

Table 6. Cotton insect loss estimates for 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	630,000	100%	73,710	11.7%	1.2	\$34.50	1.50%	0.14	\$4.99	1.50%	38,194	\$18,723,692	\$29.72	10.8%
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	12,600	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	6,300	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	126,000	20%	18,900	3.0%	1.0	\$14.50	0.00%	0.03	\$0.44	0.00%	0	\$54,810	\$0.09	0.0%
Cotton Leaf Perforator	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	12,600	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	630,000	100%	623,700	99.0%	4.0	\$23.50	5.00%	3.96	\$93.06	5.00%	127,313	\$110,571,300	\$175.51	63.9%
Cotton Fleahopper	441,000	70%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (other than brown stink bug)	630,000	100%	18,900	3.0%	1.0	\$23.50	0.30%	0.03	\$0.71	0.30%	7,639	\$3,560,760	\$5.65	2.1%
Brown Stink Bug	630,000	100%	18,900	3.0%	1.0	\$23.50	0.30%	0.03	\$0.71	0.30%	7,639	\$3,560,760	\$5.65	2.1%
Clouded Plant Bug	492,975	78%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	31,500	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	355,950	57%	157,500	25.0%	1.7	\$23.50	1.80%	0.42	\$9.96	1.02%	25,895	\$14,109,902	\$22.40	8.2%
Thrips	630,000	100%	346,500	55.0%	1.6	\$17.50	1.00%	0.86	\$15.06	1.00%	25,463	\$19,878,469	\$31.55	11.5%
Aphids	630,000	100%	107,100	17.0%	1.0	\$23.50	0.00%	0.17	\$4.00	0.00%	0	\$2,516,850	\$4.00	1.5%
Grasshoppers	81,900	13%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	126,000	20%	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								5.65	\$128.91	9.12%	232,142	\$172,976,543	\$274.57	

SUMMARY DATA

Data Input		Yield and Management Results				Economic Results	
State	Arkansas	Total Acres	630,000		Total	Per Acre	
Region	MidSouth	Total Bales Harvested	1,550,063		Foliar Insecticide Costs	\$128.91	
Year	2022	Total Bales Lost to Insects	232,142		Seed Treatment Costs	\$7,560,000	
Total Acres (Upland)	630,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	9.1%	In-Furrow Costs	\$1,134,000
Yield / Acre (Upland)	1,181	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,299	Scouting Costs	\$6,300,000
Price / lb	\$0.85	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	5.65	Eradication Costs	\$1,890,000
yield potential (lb/acre)	1,940	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	995,969	Bt Cotton	\$22,050,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	39.1%	Total Costs	\$120,145,029
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	630,000	Yield Loss to Insects	\$94,713,778
% Acres Scouted	100%	No. apps by air	3.0	Boll Weevil Eradication (# acres)	630,000	Total Losses + Costs	\$214,858,807
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	630,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3.0	Seed Treatments (arthropods) (# acres)	630,000		
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	75,600		
% acres with seed treatment	100%	% Loss to weather	17.0%	Applications by Air (acres)	630,000		
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	6.0%	Applications by Ground (acres)	630,000		
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	7.0%	No. acres with no foliar insecticide applications	0		

Table 6. Cotton insect loss estimates for 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%	12,600	\$112.00	\$35.00	96%	12,096	1.5
Bollgard III	96.0%	604,800	\$112.00	\$35.00	10%	60,480	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.0%	12,600	\$112.00	\$35.00	10%	1,260	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
Total Bt	100.0%	630,000	\$112.00	\$35.00	11.7%	73,836	0.1
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
Total Upland Cotton	100.0%	630,000	\$112.00	\$35.00	11.7%	73,836	0.1
Non Upland Cotton							
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
Total (all Cotton)		630,000	\$112.00	-	11.7%	73,836	0.1