

Table 27. Cotton insect loss estimates for the Rolling Plains-Trans Pecos 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	33,116	10%	3,312	1.0%	1.0	\$22.97	0.40%	0.01	\$0.23	0.04%	552	\$232,823	\$0.70	8.5%
Beet Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	13,247	4.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0%	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	16,558	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	165,582	50%	1,656	0.5%	1.0	\$12.50	0.67%	0.01	\$0.13	0.34%	4,620	\$1,905,658	\$5.75	69.4%
Stink Bugs (other than brown stink bug)	165,582	50%	1,656	0.5%	1.0	\$12.75	0.20%	0.01	\$0.13	0.10%	1,379	\$583,744	\$1.76	21.3%
Brown Stink Bug	0	0%	0	0.0%	0.0	\$0.00	0.20%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	6,623	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	6,623	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	231,815	70%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Aphids	16,558	5%	0	0.0%	0.0	\$0.00	0.08%	0.00	\$0.00	0.00%	55	\$22,440	\$0.07	0.8%
Grasshoppers	165,582	50%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	13,247	4%	3,312	1.0%	1.0	\$17.50	0.00%	0.01	\$0.18	0.00%	0	\$2,318	\$0.01	0.1%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					0.04			\$0.66		0.48%	6,606	\$2,746,983	\$8.29	

SUMMARY DATA

Data Input		Yield and Management Results				Economic Results	
State	Texas	Total Acres				Total	Per Acre
Region	Central	Total Bales Harvested				\$217,641	\$0.66
Year	2022	Total Bales Lost to Insects				\$1,266,702	\$3.82
Total Acres (Upland)	331,164	In-furrow cost/treated acre	\$45.00	Percent Yield Loss	0.5%	In-Furrow Costs	\$149,024
Yield / Acre (Upland)	750	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	754	Scouting Costs	\$351,862
Price / lb	\$0.85	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	0.04	Eradication Costs	\$827,910
yield potential (lb/acre)	1,999	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	861,685	Bt Cotton	\$6,056,265
Acres (Pima)	12,989	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	62.5%	Total Costs	\$8,869,404
Yield / Acre (Pima)	1,250	% Insect apps by air	1%	Transgenic Cotton (arthropods) (# acres)	309,307	Yield Loss to Insects	\$2,695,248
% Acres Scouted	13%	No. apps by air	1	Boll Weevil Eradication (# acres)	331,164	Total Losses + Costs	\$11,564,652
Fee / Scouted Acre	\$8.50	Cost/app by air	\$9.50	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.5	% insect apps by ground	1%	# Scouted Acres	41,396		
% acres Transgenic (Bt) Cotton	93%	No. apps by ground	1	Seed Treatments (arthropods) (# acres)	149,024		
Cost/treated acre (Bt) Cotton	\$19.58	Cost/app by ground	\$7.50	In-Furrow Applications (# acres)	3,312		
% acres with seed treatment	45%	% Loss to weather	56.0%	Applications by Air (acres)	1,656		
Seed trt. cost/ treated acre	\$8.50	% loss to non-arthropods	2.0%	Applications by Ground (acres)	3,312		
% acres with in-furrow	1.0%	% loss to other (chemical injury, weeds, diseases, etc.)	4.0%	No. acres with no foliar insecticide applications	314,606		

Table 27. Cotton insect loss estimates for the Rolling Plains-Trans Pecos 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	9.9%	32,785	\$76.52	\$11.67	2.0%	656	1.0
Bollgard III	29.8%	98,687	\$86.48	\$21.63	0.0%	0	0.0
WideStrike	0.1%	331	\$67.24	\$2.39	3.0%	10	1.0
WideStrike 3	22.8%	75,505	\$81.08	\$16.23	0.0%	0	0.0
TwinLink	4.9%	16,227	\$67.12	\$9.17	2.0%	325	1.0
TwinLink Plus	25.9%	85,771	\$83.18	\$25.23	0.0%	0	0.0
Total Bt	93.4%	309,306	\$82.15	\$19.58	0.3%	990	0.003
Herbicide Traits Only	1.0%	3,312	\$44.00	-	8.0%	265	1.0
Conventional	5.0%	16,558	\$0.00	-	8.0%	1,325	1.0
Organic	0.0%	0	\$0.00	-	0.0%	0	0.0
Total Upland Cotton	99.4%	329,176	\$77.64	\$19.58	0.8%	2,580	0.008
Non Upland Cotton							
Pima	0.9%	2,980	\$65.00	-	20.0%	596	1.0
Other	0.0%	0	\$0.00	-	0.0%	0	0.0
Organic	0.0%	0	\$0.00	-	0.0%	0	0.0
Total (all Cotton)		332,156	\$77.52	-	1.0%	3,176	0.01