

Table 25. Cotton insect loss estimates for the High Plains 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	1,288,112	30%	30,284	0.7%	1.0	\$20.00	0.250%	0.01	\$0.20	0.08%	13,418	\$4,637,258	\$1.08	5.7%
Beet Armyworm	429,371	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	257,622	6%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	429,371	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	215	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	858,742	20%	42,937	1.0%	1.0	\$17.00	0.800%	0.01	\$0.17	0.16%	28,625	\$9,489,186	\$2.21	11.7%
Cotton Fleahopper	1,288,112	30%	128,811	3.0%	1.0	\$15.00	1.000%	0.03	\$0.45	0.30%	53,671	\$18,097,865	\$4.21	22.4%
Stink Bugs (other than brown stink bug)	1,288,112	30%	42,937	1.0%	1.0	\$11.00	0.600%	0.01	\$0.11	0.18%	32,203	\$10,652,752	\$2.48	13.2%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	4,294	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	128,811	3%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	4,293,708	100%	644,056	15.0%	1.0	\$9.00	0.500%	0.15	\$1.35	0.50%	89,452	\$34,993,638	\$8.15	43.3%
Aphids	1,288,112	30%	214,685	5.0%	1.0	\$18.00	0.100%	0.05	\$0.90	0.03%	5,367	\$2,911,090	\$0.68	3.6%
Grasshoppers	429,371	10%	4,294	0.1%	0.0	\$20.00	0.010%	0.00	\$0.00	0.00%	179	\$58,426	\$0.01	0.1%
Banded Winged Whitefly	85,874	2%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Wireworms	107,343	3%	0	0.0%	0.0	\$0.00	0.006%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								0.26	\$3.18	1.25%	222,915	\$80,840,215	\$18.83	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results	
State	Texas	Total Acres	4,303,708		Total	Per Acre
Region	Central	Total Bales Harvested	4,651,517		Foliar Insecticide Costs	\$13,653,990
Year	2019	Total Bales Lost to Insects	222,915		Seed Treatment Costs	\$38,643,369
Total Acres (Upland)	4,293,708	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	1.2%	
Yield / Acre (Upland)	520	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	527	
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$1.08	Av. # Applications	0.26	
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	17,898,678	
Acres (Pima)	10,000	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	100.0%	
Yield / Acre (Pima)	900	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	3,611,008	
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	4,293,708	
Fee / Scouted Acre	\$9.00	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)	0	
No. times scouted/week	1	% insect apps by ground	10%	# Scouted Acres	2,146,854	
% acres Transgenic (Bt) Cotton	84%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	3,864,337	
Cost/treated acre (Bt) Cotton	\$19.87	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	128,811	
% acres with seed treatment	90%	% Loss to weather	90.8%	Applications by Air (acres)	214,685	
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.0%	Applications by Ground (acres)	429,371	
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	6.0%	No. acres with no foliar insecticide applications	3,649,652	

Table 25. Cotton insect loss estimates for the High Plains 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	48.6%	2,086,742	\$81.00	\$19.00	0%	0	0.0
Bollgard III	8.0%	343,497	\$93.00	\$26.00	0%	0	0.0
WideStrike	3.0%	128,811	\$67.00	\$5.00	0%	0	0.0
WideStrike 3	9.0%	386,434	\$87.00	\$24.00	0%	0	0.0
TwinLink	13.5%	579,651	\$76.00	\$19.00	0%	0	0.0
TwinLink Plus	2.0%	85,874	\$86.00	\$26.00	0%	0	0.0
Total Bt	84%	3,611,009	\$81.60	\$19.87	0.0%	0	0.0
Herbicide Traits Only	11.0%	472,308	\$64.00	-	3%	14,169	1.0
Conventional	4.0%	171,748	\$23.00	-	3%	5,152	1.0
Organic	1.0%	42,937	\$23.00	-	0%	0	0.0
Total Upland Cotton	100.1%	4,298,002	\$76.74	\$19.87	0.4%	19,321	0.1
Non Upland Cotton							
Pima	0.1%	4,294	\$60.00	-	1%	43	1.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.5%	21,469	\$23.00	-	2%	429	1.0
Total (all Cotton)		4,323,765	\$76.46	-	0.5%	19,793	0.2