

Table 23. Cotton insect loss estimates for the Blacklands-Winter Garden area of Texas 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	404,558	100%	80,912	20.0%	1.0	\$21.50	0.05%	0.20	\$4.30	0.05%	843	\$2,014,755	\$4.98	1.1%
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	80,912	20%	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	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	343,874	85%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	404,558	100%	372,193	92.0%	2.5	\$11.25	15.00%	2.30	\$25.88	15.00%	252,849	\$92,997,852	\$229.88	48.8%
Stink Bugs (other than brown stink bug)	364,102	90%	40,456	10.0%	1.0	\$11.00	0.00%	0.10	\$1.10	0.00%	0	\$400,512	\$0.99	0.2%
Brown Stink Bug	404,558	100%	283,191	70.0%	1.0	\$11.00	10.00%	0.70	\$7.70	10.00%	168,566	\$58,135,039	\$143.70	30.5%
Clouded Plant Bug	0	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	384,330	95%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	283,191	70%	101,140	25.0%	1.0	\$13.50	5.00%	0.25	\$3.38	3.50%	58,998	\$20,212,715	\$49.96	10.6%
Thrips	404,558	100%	121,367	30.0%	1.0	\$11.00	2.00%	0.30	\$3.30	2.00%	33,713	\$12,338,965	\$30.50	6.5%
Aphids	404,558	100%	202,279	50.0%	1.5	\$13.50	0.05%	0.75	\$10.13	0.05%	843	\$4,371,305	\$10.81	2.3%
Grasshoppers	404,558	100%	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	0	0%	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								4.60	\$55.78	30.60%	515,812	\$190,471,143	\$470.81	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Texas		Total Acres	404,558		Total	Per Acre	
Region	Central		Total Bales Harvested	699,548		Foliar Insecticide Costs	\$22,564,222	
Year	2019		Total Bales Lost to Insects	515,812		Seed Treatment Costs	\$4,045,580	
Total Acres (Upland)	404,558	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	30.6%		In-Furrow Costs	\$145,641
Yield / Acre (Upland)	830	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,196		Scouting Costs	\$3,236,464
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$3.46	Av. # Applications	4.6		Eradication Costs	\$1,399,771
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,655,316		Bt Cotton	\$7,947,553
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	98.2%		Total Costs	\$39,339,231
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	404,558		Yield Loss to Insects	\$168,361,037
% Acres Scouted	80%	No. apps by air	3	Boll Weevil Eradication (# acres)	404,558		Total Losses + Costs	\$207,700,268
Fee / Scouted Acre	\$10.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	323,646			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	404,558			
Cost/treated acre (Bt) Cotton	\$19.65	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	8,091			
% acres with seed treatment	100%	% Loss to weather	65.1%	Applications by Air (acres)	404,558			
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	0.5%	Applications by Ground (acres)	404,558			
% acres with in-furrow	2.0%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0			

Table 23 Cotton insect loss estimates for the Blacklands-Winter Garden area of Texas 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	65.5%	264,985	\$81.00	\$19.00	20%	52,997	1.0
Bollgard III	10.0%	40,456	\$93.00	\$26.00	1%	405	1.0
WideStrike	6.0%	24,273	\$67.00	\$5.00	100%	24,273	1.0
WideStrike 3	15.0%	60,684	\$87.00	\$24.00	1%	607	1.0
TwinLink	3.0%	12,137	\$76.00	\$19.00	20%	2,427	1.0
TwinLink Plus	0.5%	2,023	\$86.00	\$26.00	0%	0	0.0
Total Bt	100%	404,558	\$82.14	\$19.65	19.9%	80,709	1.0
Herbicide Traits Only	0%	0	\$0.00	-	0%	0	0.0
Conventional	0%	0	\$0.00	-	0%	0	0.0
Organic	0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	404,558	\$82.14	\$19.65	19.9%	80,709	1.0
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		404,558	\$82.14	-	19.9%	80,709	1.0