

Table 24. Cotton insect loss estimates for the Rolling Plains-Trans Pecos area of Texas during 2020.

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	60,000	15%	8,000	2.0%	1.0	\$17.00	0.60%	0.02	\$0.34	0.09%	1,499	\$509,674	\$1.27	17.0%
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	1,600	0.4%	800	0.2%	1.0	\$17.00	0.25%	0.00	\$0.00	0.00%	17	\$5,549	\$0.01	0.2%
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	4,000	1%	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	20,000	5%	2,800	0.7%	1.0	\$13.00	0.50%	0.01	\$0.13	0.03%	416	\$138,382	\$0.35	4.6%
Cotton Fleahopper	76,000	19%	24,000	6.0%	1.0	\$12.00	1.50%	0.06	\$0.72	0.29%	4,748	\$1,604,467	\$4.01	53.4%
Stink Bugs (other than brown stink bug)	44,000	11%	12,000	3.0%	1.0	\$11.00	0.25%	0.03	\$0.33	0.03%	466	\$166,622	\$0.42	5.5%
Brown Stink Bug	4,000	1%	3,600	0.9%	1.0	\$11.00	0.00%	0.01	\$0.11	0.00%	0	\$440	\$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	36,000	9%	800	0.2%	1.0	\$10.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	20,000	5%	4,000	1.0%	1.0	\$9.00	0.00%	0.01	\$0.09	0.00%	0	\$1,800	\$0.00	0.1%
Thrips	400,000	100%	20,000	5.0%	1.0	\$9.00	0.00%	0.05	\$0.45	0.00%	0	\$180,000	\$0.45	6.0%
Aphids	92,000	23%	4,000	1.0%	1.0	\$14.00	0.00%	0.01	\$0.14	0.00%	0	\$12,880	\$0.03	0.4%
Grasshoppers	40,000	10%	16,000	4.0%	1.0	\$15.00	0.50%	0.04	\$0.60	0.05%	833	\$295,891	\$0.74	9.8%
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	4,000	1%	4,000	1.0%	4.0	\$15.00	1.50%	0.04	\$0.60	0.02%	250	\$84,000	\$0.21	2.8%
Pillbugs	2,000	0.5%	1,000	0.25%	1.5	\$8.00	0.25%	0.00	\$0.00	0.00%	17	\$5,549	\$0.01	0.2%
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								0.28	\$3.51	0.50%	8,246	\$3,005,254	\$7.51	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Texas	Total Acres		400,000			
Region	Central	Total Bales Harvested		266,667	Foliar Insecticide Costs	\$1,404,000	
Year	2020	Total Bales Lost to Insects		8,246	Seed Treatment Costs	\$3,133,440	
Total Acres (Upland)	400,000	Percent Yield Loss		0.5%	In-Furrow Costs	\$200	
Yield / Acre (Upland)	320	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	322	Scouting Costs	\$544,000
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$0.67	Av. # Applications	0.28	Eradication Costs	\$268,000
yield potential (lb/acre)	1,999	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,399,217	Bt Cotton	\$6,854,400
Acres (Pima)	17,290	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	84.0%	Total Costs	\$12,204,040
Yield / Acre (Pima)	1,000	% Insect apps by air	10%	Transgenic Cotton (arthropods) (# acres)	378,800	Yield Loss to Insects	\$2,691,494
% Acres Scouted	16%	No. apps by air	1	Boll Weevil Eradication (# acres)	400,000	Total Losses + Costs	\$14,895,534
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	82%	# Scouted Acres	64,000		
% acres Transgenic (Bt) Cotton	95%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	384,000		
Cost/treated acre (Bt) Cotton	\$18.10	Cost/app by ground	\$5.80	In-Furrow Applications (# acres)	4		
% acres with seed treatment	96%	% Loss to weather	80.0%	Applications by Air (acres)	40,000		
Seed trt. cost/ treated acre	\$8.16	% loss to non-arthropods	2.0%	Applications by Ground (acres)	328,000		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	1.5%	No. acres with no foliar insecticide applications	340,000		

Table 24. Cotton insect loss estimates for the Rolling Plains-Trans Pecos area of Texas during 2020, 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	45.9%	183,600	\$75.00	\$16.00	3.5%	6,426	1.0
Bollgard III	37.6%	150,400	\$81.00	\$21.00	0.0%	0	0.0
WideStrike	2.4%	9,600	\$61.00	\$8.00	5.0%	480	1.0
WideStrike 3	4.8%	19,200	\$81.00	\$20.00	0.0%	0	0.0
TwinLink	3.2%	12,800	\$72.00	\$18.00	4.0%	512	1.0
TwinLink Plus	0.8%	3,200	\$75.00	\$21.00	0.0%	0	0.0
Total Bt	94.7%	378,800	\$77.23	\$18.10	2.0%	7,418	0.02
Herbicide Traits Only	2.8%	11,200	\$65.00	-	1.0%	112	1.0
Conventional	1.0%	4,000	\$0.00	-	1.0%	40	1.0
Organic	0.0%	0	\$0.00	-	1.0%	0	0.0
Total Upland Cotton	98.5%	394,000	\$76.10	\$18.10	1.9%	7,570	0.02
Non Upland Cotton							
Pima	1.5%	6,000	\$65.00	-	6.5%	390	1.5
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)		400,000	\$75.93	-	2.0%	7,960	0.02