

Table 29. Cotton insect loss estimates for Texas during 2017.

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	5,867,470	85%	1,434,049	21%	1.0	\$15.35	1.02%	0.21	\$3.22	0.87%	251,408	\$103,646,744	\$14.99	56.6%
Beet Armyworm	506,450	7%	0	0%	0.2	\$4.36	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	212,184	3%	16,815	0%	0.2	\$3.74	0.02%	0.00	\$0.00	0.00%	216	\$73,229	\$0.01	0.0%
Loopers	479,070	7%	0	0%	0.2	\$2.57	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	30,724	0%	0	0%	0.2	\$2.57	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0%	0.2	\$1.88	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	219	0%	0	0%	0.2	\$2.57	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	342,206	5%	6,726	0%	0.2	\$2.70	0.00%	0.00	\$0.00	0.00%	0	\$221	\$0.00	0.0%
Cotton Fleahopper	2,068,500	30%	1,104,172	16%	1.2	\$9.49	0.42%	0.19	\$1.77	0.13%	36,175	\$15,857,472	\$2.29	8.7%
Stink Bugs (other than brown stink bug)	834,930	12%	672,215	10%	0.4	\$4.38	0.54%	0.04	\$0.16	0.06%	18,675	\$6,427,735	\$0.93	3.5%
Brown Stink Bug	201,782	3%	50,445	1%	0.2	\$3.26	0.02%	0.00	\$0.01	0.00%	205	\$70,368	\$0.01	0.0%
Clouded Plant Bug	0	0%	0	0%	0.2	\$1.60	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	605,914	9%	0	0%	0.2	\$1.60	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	627,607	9%	19,553	0%	0.2	\$4.24	0.44%	0.00	\$0.00	0.04%	11,667	\$3,936,203	\$0.57	2.1%
Thrips	6,914,000	100%	2,552,708	37%	1.0	\$9.36	0.16%	0.37	\$3.45	0.16%	46,684	\$39,623,678	\$5.73	21.6%
Aphids	3,858,485	56%	1,049,722	15%	1.0	\$14.19	0.09%	0.16	\$2.21	0.05%	14,914	\$13,542,205	\$1.96	7.4%
Grasshoppers	382,482	6%	7,064	0%	0.2	\$1.60	0.00%	0.00	\$0.00	0.00%	0	\$124	\$0.00	0.0%
Banded Winged Whitefly	156,050	2%	0	0%	0.2	\$2.77	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0%	0.2	\$3.96	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Creontiades	381,201	6%	124,305	2%	0.1	\$1.20	0.01%	0.00	\$0.00	0.00%	96	\$33,192	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.96	\$10.82	1.31%	380,040	\$183,211,172	\$26.50	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results	
State	Texas	Total Acres	6,928,000		Total	Per Acre
Region	Central	Total Bales Harvested	11,927,324		Foliar Insecticide Costs	\$74,776,052
Year	2017	Total Bales Lost to Insects	380,040		Seed Treatment Costs	\$53,539,002
Total Acres (Upland)	6,914,000	Percent Yield Loss	1.3%		In-Furrow Costs	\$1,758,423
Yield / Acre (Upland)	828	Yield w/o Insects (lb/acre)	839		Scouting Costs	\$19,318,291
Price / lb	\$0.70	Av. # Applications	1.0		Eradication Costs	\$18,719,926
yield potential (lb/acre)	2,007	Total Bales lost (all factors)	17,036,076		Bt Cotton	\$44,070,637
Acres (Pima)	14,000	Total % yield Loss	58.7%		Total Costs	\$212,182,331
Yield / Acre (Pima)	1,065	Transgenic Cotton (arthropods) (# acres)	5,474,020		Yield Loss to Insects	\$128,155,853
% Acres Scouted	34%	Boll Weevil Eradication (# acres)	6,914,000		Total Losses + Costs	\$340,338,184
Fee / Scouted Acre	\$8.21	Pink Bollworm Eradication (# acres)	16,428			
No. times scouted/week	1	# Scouted Acres	2,353,771			
% acres Transgenic (Bt) Cotton	79%	Seed Treatments (arthropods) (# acres)	5,966,666			
Cost/treated acre (Bt) Cotton	\$8.05	In-Furrow Applications (# acres)	131,736			
% acres with seed treatment	86%	Applications by Air (acres)	1,879,354			
Seed trt. cost/ treated acre	\$8.97	Applications by Ground (acres)	5,034,646			
% acres with in-furrow	2%	No. acres with no foliar insecticide applications	4,530,750			

Table 29. Cotton insect loss estimates for Texas during 2017, 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	% of Population Bollworm
Bollgard II	35.57%	2,458,997	\$57.03	\$7.48	6.6%	161,827	1.0	100%
Bollgard III	0.02%	1,369	\$9.90	\$9.98	0.0%	0	0.0	83%
WideStrike	10.36%	716,453	\$47.32	\$7.27	13.1%	93,533	1.0	100%
WideStrike 3	8.01%	553,472	\$62.20	\$11.86	0.0%	0	0.0	88%
TwinLink	24.15%	1,669,423	\$57.70	\$7.84	7.4%	123,154	0.9	100%
TwinLink Plus	1.07%	74,305	\$54.73	\$10.71	0.0%	0	0.0	88%
Total Bt	79.17%	5,474,020	\$56.44	\$8.05	6.9%	378,514	0.9	98.2%
Herbicide Traits Only	16.63%	1,149,800	\$25.34	-	32.1%	368,751	0.8	83%
Conventional	3.62%	250,523	\$16.36	-	44.1%	110,372	1.1	95%
Organic	0.63%	43,800	\$15.64	-	0.4%	173	0.2	19%
Total Upland Cotton	100.06%	6,918,143	\$49.56	\$8.05	12.4%	857,810	0.85795626	95.0%
Non Upland Cotton								
Pima	0.2%	13,690	\$11.88	-	0	0	0	0
Other	0.0%	0	\$0.00	-	-	-	-	-
Organic	0.0%	0	\$0.00	-	-	-	-	-
Total (all Cotton)		6,931,833	\$49.49		12.4%	857,810	0.9	