

Table 5. Cotton insect loss estimates for Northeast Arkansas during 2022.

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	409,500	100%	47,912	12%	1.2	\$34.50	1.5%	0.14	\$4.83	1.50%	24,852	\$12,117,501	\$29.59	10.7%
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	8,190	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	4,095	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	81,900	20%	12,285	3%	1.0	\$14.50	0.0%	0.03	\$0.44	0.00%	0	\$35,627	\$0.09	0.0%
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	8,190	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	409,500	100%	405,405	99%	4.0	\$23.50	5.0%	3.96	\$93.06	5.00%	82,838	\$71,905,974	\$175.59	63.5%
Cotton Fleahopper	286,650	70%	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)	409,500	100%	12,285	3%	1.0	\$23.50	0.3%	0.03	\$0.71	0.30%	4,970	\$2,316,458	\$5.66	2.0%
Brown Stink Bug	409,500	100%	12,285	3%	1.0	\$23.50	0.3%	0.03	\$0.71	0.30%	4,970	\$2,316,458	\$5.66	2.0%
Clouded Plant Bug	327,600	80%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	20,475	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	245,700	60%	102,375	25%	1.8	\$23.50	1.8%	0.45	\$10.58	1.08%	17,893	\$9,898,622	\$24.17	8.7%
Thrips	409,500	100%	225,225	55%	1.6	\$17.50	1.0%	0.88	\$15.40	1.00%	16,568	\$13,066,044	\$31.91	11.5%
Aphids	409,500	100%	69,615	17%	1.0	\$23.50	0.0%	0.17	\$4.00	0.00%	0	\$1,635,953	\$4.00	1.4%
Grasshoppers	53,235	13%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	81,900	20%	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>					5.69	\$129.71			\$9.18	9.18%	152,091	\$113,292,637	\$276.66	

**SUMMARY DATA**

Data Input		Yield and Management Results				Economic Results		
State	Arkansas	Total Acres		409,500		Total	Per Acre	
Region	MidSouth	Total Bales Harvested		1,007,541	Foliar Insecticide Costs	\$53,114,198	\$129.71	
Year	2022	Total Bales Lost to Insects		152,091	Seed Treatment Costs	\$4,914,000	\$12.00	
Total Acres (Upland)	409,500	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	9.2%	In-Furrow Costs	\$737,100	\$1.80
Yield / Acre (Upland)	1,181	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,300	Scouting Costs	\$4,095,000	\$10.00
Price / lb	\$0.85	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	5.69	Eradication Costs	\$1,228,500	\$3.00
yield potential (lb/acre)	1,942	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	649,122	Bt Cotton	\$14,332,500	\$35.00
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	39.2%	Total Costs	\$78,421,298	\$191.51
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	409,500	Yield Loss to Insects	\$62,053,128	\$151.53
% Acres Scouted	100%	No. apps by air	3	Boll Weevil Eradication (# acres)	409,500	Total Losses + Costs	\$140,474,426	\$343.04
Fee / Scouted Acre	\$10.00	Cost/app by air	\$11.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	409,500			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	409,500			
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	41,90			
% acres with seed treatment	100%	% Loss to weather	17.0%	Applications by Air (acres)	409,500			
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	6.0%	Applications by Ground (acres)	409,500			
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	7.0%	No. acres with no foliar insecticide applications	0			

Table 5. Cotton insect loss estimates for Northeast Arkansas during 2022, 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	2.0%	8,190	\$112.00	\$35.00	96%	7,862	1.5
Bollgard III	96.0%	393,120	\$112.00	\$35.00	10%	39,312	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.0%	8,190	\$112.00	\$35.00	10%	819	1.0
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	0.0%	0	\$112.00	\$35.00	0%	0	0.0
<b>Total Bt</b>	<b>100.0%</b>	<b>409,500</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>11.7%</b>	<b>47,993</b>	<b>0.1</b>
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>409,500</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>11.7%</b>	<b>47,993</b>	<b>0.1</b>
<b>Non Upland Cotton</b>							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total (all Cotton)</b>		<b>409,500</b>	<b>\$112.00</b>	<b>-</b>	<b>11.7%</b>	<b>47,993</b>	<b>0.1</b>