

Table 19. Cotton insect loss estimates for Oklahoma during 2021.

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	27,271	5%	16,363	3.0%	1.0	\$20.00	10.00%	0.03	\$0.60	0.50%	4,403	\$2,235,475	\$4.10	17.6%
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	38,179	7%	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	27,271	5%	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	409,066	75%	463,608	85.0%	1.5	\$12.00	1.00%	1.28	\$15.36	0.75%	6,605	\$9,612,170	\$17.62	75.6%
Stink Bugs (other than brown stink bug)	81,813	15%	54,542	10.0%	1.0	\$9.00	0.05%	0.10	\$0.90	0.01%	70	\$108,912	\$0.20	0.9%
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	5,454	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	5,454	1%	2,727	0.5%	1.0	\$12.50	0.01%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	218,168	40%	136,355	25.0%	1.0	\$5.00	0.01%	0.25	\$1.25	0.00%	35	\$290,351	\$0.53	2.3%
Aphids	54,542	10%	54,542	10.0%	1.0	\$15.00	0.01%	0.10	\$1.50	0.00%	9	\$86,349	\$0.16	0.7%
Grasshoppers	190,897	35%	10,908	2.0%	1.0	\$18.00	0.20%	0.02	\$0.36	0.07%	616	\$379,187	\$0.70	3.0%
Banded Winged Whitefly	0	0%	0	0.0%	0.0	\$0.00	0.02%	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%
<b>TOTAL</b>								1.78	\$19.97	1.33%	11,738	\$12,712,444	\$23.31	

**SUMMARY DATA**

	Data Input		Yield and Management Results				Economic Results	
	Oklahoma		Total Acres			Total	Per Acre	
State	Oklahoma		Total Acres					
Region	Central		Total Bales Harvested	545,421	Foliar Insecticide Costs	\$10,892,057	\$19.97	
Year	2021		Total Bales Lost to Insects	909,035	Seed Treatment Costs	\$818,132	\$1.50	
Total Acres (Upland)	545,421	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	11,738	In-Furrow Costs	\$0	\$0.00
Yield / Acre (Upland)	800	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1.3%	Scouting Costs	\$2,045,329	\$3.75
Price / lb	\$1.05	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	811	Eradication Costs	\$1,363,553	\$2.50
yield potential (lb/acre)	775	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1.78	Bt Cotton	\$9,957,839	\$18.26
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	368,393	Total Costs	\$25,076,910	\$45.98
Yield / Acre (Pima)	0	% Insect apps by air	15%	Transgenic Cotton (arthropods) (# acres)	41.8%	Yield Loss to Insects	\$5,915,952	\$10.85
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	544,330	Total Losses + Costs	\$30,992,862	\$56.82
Fee / Scouted Acre	\$7.50	Cost/app by air	\$8.50	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	85%	# Scouted Acres	272,711			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	81,813			
Cost/treated acre (Bt) Cotton	\$18.29	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	0			
% acres with seed treatment	15%	% Loss to weather	35.0%	Applications by Air (acres)	81,813			
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	463,608			
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	4.5%	No. acres with no foliar insecticide applications	190,897			

Table 19. Cotton insect loss estimates for Oklahoma during 2021, 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	30.0%	163,626	\$68.00	\$18.00	3%	4,909	1.0
Bollgard III	44.6%	243,258	\$68.42	\$18.42	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	25.2%	137,446	\$64.00	\$18.42	0%	0	0.0
TwinLink	0.0%	0	\$68.00	\$18.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$0.00	\$0.00	0%	0	0.0
<b>Total Bt</b>	<b>99.8%</b>	<b>544,330</b>	<b>\$67.18</b>	<b>\$18.29</b>	<b>0.9%</b>	<b>4,909</b>	<b>0.009</b>
Herbicide Traits Only	0.20%	1,091	\$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
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>545,421</b>	<b>\$67.15</b>	<b>\$18.29</b>	<b>0.9%</b>	<b>4,909</b>	<b>0.0</b>
<b>Non Upland Cotton</b>							
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
<b>Total (all Cotton)</b>		<b>545,421</b>	<b>\$67.15</b>		<b>0.9%</b>	<b>4,909</b>	<b>0.0</b>