

Table 22. Cotton insect loss estimates for Oklahoma during 2023.

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	4,125	1%	4,125	1.0%	1.0	\$25.00	0.70%	0.01	\$0.25	0.01%	71	\$28,636	\$0.07	0.2%
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	0	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	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	371,292	90%	309,410	75.0%	1.0	\$12.00	2.00%	0.75	\$9.00	1.80%	18,333	\$10,469,501	\$25.38	80.1%
Stink Bugs (other than brown stink bug)	103,137	25%	103,137	25.0%	1.0	\$15.00	1.00%	0.25	\$3.75	0.25%	2,546	\$1,376,648	\$3.34	10.5%
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	4,125	1%	0	0.0%	0.0	\$0.00	0.10%	0.00	\$0.00	0.00%	10	\$3,888	\$0.01	0.0%
Thrips	165,019	40%	103,137	25.0%	1.0	\$9.00	0.50%	0.25	\$2.25	0.20%	2,037	\$1,163,278	\$2.82	8.9%
Aphids	4,125	1%	0	0.0%	0.0	\$0.00	0.75%	0.00	\$0.00	0.01%	81	\$31,493	\$0.08	0.2%
Grasshoppers	41,255	10%	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	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					1.26			\$15.25		2.27%	23,078	\$13,073,444	\$31.69	

SUMMARY DATA

	Data Input		Yield and Management Results			Economic Results	
	Oklahoma		Total Acres			Total	Per Acre
State	Oklahoma		Total Acres		412,547		
Region	Central		Total Bales Harvested		465,834	Foliar Insecticide Costs	\$6,291,342
Year	2023		Total Bales Lost to Insects		23,078	Seed Treatment Costs	\$3,527,277
Total Acres (Upland)	412,547	In-furrow cost/treated acre	\$0.00	Percent Yield Loss	2.3%	In-Furrow Costs	\$0
Yield / Acre (Upland)	542	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	555	Scouting Costs	\$2,320,577
Price / lb	\$0.81	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	1.26	Eradication Costs	\$1,031,368
yield potential (lb/acre)	1,185	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	552,686	Bt Cotton	\$6,074,538
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	54.3%	Total Costs	\$19,245,102
Yield / Acre (Pima)	0	% Insect apps by air	25%	Transgenic Cotton (arthropods) (# acres)	412,547	Yield Loss to Insects	\$8,972,726
% Acres Scouted	75%	No. apps by air	1	Boll Weevil Eradication (# acres)	412,547	Total Losses + Costs	\$28,217,828
Fee / Scouted Acre	\$7.50	Cost/app by air	\$8.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	75%	# Scouted Acres	309,410		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	1	Seed Treatments (arthropods) (# acres)	391,920		
Cost/treated acre (Bt) Cotton	\$14.72	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	0		
% acres with seed treatment	95%	% Loss to weather	50.0%	Applications by Air (acres)	103,137		
Seed trt. cost/ treated acre	\$9.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	309,410		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	20,627		

Table 22. Cotton insect loss estimates for Oklahoma during 2023, 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	10.0%	41,255	\$65.20	\$11.90	1%	413	1.0
Bollgard III	65.0%	268,156	\$76.50	\$15.40	0%	0	0.0
Bollgard III/Thryvon	1.0%	4,125	\$83.50	\$18.00	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	19.0%	78,384	\$69.55	\$13.30	0%	0	0.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	5.0%	20,627	\$69.10	\$12.75	0%	0	0.0
Total Bt	100.0%	412,547	\$73.75	\$14.72	0.1%	413	0.001
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%	412,547	\$73.75	\$14.72	0.1%	413	0.001
Non Upland Cotton							
Pima	0.0%	0	\$0.00		0%	0	0.0
Other	0.0%	0	\$0.00		0%	0	0.0
Organic	0.0%	0	\$0.00		0%	0	0.0
Total (all Cotton)		412,547	\$73.75		0.1%	413	0.001

Upland Cotton	Thryvon Bt cost/acre	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	\$18.00	0%	0	0	0%	0	0