

Table 6. Cotton insect loss estimates for Northeast Arkansas 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	366,000	100%	274,500	75%	1.2	\$22.00	3.5%	0.90	\$19.80	3.50%	41,339	\$21,196,232	\$57.91	33.6%
Beet Armyworm	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	18,300	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	5,490	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	73,200	20%	36,600	10%	1.0	\$18.00	0.0%	0.10	\$1.80	0.00%	0	\$131,760	\$0.36	0.2%
Cotton Leaf Perforator	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	54,900	15%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	366,000	100%	366,000	100%	4.5	\$10.00	3.9%	4.50	\$45.00	3.90%	46,063	\$32,013,499	\$87.47	50.8%
Cotton Fleahopper	274,500	75%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	256,200	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	256,200	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	201,300	55%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	292,800	80%	128,100	35%	1.4	\$20.00	1.6%	0.49	\$9.80	1.28%	15,118	\$7,970,858	\$21.78	12.7%
Thrips	366,000	100%	73,200	20%	1.0	\$13.00	0.0%	0.20	\$2.60	0.00%	0	\$951,600	\$2.60	1.5%
Aphids	366,000	100%	36,600	10%	1.0	\$20.00	0.0%	0.10	\$2.00	0.00%	0	\$732,000	\$2.00	1.2%
Grasshoppers	29,280	8%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	29,280	8%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
<b>TOTAL</b>								6.29	\$81.00	8.68%	102,520	\$62,995,949	\$172.12	

**SUMMARY DATA**

	Data Input		Yield and Management Results			Economic Results		
						Total	Per Acre	
State	Arkansas		Total Acres	366,000				
Region	MidSouth		Total Bales Harvested	876,875	Foliar Insecticide Costs	\$29,646,000	\$81.00	
Year	2019		Total Bales Lost to Insects	102,520	Seed Treatment Costs	\$4,346,250	\$11.88	
Total Acres (Upland)	366,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.7%	In-Furrow Costs	\$658,800	\$1.80
Yield / Acre (Upland)	1,150	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,259	Scouting Costs	\$3,660,000	\$10.00
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	6.29	Eradication Costs	\$1,098,000	\$3.00
yield potential (lb/acre)	1,549	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	409,610	Bt Cotton	\$12,617,850	\$34.48
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	34.7%	Total Costs	\$52,026,900	\$142.15
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	360,510	Yield Loss to Insects	\$34,594,349	\$94.52
% Acres Scouted	100%	No. apps by air	3.5	Boll Weevil Eradication (# acres)	366,000	Total Losses + Costs	\$86,621,249	\$236.67
Fee / Scouted Acre	\$10.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	366,000			
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4	Seed Treatments (arthropods) (# acres)	347,700			
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	43,920			
% acres with seed treatment	95%	% Loss to weather	16.0%	Applications by Air (acres)	292,800			
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	366,000			
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0			

Table 6. Cotton insect loss estimates for Northeast Arkansas 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	81.5%	298,290	\$112.00	\$35.00	75%	223,718	1.5
Bollgard III	7.0%	25,620	\$112.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	5.0%	18,300	\$112.00	\$35.00	2%	366	0.5
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	18,300	\$112.00	\$35.00	0%	0	0.0
<b>Total Bt</b>	<b>98.5%</b>	<b>360,510</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>62.2%</b>	<b>224,084</b>	<b>1.3</b>
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.5%	5,490	\$26.00	-	100%	5,490	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>366,000</b>	<b>\$110.71</b>	<b>\$35.00</b>	<b>62.7%</b>	<b>229,574</b>	<b>1.3</b>
<b>Non Upland Cotton</b>							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
<b>Total (all Cotton)</b>		<b>366,000</b>	<b>\$110.71</b>	<b>-</b>	<b>62.7%</b>	<b>229,574</b>	<b>1.3</b>