

Table 28. Cotton insect loss estimates for the High Plains area of Texas during 2023.

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	1,730,978	100%	8,897	0.5%	1.0	\$18.00	0.350%	0.01	\$0.18	0.35%	25,521	\$10,111,640	\$5.84	10.4%
Beet Armyworm	17,310	1%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	34,620	2%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	34,620	2%	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	17,310	1%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	519,293	30%	17,310	1.0%	1.0	\$14.00	0.500%	0.01	\$0.14	0.15%	10,938	\$4,272,893	\$2.47	4.4%
Cotton Fleahopper	1,211,685	70%	173,098	10.0%	1.0	\$14.00	1.000%	0.10	\$1.40	0.70%	51,042	\$21,296,486	\$12.30	21.9%
Stink Bugs (other than brown stink bug)	259,647	15%	8,655	0.5%	1.0	\$14.00	0.500%	0.01	\$0.14	0.08%	5,469	\$2,136,447	\$1.23	2.2%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$14.00	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	17,310	1%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	51,929	3%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	1,730,978	100%	259,647	15.0%	1.0	\$12.50	0.500%	0.15	\$1.88	0.50%	36,459	\$17,245,840	\$9.96	17.8%
Aphids	34,620	2%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	1,730,978	100%	1,731	0.1%	1.0	\$18.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	17,310	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	519,293	30%	173,098	10.0%	0.0	\$0.00	5.000%	0.00	\$0.00	1.50%	109,376	\$42,000,384	\$24.26	43.3%
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								0.28	\$3.74	3.28%	238,805	\$97,063,690	\$56.07	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
					Total	Per Acre	
State	Texas	Total Acres		1,730,978			
Region	Central	Total Bales Harvested		1,803,102	Foliar Insecticide Costs	\$6,465,203 \$3.74	
Year	2023	Total Bales Lost to Insects		238,805	Seed Treatment Costs	\$11,684,102 \$6.75	
Total Acres (Upland)	1,730,978	In-furrow cost/treated acre	\$40.00	Percent Yield Loss	3.3%	In-Furrow Costs	\$2,077,174 \$1.20
Yield / Acre (Upland)	500	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	517	Scouting Costs	\$11,078,259 \$6.40
Price / lb	\$0.80	Cost/acre Boll Weevil Eradication	\$1.04	Av. # Applications	0.28	Eradication Costs	\$1,800,217 \$1.04
yield potential (lb/acre)	2,022	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	5,488,861	Bt Cotton	\$19,908,862 \$11.50
Acres (Pima)	13,950	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	75.3%	Total Costs	\$53,013,817 \$30.63
Yield / Acre (Pima)	950	% Insect apps by air	11%	Transgenic Cotton (arthropods) (# acres)	1,280,924	Yield Loss to Insects	\$91,701,120 \$52.98
% Acres Scouted	80%	No. apps by air	1	Boll Weevil Eradication (# acres)	1,730,978	Total Losses + Costs	\$144,714,937 \$83.60
Fee / Scouted Acre	\$8.00	Cost/app by air	\$8.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	18%	# Scouted Acres	1,384,782		
% acres Transgenic (Bt) Cotton	74%	No. apps by ground	1	Seed Treatments (arthropods) (# acres)	1,298,234		
Cost/treated acre (Bt) Cotton	\$15.54	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	51,929		
% acres with seed treatment	75%	% Loss to weather	65.0%	Applications by Air (acres)	190,408		
Seed trt. cost/ treated acre	\$9.00	% loss to non-arthropods	2.0%	Applications by Ground (acres)	311,576		
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	1,263,614		

Table 28. Cotton insect loss estimates for the High Plains area of Texas during 2023, 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	10.0%	173,098	\$89.02	\$13.89	0%	0	0.0
Bollgard III	25.0%	432,745	\$95.67	\$20.54	0%	0	0.0
Bollgard III/Thryvon	2.0%	34,620	\$115.67	\$40.54	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	10.0%	173,098	\$88.84	\$13.71	0%	0	0.0
TwinLink	10.0%	173,098	\$71.89	\$0.00	0%	0	0.0
TwinLink Plus	17.0%	294,266	\$89.34	\$14.21	0%	0	0.0
Total Bt	74.0%	1,280,925	\$89.72	\$15.54	0.0%	0	0.0
Herbicide Traits Only	18.0%	311,576	\$75.13		2%	6,232	1.0
Conventional	7.0%	121,168	\$25.08		2%	2,423	1.0
Organic	1.0%	17,310	\$25.08		0%	0	0.0
Total Upland Cotton	100.0%	1,730,979	\$81.92	\$15.54	0.5%	8,655	0.0
Non Upland Cotton							
Pima	0.8%	13,848	\$65.00		2%	277	1.0
Other	0.0%	0	\$0.00		0%	0	0.0
Organic	0.0%	0	\$0.00		0%	0	0.0
Total (all Cotton)		1,744,827	\$81.79		0.5%	8,932	0.005

Upland Cotton	Thryvon Bt cost/acre	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	\$19.00	0%	0	0	0%	0	0