225,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	Seed Treatments (arthropods) (# acres)	270,000			
Cost/treated acre (Bt) Cotton	\$29.23	Cost/app by ground	In-Furrow Applications (# acres)	60,000			
% acres with seed treatment	90%	% Loss to weather	Applications by Air (acres)	15,000			
Seed trt. cost/ treated acre	\$13.00	% loss to non-arthropods	Applications by Ground (acres)	285,000			
% acres with in-furrow	20%	% loss to other (chemical injury, weeds, diseases, etc.)	No. acres with no foliar insecticide applications	1,500			

Table 24. Cotton insect loss estimates for South Carolina during 2018, 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	84.4%	253,200	\$108.00	\$30.00	50%	126,600	1.0
Bollgard III	9.0%	27,000	\$106.00	\$30.00	5%	1,350	1.0
WideStrike	0.1%	300	\$92.00	\$10.00	100%	300	1.0
WideStrike 3	3.0%	9,000	\$105.00	\$10.00	5%	450	1.0
TwinLink	3.0%	9,000	\$99.00	\$25.00	50%	4,500	1.0
TwinLink Plus	0.5%	1,500	\$102.00	\$30.00	5%	75	1.0
Total Bt	100.0%	300,000	\$107.41	\$29.23	44.4%	133,275	1.0
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%	300,000	\$97.87	\$29.23	44.4%	133,275	1.0
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)		300,000	\$97.87		44.4%	133,275	1.0