

Table 10. Cotton insect loss estimates for Florida 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	120,000	100%	18,000	15.0%	1.0	\$8.00	0.80%	0.15	\$1.20	0.80%	2,200	\$809,280	\$6.74	5.7%
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	6,000	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,400	2%	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	120,000	100%	108,000	90.0%	1.5	\$8.50	3.00%	1.35	\$11.48	3.00%	8,250	\$3,871,800	\$32.27	27.0%
Cotton Fleahopper	15,600	13%	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)	120,000	100%	108,000	90.0%	2.0	\$7.50	3.50%	1.80	\$13.50	3.50%	9,625	\$4,530,600	\$37.76	31.6%
Brown Stink Bug	120,000	100%	108,000	90.0%	1.5	\$8.50	2.00%	1.35	\$11.48	2.00%	5,500	\$3,040,200	\$25.34	21.2%
Clouded Plant Bug	30,000	25%	18,000	15.0%	1.0	\$8.50	0.08%	0.15	\$1.28	0.02%	55	\$54,882	\$0.46	0.4%
Leaf Footed Bugs	96,000	80%	60,000	50.0%	1.0	\$9.00	1.00%	0.50	\$4.50	0.80%	2,200	\$1,097,280	\$9.14	7.7%
Spider Mites	36,000	30%	30,000	25.0%	1.2	\$8.50	0.00%	0.30	\$2.55	0.00%	0	\$91,800	\$0.77	0.6%
Thrips	120,000	100%	72,000	60.0%	1.0	\$3.25	0.00%	0.60	\$1.95	0.00%	0	\$234,000	\$1.95	1.6%
Aphids	120,000	100%	72,000	60.0%	1.0	\$8.00	0.00%	0.60	\$4.80	0.00%	0	\$576,000	\$4.80	4.0%
Grasshoppers	0	0%	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	60,000	50%	600	0.5%	1.0	\$21.50	0.00%	0.01	\$0.22	0.00%	0	\$12,900	\$0.11	0.1%
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								6.81	\$52.94	10.12%	27,830	\$14,318,742	\$119.32	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Florida		Total Acres	120,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	187,500	Foliar Insecticide Costs	\$6,352,800	\$52.94	
Year	2019		Total Bales Lost to Insects	27,830	Seed Treatment Costs	\$1,575,000	\$13.13	
Total Acres (Upland)	120,000	In-furrow cost/treated acre	\$25.00	Percent Yield Loss	10.1%	In-Furrow Costs	\$1,800,000	\$15.00
Yield / Acre (Upland)	750	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	834	Scouting Costs	\$518,400	\$4.32
Price / lb	\$0.63	Cost/acre Boll Weevil Eradication	\$2.00	Av. # Applications	6.81	Eradication Costs	\$240,000	\$2.00
yield potential (lb/acre)	1,100	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	58,080	Bt Cotton	\$4,184,640	\$34.87
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	21.1%	Total Costs	\$14,670,840	\$122.26
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	120,000	Yield Loss to Insects	\$8,415,792	\$70.13
% Acres Scouted	48%	No. apps by air	1.2	Boll Weevil Eradication (# acres)	120,000	Total Losses + Costs	\$23,086,632	\$192.39
Fee / Scouted Acre	\$9.00	Cost/app by air	\$8.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	100%	# Scouted Acres	57,600			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	4	Seed Treatments (arthropods) (# acres)	90,000			
Cost/treated acre (Bt) Cotton	\$34.87	Cost/app by ground	\$8.00	In-Furrow Applications (# acres)	72,000			
% acres with seed treatment	75%	% Loss to weather	10.0%	Applications by Air (acres)	24,000			
Seed trt. cost/ treated acre	\$17.50	% loss to non-arthropods	0.0%	Applications by Ground (acres)	120,000			
% acres with in-furrow	60%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	0			

Table 10. Cotton insect loss estimates for Florida 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	87.0%	104,400	\$114.00	\$35.00	7%	7,308	1.0
Bollgard III	7.0%	8,400	\$110.00	\$35.00	0%	0	0.0
WideStrike	4.0%	4,800	\$103.18	\$38.15	5%	240	1.0
WideStrike 3	1.0%	1,200	\$109.58	\$44.60	0%	0	0.0
TwinLink	1.0%	1,200	-	-	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
Total Bt	100.0%	120,000	\$112.10	\$34.87	6.3%	7,548	0.9
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%	120,000	\$112.10	\$34.87	6.3%	7,548	0.9
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)		120,000	\$112.10	-	6.3%	7,548	0.9