

Table 25. Cotton insect loss estimates for the High Plains area of 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	2,378,359	70%	9,513	0.3%	1.0	\$15.00	0.100%	0.00	\$0.00	0.07%	9,910	\$4,756,800	\$1.40	1.5%
Beet Armyworm	271,812	8%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	169,883	5%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	339,766	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	169,883	5%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	2,718,125	80%	339,766	10.0%	1.0	\$15.00	1.000%	0.10	\$1.50	0.80%	113,255	\$58,439,587	\$17.20	18.4%
Cotton Fleahopper	3,397,656	100%	441,695	13.0%	1.0	\$15.00	3.000%	0.13	\$1.95	3.00%	424,707	\$210,484,789	\$61.95	66.3%
Stink Bugs (other than brown stink bug)	849,414	25%	101,930	3.0%	1.0	\$11.00	2.000%	0.03	\$0.33	0.50%	70,785	\$34,257,107	\$10.08	10.8%
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	16,988	1%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	339,766	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	1,698,828	50%	509,648	15.0%	1.0	\$5.00	0.250%	0.15	\$0.75	0.13%	17,696	\$9,768,201	\$2.87	3.1%
Aphids	339,766	10%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	1,019,297	30%	0	0.0%	0.0	\$0.00	0.000%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	33,977	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%
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					0.41			\$4.53		4.50%	636,353	\$317,706,484	\$93.51	

SUMMARY DATA

Data Input		Yield and Management Results				Economic Results		
	Texas	Total Acres				Total	Per Acre	
State	Central	3,397,656	Total Acres Harvested	4,742,562	Foliar Insecticide Costs	\$15,391,382	\$4.53	
Region	2021		Total Bales Lost to Insects	636,353	Seed Treatment Costs	\$30,578,904	\$9.00	
Year			Percent Yield Loss	4.5%	In-Furrow Costs	\$1,223,156	\$0.36	
Total Acres (Upland)	3,397,656	In-furrow cost/treated acre	\$12.00	Yield w/o Insects (lb/acre)	702	Scouting Costs	\$15,289,452	\$4.50
Yield / Acre (Upland)	670	% acres in Boll Weevil Eradication	100%	Av. # Applications	0.41	Eradication Costs	\$4,722,742	\$1.39
Price / lb	\$1.00	Cost/acre Boll Weevil Eradication	\$1.39	Total Bales lost (all factors)	9,413,631	Bt Cotton	\$49,979,525	\$14.71
yield potential (lb/acre)	2,000	% acres in Pink Bollworm Eradication	0%	Total % yield Loss	66.5%	Total Costs	\$117,185,161	\$34.49
Acres (Pima)	5,311	Cost/acre Pink Bollworm Eradication	\$0.00	Transgenic Cotton (arthropods) (# acres)	2,531,254	Yield Loss to Insects	\$305,449,440	\$89.90
Yield / Acre (Pima)	950	% Insect apps by air	35%	Boll Weevil Eradication (# acres)	3,397,656	Total Losses + Costs	\$422,634,601	\$124.39
% Acres Scouted	50%	No. apps by air	1	Pink Bollworm Eradication (# acres)	0			
Fee / Scouted Acre	\$9.00	Cost/app by air	\$7.00	# Scouted Acres	1,698,828			
No. times scouted/week	1	% insect apps by ground	65%	Seed Treatments (arthropods) (# acres)	3,057,890			
% acres Transgenic (Bt) Cotton	75%	No. apps by ground	1	In-Furrow Applications (# acres)	101,930			
Cost/treated acre (Bt) Cotton	\$19.74	Cost/app by ground	\$6.00	Applications by Air (acres)	1,189,180			
% acres with seed treatment	90%	% Loss to weather	55.0%	Applications by Ground (acres)	2,208,476			
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	2.0%	No. acres with no foliar insecticide applications	2,718,125			
% acres with in-furrow	3%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%					

Table 25. Cotton insect loss estimates for the High Plains area of 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	18.0%	611,578	\$85.00	\$17.00	0%	0	0.0
Bollgard III	21.0%	713,508	\$93.00	\$25.00	0%	0	0.0
WideStrike	0.0%	0	\$68.00	\$5.00	0%	0	0.0
WideStrike 3	13.0%	441,695	\$83.00	\$15.00	0%	0	0.0
TwinLink	12.5%	424,707	\$73.00	\$14.00	0%	0	0.0
TwinLink Plus	10.0%	339,766	\$86.00	\$27.00	0%	0	0.0
Total Bt	74.5%	2,531,254	\$85.03	\$19.74	0.0%	0	0.000
Herbicide Traits Only	22.0%	747,484	\$44.00	-	1%	7,475	1.0
Conventional	3.0%	101,930	\$19.00	-	2%	2,039	1.0
Organic	0.5%	16,988	\$19.00	-	0%	0	0.0
Total Upland Cotton	100.0%	3,397,656	\$73.69	\$19.74	0.3%	9,514	0.003
Non Upland Cotton							
Pima	0.1563%	5,311	\$65.00	-	2%	106	1.0
Other	0.0%	0	\$19.00	-	0%	0	0
Organic	0.0%	0	\$65.00	-	0%	0	0
Total (all Cotton)		3,402,967	\$73.68		0.3%	9,620	0.003