

Table 19. Cotton insect loss estimates for Oklahoma during 2020.

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	103,297	18%	86,081	15.0%	1.5	\$20.00	15.00%	0.23	\$4.60	2.70%	25,017	\$8,640,716	\$15.06	49.5%
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	5,739	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	86,081	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	430,405	75%	459,098	80.0%	1.5	\$12.00	1.00%	1.20	\$14.40	0.75%	6,949	\$8,465,982	\$14.75	48.5%
Stink Bugs (other than brown stink bug)	68,865	12%	40,171	7.0%	1.0	\$9.00	0.05%	0.07	\$0.63	0.01%	56	\$61,663	\$0.11	0.4%
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	5,739	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	5,739	1%	2,869	0.5%	1.0	\$12.50	0.01%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	172,162	30%	86,081	15.0%	1.0	\$5.00	0.01%	0.15	\$0.75	0.00%	28	\$138,261	\$0.24	0.8%
Aphids	86,081	15%	57,387	10.0%	1.0	\$15.00	0.01%	0.10	\$1.50	0.00%	19	\$135,323	\$0.24	0.8%
Grasshoppers	114,775	20%	8,608	1.5%	1.0	\$18.00	0.01%	0.01	\$0.18	0.00%	19	\$26,861	\$0.05	0.2%
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					1.76	\$22.06			\$3.46	3.46%	32,088	\$17,468,806	\$30.44	

SUMMARY DATA

	Data Input		Yield and Management Results			Economic Results	
	Oklahoma		Total Acres			Total	Per Acre
State	Oklahoma		573,873				
Region	Central		911,023	Total Bales Harvested		\$12,659,638	\$22.06
Year	2020		32,088	Total Bales Lost to Insects		\$860,810	\$1.50
Total Acres (Upland)	573,873	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	3.5%	In-Furrow Costs	\$0
Yield / Acre (Upland)	762	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	789	Scouting Costs	\$2,152,024
Price / lb	\$0.68	Cost/acre Boll Weevil Eradication	\$2.50	Av. # Applications	1.76	Eradication Costs	\$1,434,683
yield potential (lb/acre)	775	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	272,994	Bt Cotton	\$10,487,345
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	29.5%	Total Costs	\$27,594,500
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	573,873	Yield Loss to Insects	\$10,473,523
% Acres Scouted	50%	No. apps by air	1	Boll Weevil Eradication (# acres)	573,873	Total Losses + Costs	\$38,068,023
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	286,937		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	86,081		
Cost/treated acre (Bt) Cotton	\$18.27	Cost/app by ground	\$6.00	In-Furrow Applications (# acres)	0		
% acres with seed treatment	15%	% Loss to weather	23.0%	Applications by Air (acres)	114,775		
Seed trt. cost/ treated acre	\$10.00	% loss to non-arthropods	1.0%	Applications by Ground (acres)	487,792		
% acres with in-furrow	0%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	160,684		

Table 19. Cotton insect loss estimates for Oklahoma during 2020, 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	34.6%	198,560	\$68.00	\$18.00	15%	29,784	1.5
Bollgard III	40.2%	230,697	\$68.42	\$18.42	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	25.2%	144,616	\$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
Total Bt	100.0%	573,873	\$67.16	\$18.27	5.2%	29,784	0.1
Herbicide Traits Only	0.01%	34	\$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%	573,907	\$67.16	\$18.27	5.2%	29,784	0.1
Non Upland Cotton							
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
Total (all Cotton)		573,907	\$67.16	-	5.2%	29,784	0.1