

Table 22. Cotton insect loss estimates for Oklahoma during 2017.

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	55,500	10%	27,750	5.0%	1.0	\$15.00	0.50%	0.05	\$0.75	0.05%	578	\$230,284	\$0.41	1.8%
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	5,550	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	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	416,250	75%	360,750	65.0%	2.0	\$12.00	1.50%	1.30	\$15.60	1.13%	13,008	\$10,739,311	\$19.35	85.0%
Stink Bugs (other than brown stink bug)	83,250	15%	27,750	5.0%	2.0	\$8.50	1.00%	0.10	\$0.85	0.15%	1,734	\$636,740	\$1.15	5.0%
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	5,550	1%	5,550	1.0%	1.0	\$12.50	0.00%	0.01	\$0.13	0.00%	0	\$694	\$0.00	0.0%
Thrips	138,750	25%	138,750	25.0%	1.0	\$8.50	0.50%	0.25	\$2.13	0.13%	1,445	\$766,492	\$1.38	6.1%
Aphids	55,500	10%	55,500	10.0%	1.0	\$14.00	0.50%	0.10	\$1.40	0.05%	578	\$266,359	\$0.48	2.1%
Grasshoppers	27,750	5%	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								1.81	\$20.85	1.50%	17,343	\$12,639,880	\$22.77	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results	
State	Oklahoma		Total Acres	555,000		Total	Per Acre
Region	Central		Total Bales Harvested	1,099,594	Foliar Insecticide Costs	\$11,571,750	\$20.85
Year	2017		Total Bales Lost to Insects	17,343	Seed Treatment Costs	\$555,000	\$1.00
Total Acres (Upland)	555,000	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	1.5%	In-Furrow Costs	\$0
Yield / Acre (Upland)	951	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	965	Scouting Costs	\$2,081,250
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	1.81	Eradication Costs	\$1,387,500
yield potential (lb/acre)	1,000	% acres in Pink Bollworm Eradication		Total Bales lost (all factors)	150,313	Bt Cotton	\$2,081,250
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	0%	Total % yield Loss	13.0%	Total Costs	\$17,676,750
Yield / Acre (Pima)	0	% Insect apps by air	\$0.00	Transgenic Cotton (arthropods) (# acres)	277,500	Yield Loss to Insects	\$5,660,755
% Acres Scouted	50%	No. apps by air	20%	Boll Weevil Eradication (# acres)	555,000	Total Losses + Costs	\$23,337,505
Fee / Scouted Acre	\$7.50	Cost/app by air	1	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1	% insect apps by ground	\$8.50	# Scouted Acres	277,500		
% acres Transgenic (Bt) Cotton	50%	No. apps by ground	80%	Seed Treatments (arthropods) (# acres)	55,500		
Cost/treated acre (Bt) Cotton	\$7.50	Cost/app by ground	2.5	In-Furrow Applications (# acres)	0		
% acres with seed treatment	10%	% Loss to weather	\$6.00	Applications by Air (acres)	111,000		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	10.0%	Applications by Ground (acres)	444,000		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	83,250		

Table 22. Cotton insect loss estimates for Oklahoma during 2017, 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	% of Population Bollworm
Bollgard II	91.0%	505,050	\$68.00	\$6.50	5%	25,253	1.0	100%
Bollgard III	0.0%	0	-	-	-	-	-	-
WideStrike	1.0%	5,550	\$68.00	\$6.50	0%	0	0.0	0%
WideStrike 3	7.0%	38,850	\$68.00	\$6.50	0%	0	0.0	0%
TwinLink	1.0%	5,550	\$68.00	\$6.50	0%	0	0.0	0%
TwinLink Plus	0.0%	0	-	-	-	-	-	-
Total Bt	100%	555,000	\$68.00	\$6.50	4.6%	25,253	0.9	91.0%
Herbicide Traits Only	0%	0	-	-	-	-	-	-
Conventional	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total Upland Cotton	100.0%	555,000	\$68.00	\$6.50	4.6%	25,253	0.9	91.0%
Non Upland Cotton								
Pima	0%	0	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total (all Cotton)		555,000	\$68.00		4.6%	25,253	0.9	