

Table 19. Cotton insect loss estimates for Oklahoma during 2019.

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	59,965	10%	5,996	1.0%	1.0	\$20.00	15.00%	0.01	\$0.20	1.50%	13,904	\$4,216,563	\$7.03	33.3%
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	5,996	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	89,947	15%	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	419,753	70%	479,718	80.0%	1.5	\$12.00	1.00%	1.20	\$14.40	0.70%	6,489	\$8,006,715	\$13.35	63.2%
Stink Bugs (other than brown stink bug)	89,947	15%	41,975	7.0%	1.0	\$9.00	0.05%	0.07	\$0.63	0.01%	74	\$79,044	\$0.13	0.6%
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	29,982	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	17,989	3%	5,996	1.0%	1.0	\$12.50	0.01%	0.01	\$0.13	0.00%	0	\$2,249	\$0.00	0.0%
Thrips	149,912	25%	59,965	10.0%	1.0	\$5.00	0.01%	0.10	\$0.50	0.00%	28	\$83,423	\$0.14	0.7%
Aphids	101,940	17%	107,936	18.0%	1.0	\$15.00	0.01%	0.18	\$2.70	0.00%	19	\$280,984	\$0.47	2.2%
Grasshoppers	59,965	10%	5,996	1.0%	1.0	\$10.00	0.01%	0.01	\$0.10	0.00%	9	\$8,718	\$0.01	0.1%
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%
<b>TOTAL</b>								1.58	\$18.66	2.21%	20,523	\$12,677,696	\$21.14	

**SUMMARY DATA**

Data Input			Yield and Management Results			Economic Results	
State	Oklahoma		Total Acres	599,647		Total	Per Acre
Region	Central		Total Bales Harvested	759,553	Foliar Insecticide Costs	\$11,186,415	\$18.66
Year	2019		Total Bales Lost to Insects	20,523	Seed Treatment Costs	\$899,471	\$1.50
Total Acres (Upland)	599,647	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	2.2%	In-Furrow Costs	\$0
Yield / Acre (Upland)	608	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	622	Scouting Costs	\$2,248,676
Price / lb	\$0.63	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	1.58	Eradication Costs	\$1,499,118
yield potential (lb/acre)	742	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	224,453	Bt Cotton	\$10,962,351
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	24.2%	Total Costs	\$26,796,031
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	599,407	Yield Loss to Insects	\$6,206,155
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	599,647	Total Losses + Costs	\$33,002,186
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	299,824		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	89,947		
Cost/treated acre (Bt) Cotton	\$18.29	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	0		
% acres with seed treatment	15%	% Loss to weather	20.0%	Applications by Air (acres)	119,929		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	509,700		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	1.0%	No. acres with no foliar insecticide applications	137,919		

Table 19. Cotton insect loss estimates for Oklahoma during 2019, 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	29.9%	179,294	\$68.00	\$18.00	3%	5,737	1.0
Bollgard III	44.8%	268,642	\$68.42	\$18.42	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	23.9%	143,316	\$64.00	\$18.42	0%	0	0.0
TwinLink	1.4%	8,155	\$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>100.0%</b>	<b>599,407</b>	<b>\$67.23</b>	<b>\$18.29</b>	<b>1.0%</b>	<b>5,737</b>	<b>0.3</b>
Herbicide Traits Only	0.01%	36	\$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>599,443</b>	<b>\$67.23</b>	<b>\$18.29</b>	<b>1.0%</b>	<b>5,737</b>	<b>0.3</b>
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
<b>Total (all Cotton)</b>		<b>599,443</b>	<b>\$67.23</b>	<b>-</b>	<b>1.0%</b>	<b>5,737</b>	<b>0.3</b>