

Table 24. Cotton insect loss estimates for the Rolling Plains-Trans Pecos 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	961,794	70%	18,549	1.4%	1.0	\$20.00	0.40%	0.01	\$0.20	0.28%	16,102	\$8,694,215	\$6.33	5.7%
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	68,700	5.0%	1,374	0.1%	2.0	\$20.00	0.30%	0.00	\$0.00	0.02%	863	\$455,664	\$0.33	0.3%
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	27,480	2%	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	13,740	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	1,236,592	90%	384,717	28.0%	1.0	\$18.00	4.00%	0.28	\$5.04	3.60%	207,026	\$115,542,151	\$84.09	75.8%
Stink Bugs (other than brown stink bug)	1,030,493	75%	123,659	9.0%	1.0	\$11.00	1.00%	0.09	\$0.99	0.75%	43,130	\$23,792,828	\$17.32	15.6%
Brown Stink Bug	0	0%	0	0.0%	1.0	\$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	27,480	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	1,373,991	100%	68,700	5.0%	1.0	\$9.00	0.00%	0.05	\$0.45	0.00%	0	\$618,296	\$0.45	0.4%
Aphids	1,373,991	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	1,373,991	100%	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	27,480	2%	343,498	25.0%	2.0	\$16.00	5.00%	0.50	\$8.00	0.10%	5,751	\$3,256,367	\$2.37	2.1%
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					0.93			\$14.68		4.75%	272,872	\$152,359,521	\$110.89	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results	
State	Texas	Total Acres		1,373,991	Total	Per Acre
Region	Central	Total Bales Harvested		1,917,862	Foliar Insecticide Costs	\$20,170,188
Year	2021	Total Bales Lost to Insects		272,872	Seed Treatment Costs	\$11,211,767
Total Acres (Upland)	1,373,991	In-furrow cost/treated acre	\$50.00	Percent Yield Loss		\$6,870
Yield / Acre (Upland)	670	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)		\$1,868,628
Price / lb	\$1.10	Cost/acre Boll Weevil Eradication	\$1.39	Av. # Applications		\$1,909,847
yield potential (lb/acre)	2,009	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	3,832,571	\$25,102,817
Acres (Pima)	9,331	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss		\$60,270,117
Yield / Acre (Pima)	990	% Insect apps by air	12%	Transgenic Cotton (arthropods) (# acres)	1,332,771	\$144,076,416
% Acres Scouted	16%	No. apps by air	1	Boll Weevil Eradication (# acres)	1,373,991	\$204,346,533
Fee / Scouted Acre	\$8.50	Cost/app by air	\$7.00	Pink Bollworm Eradication (# acres)		0
No. times scouted/week	1	% insect apps by ground	80%	# Scouted Acres		219,839
% acres Transgenic (Bt) Cotton	97%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	1,319,031	
Cost/treated acre (Bt) Cotton	\$18.84	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)		137
% acres with seed treatment	96%	% Loss to weather	49.5%	Applications by Air (acres)		164,879
Seed trt. cost/ treated acre	\$8.50	% loss to non-arthropods	7.2%	Applications by Ground (acres)		1,099,193
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	5.2%	No. acres with no foliar insecticide applications		1,099,193

Table 24. Cotton insect loss estimates for the Rolling Plains-Trans Pecos 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	31.0%	425,937	\$85.00	\$17.00	2.0%	8,519	1.0
Bollgard III	30.0%	412,197	\$93.00	\$25.00	0.0%	0	0.0
WideStrike	9.0%	123,659	\$68.00	\$5.00	3.0%	3,710	1.0
WideStrike 3	10.0%	137,399	\$83.00	\$15.00	0.0%	0	0.0
TwinLink	8.0%	109,919	\$73.00	\$14.00	2.0%	2,198	1.0
TwinLink Plus	9.0%	123,659	\$86.00	\$27.00	0.0%	0	0.0
Total Bt	97.0%	1,332,770	\$84.79	\$18.84	1.1%	14,427	0.01
Herbicide Traits Only	2.0%	27,480	\$44.00	-	6.0%	1,649	1.0
Conventional	1.0%	13,740	\$19.00	-	0.0%	0	0.0
Organic	0.0%	0	\$19.00	-	0.0%	0	0.0
Total Upland Cotton	100.0%	1,373,990	\$83.32	\$18.84	1.2%	16,076	0.01
Non Upland Cotton							
Pima	0.68%	9,343	\$65.00	-	20.0%	1,869	1
Other	0.00%	0	\$19.00	-	0.0%	0	0
Organic	0.00%	0	\$65.00	-	0.0%	0	0
Total (all Cotton)		1,383,333	\$83.20		1.3%	17,945	0.01