

Table 20. Cotton insect loss estimates for South Carolina during 2019.

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%	75,000	25.0%	1.0	\$10.00	1.00%	0.25	\$2.50	1.00%	6,913	\$3,072,768	\$10.24	15.9%
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	3,000	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	15,000	5%	9,000	3.0%	1.0	\$6.00	0.10%	0.03	\$0.18	0.01%	35	\$14,460	\$0.05	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	300,000	100%	30,000	10.0%	1.0	\$9.00	0.25%	0.10	\$0.90	0.25%	1,728	\$850,608	\$2.84	4.4%
Cotton Fleahopper	300,000	100%	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%	270,000	90.0%	1.5	\$9.00	2.00%	1.35	\$12.15	2.00%	13,825	\$8,290,200	\$27.63	42.8%
Brown Stink Bug	300,000	100%	150,000	50.0%	1.0	\$9.00	0.25%	0.50	\$4.50	0.25%	1,728	\$1,930,608	\$6.44	10.0%
Clouded Plant Bug	15,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	150,000	50%	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%	30,000	10.0%	1.0	\$0.00	0.10%	0.10	\$0.00	0.10%	691	\$232,176	\$0.77	1.2%
Thrips	300,000	100%	225,000	75.0%	1.0	\$6.00	1.00%	0.75	\$4.50	1.00%	6,913	\$3,672,768	\$12.24	19.0%
Aphids	300,000	100%	60,000	20.0%	1.0	\$9.00	0.25%	0.20	\$1.80	0.25%	1,728	\$1,120,608	\$3.74	5.8%
Grasshoppers	300,000	100%	3,000	1.0%	1.0	\$9.00	0.01%	0.01	\$0.09	0.01%	69	\$50,184	\$0.17	0.3%
Banded Winged Whitefly	150,000	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	150,000	50%	3,000	1.0%	1.0	\$15.00	0.10%	0.01	\$0.15	0.05%	346	\$138,756	\$0.46	0.7%
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								3.30	\$26.77	4.92%	33,976	\$19,373,136	\$64.58	

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	508,750		Foliar Insecticide Costs	\$8,031,000
Year	2019		Total Bales Lost to Insects	33,976		Seed Treatment Costs	\$3,510,000
Total Acres (Upland)	300,000		Percent Yield Loss	4.9%		In-Furrow Costs	\$1,080,000
Yield / Acre (Upland)	814		Yield w/o Insects (lb/acre)	856		Scouting Costs	\$1,680,000
Price / lb	\$0.70		Av. # Applications	3.3		Eradication Costs	\$375,000
yield potential (lb/acre)	1,106		Total Bales lost (all factors)	248,262		Bt Cotton	\$8,625,000
Acres (Pima)	0		Total % yield Loss	35.9%		Total Costs	\$23,301,000
Yield / Acre (Pima)	0		Transgenic Cotton (arthropods) (# acres)	300,000		Yield Loss to Insects	\$11,415,936
% Acres Scouted	80%		Boll Weevil Eradication (# acres)	300,000		Total Losses + Costs	\$34,716,936
Fee / Scouted Acre	\$7.00		Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1		# Scouted Acres	240,000			
% acres Transgenic (Bt) Cotton	100%		Seed Treatments (arthropods) (# acres)	270,000			
Cost/treated acre (Bt) Cotton	\$28.75		In-Furrow Applications (# acres)	60,000			
% acres with seed treatment	90%		Applications by Air (acres)	15,000			
Seed trt. cost/ treated acre	\$13.00		Applications by Ground (acres)	285,000			
% acres with in-furrow	20%		No. acres with no foliar insecticide applications	750			

Table 20. Cotton insect loss estimates for South Carolina during 2019, 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	72.0%	216,000	\$108.00	\$30.00	50%	108,000	1.0
Bollgard III	20.0%	60,000	\$106.00	\$30.00	5%	3,000	1.0
WideStrike	0.0%	0	\$92.00	\$10.00	100%	0	0.0
WideStrike 3	6.0%	18,000	\$105.00	\$10.00	10%	1,800	1.0
TwinLink	1.0%	3,000	\$99.00	\$25.00	50%	1,500	1.0
TwinLink Plus	1.0%	3,000	\$102.00	\$30.00	5%	150	1.0
Total Bt	100.0%	300,000	\$107.27	\$28.75	38.2%	114,450	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	\$107.27	\$28.75	38.2%	114,450	1.0
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		300,000	\$107.27	-	38.2%	114,450	1.0