

Table 6. Cotton insect loss estimates for Arkansas during 2023.

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	505,000	100%	59,085	11.7%	1.0	\$34.50	1.20%	0.12	\$4.04	1.20%	24,493	\$11,090,861	\$21.96	9.5%
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	5,050	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,020	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	50,500	10%	2,525	0.5%	1.0	\$14.50	0.00%	0.01	\$0.07	0.00%	0	\$3,661	\$0.01	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	15,150	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	505,000	100%	497,425	98.5%	3.0	\$23.50	4.50%	2.96	\$69.44	4.50%	91,847	\$69,015,068	\$136.66	59.2%
Cotton Fleahopper	328,250	65%	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)	479,750	95%	10,100	2.0%	1.0	\$23.50	0.20%	0.02	\$0.47	0.19%	3,878	\$1,658,784	\$3.28	1.4%
Brown Stink Bug	479,750	95%	10,100	2.0%	1.0	\$23.50	0.20%	0.02	\$0.47	0.19%	3,878	\$1,658,784	\$3.28	1.4%
Clouded Plant Bug	454,500	90%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	10,100	2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	368,650	73%	176,750	35.0%	1.5	\$23.50	2.00%	0.53	\$12.34	1.46%	29,799	\$15,562,007	\$30.82	13.3%
Thrips	505,000	100%	328,250	65.0%	1.5	\$17.50	1.20%	0.98	\$17.06	1.20%	24,493	\$17,668,991	\$34.99	15.1%
Aphids	505,000	100%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	126,250	25%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	50,500	10%	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					4.62	\$103.89			8.74%		178,387	\$116,658,154	\$231.01	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Arkansas	Total Acres		505,000	Total	Per Acre	
Region	MidSouth	Total Bales Harvested		1,409,792	Foliar Insecticide Costs	\$52,465,208	
Year	2023	Total Bales Lost to Insects		178,387	Seed Treatment Costs	\$6,060,000	
Total Acres (Upland)	505,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.7%	In-Furrow Costs	\$909,000
Yield / Acre (Upland)	1,340	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,468	Scouting Costs	\$5,050,000
Price / lb	\$0.77	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	4.62	Eradication Costs	\$1,515,000
yield potential (lb/acre)	1,940	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	630,800	Bt Cotton	\$19,311,200
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	30.9%	Total Costs	\$85,310,408
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	505,000	Yield Loss to Insects	\$65,931,851
% Acres Scouted	100%	No. apps by air	2.5	Boll Weevil Eradication (# acres)	505,000	Total Losses + Costs	\$151,242,258
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	505,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	505,000		
Cost/treated acre (Bt) Cotton	\$38.24	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	60,600		
% acres with seed treatment	100%	% Loss to weather	14.0%	Applications by Air (acres)	505,000		
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	4.0%	Applications by Ground (acres)	505,000		
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	4.2%	No. acres with no foliar insecticide applications	0		

Table 6. Cotton insect loss estimates for Arkansas during 2023, 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	1.5%	7,575	\$112.00	\$35.00	100%	7,575	1.5
Bollgard III	84.5%	426,725	\$112.00	\$35.00	10%	42,673	1.0
Bollgard III/Thryvon	12.0%	60,600	\$139.00	\$35.00	10%	6,060	1.0
WideStrike	0.0%	0	\$97.00	35	0%	0	0.0
WideStrike 3	2.0%	10,100	\$112.00	35	10%	1,010	1.0
TwinLink	0.0%	0	\$112.00	35	0%	0	0.0
TwinLink Plus	0.0%	0	\$112.00	35	0%	0	0.0
Total Bt	100.0%	505,000	\$115.24	\$38.24	11.4%	57,318	0.1
Herbicide Traits Only	0.0%	0	\$0.00		0%	0	0.0
Conventional	0.0%	0	\$26.00		0%	0	0.0
Organic	0.0%	0	\$0.00		0%	0	0.0
Total Upland Cotton	100.0%	505,000	\$115.24	\$38.24	11.4%	57,318	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)							
	Thryvon	% acres treated	# acres treated	# apps	% acres treated	# acres treated	# apps
Upland Cotton	Bt cost/acre	for Thrips	for Thrips	for Thrips	for Lygus	for Lygus	for Lygus
Bollgard III/Thryvon	\$27.00	3%	1,818	1	90%		