Table 22. Cotton insect loss estimates for South 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	837,072	100%	123,301	14.7%	1.0	$20.00	1.60%	0.15	$3.00	1.60%	55,749	$20,707,690	$24.74	16.1%
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	11,049	1%	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	637,263	76%	77,262	9.2%	0.5	$12.00	0.72%	0.05	$0.60	0.55%	19,094	$6,614,639	$7.90	5.2%
Cotton Fleahopper	837,072	100%	824,767	98.5%	1.0	$10.00	4.37%	0.99	$9.90	4.37%	152,264	$57,985,985	$69.27	45.2%
Stink Bugs (other than brown stink bug)	433,771	52%	160,802	19.2%	0.5	$10.00	2.50%	0.10	$1.00	1.30%	45,157	$15,173,016	$18.13	11.8%
Brown Stink Bug	0	0%	0	0.0%	0.0	$0.00	0.00%	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	0	0%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Spider Mites	22,099	3%	17,662	2.1%	1.0	$8.00	0.26%	0.02	$0.16	0.01%	244	$83,177	$0.10	0.1%
Thrips	837,072	100%	110,326	13.2%	1.0	$12.00	0.79%	0.13	$1.56	0.79%	27,526	$10,290,319	$12.29	8.0%
Aphids	636,761	76%	473,699	56.6%	1.0	$10.00	1.10%	0.57	$5.70	0.84%	29,164	$13,148,667	$15.71	10.2%
Grasshoppers	0	0%	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	162,057	19%	121,375	14.5%	0.5	$12.00	0.39%	0.07	$0.84	0.08%	2,648	$1,000,435	$1.20	0.8%
Verde Plant Bug	190,099	23%	61,609	7.4%	0.0	$0.00	1.10%	0.00	$0.00	0.25%	8,711	$2,843,270	$3.40	2.2%
Boll Weevil	163,313	20%	220,652	26.4%	4.0	$0.00	0.26%	1.05	$0.00	0.05%	1,777	$580,013	$0.69	0.5%
TOTAL								3.13	$22.76	9.83%	342,334	$128,427,211	$153.42	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results		
State	Texas			Total Acres	837,072		Total	Per Acre
Region	Central			Total Bales Harvested	2,051,612	Foliar Insecticide Costs	$19,051,765	$22.76
Year	2020			Total Bales Lost to Insects	342,334	Seed Treatment Costs	$7,952,186	$9.50
Total Acres (Upland)	837,072	In-furrow cost/treated acre	$12.00	Percent Yield Loss	9.8%	In-Furrow Costs	$100,449	$0.12
Yield / Acre (Upland)	1,176	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,305	Scouting Costs	$5,357,262	$6.40
Price / lb	$0.68	Cost/acre Boll Weevil Eradication	$4.74	Av. # Applications	3.13	Eradication Costs	$3,967,721	$4.74
yield potential (lb/acre)	1,998	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,432,924	Bt Cotton	$15,123,802	$18.07
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	$0.00	Total % yield Loss	41.1%	Total Costs	$51,553,185	$61.59
Yield / Acre (Pima)	0	% Insect apps by air	57%	Transgenic Cotton (arthropods) (# acres)	837,072	Yield Loss to Insects	$111,737,818	$133.49
% Acres Scouted	80%	No. apps by air	1.3	Boll Weevil Eradication (# acres)	837,072	Total Losses + Costs	$163,291,003	$195.07
Fee / Scouted Acre	$8.00	Cost/app by air	$6.50	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	82%	# Scouted Acres	669,658			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3.35	Seed Treatments (arthropods) (# acres)	837,072			
Cost/treated acre (Bt) Cotton	$18.07	Cost/app by ground	$5.42	In-Furrow Applications (# acres)	8,371			
% acres with seed treatment	100%	% Loss to weather	26.3%	Applications by Air (acres)	474,285			
Seed trt. cost/ treated acre	$9.50	% loss to non-arthropods	2.0%	Applications by Ground (acres)	682,632			
% acres with in-furrow	1%	% loss to other (chemical injury, weeds, diseases, etc.)	3.0%	No. acres with no foliar insecticide applications	0			

Table 22. Cotton insect loss estimates for South 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	16.0%	133,932	$83.00	$16.00	20%	26,786	1.0
Bollgard III	26.0%	217,639	$91.00	$23.00	0%	0	0.0
WideStrike	11.0%	92,078	$70.00	$0.00	100%	92,078	1.0
WideStrike 3	39.0%	326,458	$91.00	$20.00	0%	816	1.0
TwinLink	2.5%	20,927	$78.00	$18.50	20%	4,185	1.0
TwinLink Plus	5.5%	46,039	$82.00	$23.00	0%	0	0.0
Total Bt	100.0%	837,073	$86.59	$18.07	14.8%	123,866	0.15
Herbicide Traits Only	0.0%	0	$0.00	-	0%	0	0.0
Conventional	0.0%	0	$0.00	-	0%	0	0.0
Organic	0.0%	0	$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	837,073	$86.59	$18.07	14.8%	123,866	0.15
Non Upland Cotton							
Pima	0%	0	$0.00	-	0%	0	0.0
Other	0%	0	$0.00	-	0%	0	0.0
Organic	0%	0	$0.00	-	0%	0	0.0
Total (all Cotton)		837,073	$86.59	-	14.8%	123,866	0.15