

Table 26. Cotton insect loss estimates for Texas during 2021.

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	4,350,035	75%	117,267	2%	1.0	\$17.20	0.17%	0.02	\$0.35	0.13%	30,052	\$16,284,984	\$2.82	3.7%
Beet Armyworm	271,812	5%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	471,125	8%	1,374	0%	0.5	\$4.75	0.00%	0.00	\$0.00	0.00%	0	\$253	\$0.00	0.0%
Loopers	339,766	6%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	31,865	1%	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	169,883	3%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	3,550,733	61%	377,296	7%	0.6	\$10.91	0.80%	0.04	\$0.45	0.49%	115,240	\$58,211,274	\$10.07	13.4%
Cotton Fleahopper	5,644,130	98%	1,472,149	25%	1.1	\$15.19	2.16%	0.28	\$4.21	2.11%	494,107	\$266,543,126	\$46.10	61.3%
Stink Bugs (other than brown stink bug)	2,834,975	49%	464,042	8%	0.9	\$11.00	0.88%	0.07	\$0.82	0.43%	101,052	\$51,989,414	\$8.99	12.0%
Brown Stink Bug	1,009,882	17%	197,331	3%	0.3	\$1.92	0.65%	0.01	\$0.02	0.11%	26,612	\$13,096,492	\$2.27	3.0%
Clouded Plant Bug	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	525,161	9%	20,806	0%	0.1	\$0.00	0.60%	0.00	\$0.00	0.05%	12,795	\$6,287,531	\$1.09	1.4%
Spider Mites	427,468	7%	2,193	0%	0.0	\$2.27	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	4,082,701	71%	949,972	16%	1.0	\$7.00	0.16%	0.16	\$1.15	0.11%	26,054	\$17,497,922	\$3.03	4.0%
Aphids	2,644,576	46%	312,204	5%	0.2	\$2.27	0.08%	0.01	\$0.02	0.04%	8,871	\$4,415,806	\$0.76	1.0%
Grasshoppers	3,403,170	59%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	33,977	1%	0	0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	387,581	7%	384,069	7%	0.6	\$3.80	0.00%	0.04	\$0.15	0.00%	0	\$59,921	\$0.01	0.0%
Verde Plant Bug	197,656	3%	7,282	0%	0.1	\$1.64	0.07%	0.00	\$0.00	0.00%	526	\$258,591	\$0.04	0.1%
Boll Weevil	41,528	1%	41,528	1%	2.4	\$0.00	0.00%	0.02	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.66	\$7.17	3.49%	815,308	\$434,645,314	\$75.18	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results			
State	Texas	Total Acres		5,781,529		Total	Per Acre	
Region	Central	Total Bales Harvested		8,851,966	Foliar Insecticide Costs	\$41,440,681	\$7.17	
Year	2021	Total Bales Lost to Insects		815,308	Seed Treatment Costs	\$52,418,229	\$9.07	
Total Acres (Upland)	5,781,529	In-furrow cost/treated acre	\$21.03	Percent Yield Loss	3.5%	In-Furrow Costs	\$2,358,935	\$0.41
Yield / Acre (Upland)	735	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	761	Scouting Costs	\$24,877,852	\$4.30
Price / lb	\$1.02	Cost/acre Boll Weevil Eradication	\$2.39	Av. # Applications	0.7	Eradication Costs	\$13,829,712	\$2.39
yield potential (lb/acre)	1,942	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	15,261,686	Bt Cotton	\$96,672,154	\$16.72
Acres (Pima)	14,708	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	62.2%	Total Costs	\$231,597,564	\$40.06
Yield / Acre (Pima)	976	% Insect apps by air	35%	Transgenic Cotton (arthropods) (# acres)	4,873,907	Yield Loss to Insects	\$400,648,055	\$69.30
% Acres Scouted	47%	No. apps by air	1.1	Boll Weevil Eradication (# acres)	5,781,529	Total Losses + Costs	\$632,245,618	\$109.36
Fee / Scouted Acre	\$9.12	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.1	% insect apps by ground	72%	# Scouted Acres	2,726,572			
% acres Transgenic (Bt) Cotton	84%	No. apps by ground	1.6	Seed Treatments (arthropods) (# acres)	5,386,804			
Cost/treated acre (Bt) Cotton	\$19.83	Cost/app by ground	\$5.91	In-Furrow Applications (# acres)	112,166			
% acres with seed treatment	93%	% Loss to weather	49.7%	Applications by Air (acres)	2,048,087			
Seed trt. cost/ treated acre	\$9.73	% loss to non-arthropods	3.3%	Applications by Ground (acres)	4,172,477			
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	5.6%	No. acres with no foliar insecticide applications	3,833,130			

Table 26. Cotton insect loss estimates for Texas during 2021, 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	22.66%	1,310,183	\$85.00	\$17.00	5.5%	72,505	0.4
Bollgard III	29.27%	1,692,103	\$93.00	\$25.00	0.0%	0	0.0
WideStrike	2.14%	123,659	\$68.00	\$5.00	0.7%	882	0.2
WideStrike 3	12.45%	719,614	\$83.00	\$15.00	0.7%	4,920	0.1
TwinLink	9.42%	544,725	\$73.00	\$14.00	7.3%	39,829	0.4
TwinLink Plus	8.36%	483,622	\$86.00	\$27.00	0.0%	0	0.0
Total Bt	84.30%	4,873,907	\$85.81	\$19.83	2.4%	118,135	0.010
Herbicide Traits Only	13.40%	774,964	\$44.00	-	2.0%	15,605	0.8
Conventional	2.00%	115,670	\$19.00	-	1.2%	1,360	0.6
Organic	0.29%	16,988	\$19.00	-	0.0%	0	0.0
Total Upland Cotton	100.00%	5,781,529	\$78.67	\$19.83	2.3%	135,099	0.011
Non Upland Cotton							
Pima	0.3%	14,725	\$65.00	-	6%	873	0.8
Other	0.0%	0	\$19.00	-	0%	0	0.0
Organic	0.0%	0	\$65.00	-	0%	0	0.0
Total (all Cotton)		5,796,254	\$78.64		2.3%	135,972	0.011