

Table 23. Cotton insect loss estimates for Oklahoma during 2018.

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	85,500	15.0%	39,900	7.0%	1.0	\$18.00	0.70%	0.07	\$1.26	0.11%	1,060	\$474,066	\$0.83	2.8%
Beet Armyworm	0	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	5,700	1.0%	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	\$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	\$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	\$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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Fleahopper	484,500	85.0%	399,000	70.0%	2.0	\$12.00	2.00%	1.40	\$16.80	1.70%	17,159	\$14,069,750	\$24.68	84.5%
Stink Bugs (other than brown stink bug)	85,500	15.0%	39,900	7.0%	2.0	\$8.50	1.00%	0.14	\$1.19	0.15%	1,514	\$624,983	\$1.10	3.8%
Brown Stink Bug	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	42,750	8.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	28,500	5.0%	5,700	1.0%	1.0	\$12.50	0.10%	0.01	\$0.13	0.01%	50	\$20,843	\$0.04	0.1%
Thrips	171,000	30.0%	142,500	25.0%	1.0	\$8.50	0.50%	0.25	\$2.13	0.15%	1,514	\$886,613	\$1.56	5.3%
Aphids	85,500	15.0%	85,500	15.0%	1.0	\$14.00	0.75%	0.15	\$2.10	0.11%	1,141	\$573,880	\$1.01	3.4%
Grasshoppers	39,900	7.0%	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					2.02	\$23.60			2.22%		22,438	\$16,650,135	\$29.21	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results			
State	Oklahoma	Total Acres	570,000	Total Bales Harvested	929,813	Foliar Insecticide Costs	\$13,452,000	\$23.60
Region	Central	Total Bales Lost to Insects	22,438	Seed Treatment Costs	\$570,000	In-Furrow Costs	\$0	\$1.00
Year	2018	Percent Yield Loss	2.2%	In-Furrow Costs	\$0	Scouting Costs	\$2,137,500	\$3.75
Total Acres (Upland)	570,000	Yield w/o Insects (lb/acre)	801	Scouting Costs	\$2,137,500	Eradication Costs	\$1,425,000	\$2.50
Yield / Acre (Upland)	783	Av. # Applications	2.02	Eradication Costs	\$1,425,000	Bt Cotton	\$10,284,593	\$18.04
Price / lb	\$0.72	Total Bales lost (all factors)	188,985	Bt Cotton	\$10,284,593	Total Costs	\$27,869,093	\$48.89
yield potential (lb/acre)	850	Total % yield Loss	18.7%	Total Costs	\$27,869,093	Yield Loss to Insects	\$7,754,573	\$13.60
Acres (Pima)	0	Transgenic Cotton (arthropods) (# acres)	569,367	Yield Loss to Insects	\$7,754,573	Total Losses + Costs	\$35,623,666	\$62.50
Yield / Acre (Pima)	0	Boll Weevil Eradication (# acres)	570,000	Total Losses + Costs	\$35,623,666			
% Acres Scouted	50%	Pink Bollworm Eradication (# acres)	0					
Fee / Scouted Acre	\$7.50	# Scouted Acres	285,000					
No. times scouted/week	1	Seed Treatments (arthropods) (# acres)	57,000					
% acres Transgenic (Bt) Cotton	100%	In-Furrow Applications (# acres)	0					
Cost/treated acre (Bt) Cotton	\$18.06	Applications by Air (acres)	114,000					
% acres with seed treatment	10%	Applications by Ground (acres)	456,000					
Seed trt. cost/ treated acre	\$10.00	No. acres with no foliar insecticide applications	85,500					
% acres with in-furrow	0%							

Table 23. Cotton insect loss estimates for Oklahoma during 2018, 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	84.7%	482,790	\$68.00	\$18.00	8%	38,671	1.0
Bollgard III	1.6%	9,291	\$68.42	\$18.42	0%	0	0.0
WideStrike	0.1%	570	\$68.00	\$18.00	0%	0	0.0
WideStrike 3	13.4%	76,380	\$68.00	\$18.42	0%	0	0.0
TwinLink	0.1%	336	\$68.00	\$18.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
Total Bt	99.9%	569,367	\$68.01	\$18.06	6.8%	38,671	0.8
Herbicide Traits Only	0.15%	855	\$50.97	-	0%	0	0.0
Conventional	0.00%	0	\$0.00	-	0%	0	0.0
Organic	0.00%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	570,222	\$66.87	\$18.06	6.8%	38,671	0.8
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		570,222	\$66.87		6.8%	38,671	0.8