

Table 28. Cotton insect loss estimates for the High Plains area of Texas during 2022.

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	508,221	50%	3,049	0.3%	1.0	\$18.00	0.100%	0.00	\$0.00	0.05%	2,118	\$864,144	\$0.85	2.4%
Beet Armyworm	50,822	5%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	50,822	5%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	101,644	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	50,822	5%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	813,154	80%	40,658	4.0%	1.0	\$13.00	0.500%	0.04	\$0.52	0.40%	16,941	\$7,334,768	\$7.22	20.7%
Cotton Fleahopper	1,016,442	100%	91,480	9.0%	1.0	\$12.50	1.000%	0.09	\$1.13	1.00%	42,352	\$18,423,113	\$18.13	52.0%
Stink Bugs (other than brown stink bug)	152,466	15%	10,164	1.0%	1.0	\$10.00	1.000%	0.01	\$0.10	0.15%	6,353	\$2,607,271	\$2.57	7.4%
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	20,329	2%	3,049	0.3%	0.0	\$10.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	101,644	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	1,016,442	100%	132,137	13.0%	1.0	\$14.00	0.250%	0.13	\$1.82	0.25%	10,588	\$6,169,828	\$6.07	17.4%
Aphids	101,644	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	508,221	50%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	10,164	1%	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	0	0%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil								0.27	\$3.57	1.85%	78,352	\$35,399,124	\$34.83	
TOTAL														

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
					Total	Per Acre	
State	Texas	Total Acres		1,016,442			
Region	Central	Total Bales Harvested		1,397,608	Foliar Insecticide Costs	\$3,623,616	
Year	2022	Total Bales Lost to Insects		78,352	Seed Treatment Costs	\$11,231,684	
Total Acres (Upland)	1,016,442	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	1.9%	In-Furrow Costs	\$548,879
Yield / Acre (Upland)	660	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	672	Scouting Costs	\$4,573,989
Price / lb	\$0.85	Cost/acre Boll Weevil Eradication	\$2.10	Av. # Applications	0.27	Eradication Costs	\$2,134,528
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	2,837,567	Bt Cotton	\$12,416,453
Acres (Pima)	13,683	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	67.0%	Total Costs	\$34,529,149
Yield / Acre (Pima)	950	% Insect apps by air	10%	Transgenic Cotton (arthropods) (# acres)	752,167	Yield Loss to Insects	\$31,967,616
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	1,016,442	Total Losses + Costs	\$66,496,765
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	18%	# Scouted Acres	508,221		
% acres Transgenic (Bt) Cotton	74%	No. apps by ground	1	Seed Treatments (arthropods) (# acres)	863,976		
Cost/treated acre (Bt) Cotton	\$16.51	Cost/app by ground	\$5.50	In-Furrow Applications (# acres)	30,493		
% acres with seed treatment	85%	% Loss to weather	58.0%	Applications by Air (acres)	101,644		
Seed trt. cost/ treated acre	\$13.00	% loss to non-arthropods	2.2%	Applications by Ground (acres)	182,960		
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0		

Table 28. Cotton insect loss estimates for the High Plains area of Texas during 2022, 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	18.0%	182,960	\$76.52	\$11.67	0%	0	0.0
Bollgard III	21.0%	213,453	\$86.48	\$21.63	0%	0	0.0
WideStrike	0.0%	0	\$67.24	\$2.39	0%	0	0.0
WideStrike 3	13.0%	132,137	\$81.08	\$16.23	0%	0	0.0
TwinLink	13.0%	132,137	\$67.12	\$9.17	0%	0	0.0
TwinLink Plus	9.0%	91,480	\$83.18	\$25.23	0%	0	0.0
Total Bt	74.0%	752,167	\$79.31	\$16.51	0.0%	0	0.000
Herbicide Traits Only	21.0%	213,453	\$41.14	-	1.2%	2,561	1.0
Conventional	4.0%	40,658	\$23.71	-	1.2%	488	1.0
Organic	1.0%	10,164	\$23.71	-	0.0%	0	0.0
Total Upland Cotton	100.0%	1,016,442	\$68.51	\$16.51	0.3%	3,049	0.003
Non Upland Cotton							
Pima	0.3%	3,049	\$65.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		1,019,491	\$68.50	-	0.3%	3,049	0.003