

Table 30. Cotton insect loss estimates for Texas 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	4,386,287	58.0%	1,052,485	13.8%	1.0	\$20.04	1.60%	0.14	\$2.83	0.89%	283,591	\$117,230,040	\$15.40	54.0%
Beet Armyworm	486,470	6.0%	0	0.0%	0.2	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	346,120	5.0%	27,486	0.4%	0.2	\$4.06	0.10%	0.00	\$0.00	0.00%	1,221	\$452,263	\$0.06	0.2%
Loopers	470,258	6.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	7,296	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	235	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	1,281,503	17.0%	235,616	3.1%	0.8	\$11.81	0.00%	0.02	\$0.29	0.00%	0	\$368,513	\$0.05	0.2%
Cotton Fleahopper	3,364,861	44.0%	1,434,168	18.8%	1.2	\$11.00	0.40%	0.23	\$2.54	0.20%	62,421	\$31,621,483	\$4.15	14.6%
Stink Bugs (other than brown stink bug)	1,579,613	21.0%	691,022	9.1%	1.0	\$11.83	0.60%	0.09	\$1.07	0.12%	39,499	\$16,294,908	\$2.14	7.5%
Brown Stink Bug	430,534	6.0%	156,946	2.1%	0.2	\$1.86	0.10%	0.00	\$0.01	0.00%	1,519	\$564,296	\$0.07	0.3%
Clouded Plant Bug	0	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	183,667	2.0%	92,471	1.2%	0.1	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	378,228	5.0%	83,270	1.1%	0.4	\$5.78	3.60%	0.00	\$0.02	0.18%	57,012	\$21,080,681	\$2.77	9.7%
Thrips	5,878,272	77.0%	1,486,166	19.5%	0.8	\$7.42	0.20%	0.15	\$1.14	0.14%	42,846	\$22,539,164	\$2.96	10.4%
Aphids	3,275,748	43.0%	237,774	3.1%	1.0	\$17.24	0.10%	0.03	\$0.54	0.05%	14,465	\$7,109,693	\$0.93	3.3%
Grasshoppers	265,896	3.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	94,052	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	490,097	6.0%	138,707	1.8%	0.1	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kurtoma Thrips	235,129	3.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Wireworms	235,129	3.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	61	\$22,366	\$0.00	0.0%
Boll Weevil	277,414	4.0%	277,414	3.6%	0.2	\$0.00	0.00%	0.01	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.69	\$8.44	1.58%	502,635	\$217,283,409	\$28.54	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results			
State	Texas	Total Acres	7,629,694	Total	Per Acre			
Region	Central	Total Bales Harvested	8,303,732	Foliar Insecticide Costs	\$64,291,997	\$8.44		
Year	2018	Total Bales Lost to Insects	502,635	Seed Treatment Costs	\$65,917,124	\$8.66		
Total Acres (Upland)	7,613,289	In-furrow cost/treated acre	\$17.24	Percent Yield Loss	1.6%	In-Furrow Costs	\$2,813,948	\$0.37
Yield / Acre (Upland)	524	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	532	Scouting Costs	\$31,239,006	\$4.10
Price / lb	\$0.77	Cost/acre Boll Weevil Eradication	\$2.15	Av. # Applications	0.7	Eradication Costs	\$16,392,212	\$2.15
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	28,802,399	Bt Cotton	\$76,471,594	\$10.04
Acres (Pima)	16,405	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	90.2%	Total Costs	\$257,125,881	\$33.77
Yield / Acre (Pima)	750	% Insect apps by air	42%	Transgenic Cotton (arthropods) (# acres)	6,104,422	Yield Loss to Insects	\$185,773,788	\$24.40
% Acres Scouted	44%	No. apps by air	0.3	Boll Weevil Eradication (# acres)	7,613,289	Total Losses + Costs	\$442,899,669	\$58.17
Fee / Scouted Acre	\$9.30	Cost/app by air	\$7.04	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.05	% insect apps by ground	58%	# Scouted Acres	3,360,066			
% acres Transgenic (Bt) Cotton	80%	No. apps by ground	0.6	Seed Treatments (arthropods) (# acres)	6,591,712			
Cost/treated acre (Bt) Cotton	\$12.53	Cost/app by ground	\$4.79	In-Furrow Applications (# acres)	163,219			
% acres with seed treatment	87%	% Loss to weather	80.4%	Applications by Air (acres)	3,212,400			
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.8%	Applications by Ground (acres)	4,400,889			
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	5.5%	No. acres with no foliar insecticide applications	5,075,481			

Table 30. Cotton insect loss estimates for Texas 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	37.2%	2,829,344	\$80.00	\$12.00	6%	181,117	1.0
Bollgard III	1.7%	132,981	\$90.00	\$20.00	0%	0	0.0
WideStrike	7.6%	576,550	\$60.00	\$5.00	15%	84,378	1.0
WideStrike 3	9.0%	683,489	\$90.00	\$15.00	0%	982	0.0
TwinLink	17.9%	1,364,548	\$80.00	\$12.00	6%	87,350	1.0
TwinLink Plus	6.8%	517,508	\$90.00	\$20.00	0%	0	0.0
Total Bt	80.2%	6,104,422	\$80.30	\$12.53	5.8%	353,828	0.8
Herbicide Traits Only	14.2%	1,079,460	\$65.00	-	66.7%	719,893	1.3
Conventional	4.9%	373,134	\$25.00	-	66.7%	248,844	1.3
Organic	0.7%	56,273	\$25.00	-	0.0%	0	0.0
Total Upland Cotton	100.0%	7,613,289	\$73.44	\$12.53	17.4%	1,322,564	0.9
Non Upland Cotton							
Pima	0.2%	17,833	\$12.78	-	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)		7,631,122	\$73.29		17.3%	1,322,564	0.9