

Table 6. Cotton insect loss estimates for Arkansas during 2024.

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	640,000	100.0%	70,400	11.0%	1.0	\$34.50	1.26%	0.11	\$3.80	1.26%	31,399	\$12,376,067	\$19.34	9.3%
Beet Armyworm	0	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	6,400	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,560	0.4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	51,200	8.0%	6,144	1.0%	1.0	\$14.50	0.06%	0.01	\$0.14	0.00%	120	\$45,021	\$0.07	0.0%
Cotton Leaf Perforator	0	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	8,960	1.4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	640,000	100.0%	623,360	97.4%	3.4	\$23.50	4.00%	3.33	\$78.16	4.00%	99,680	\$81,601,664	\$127.50	61.6%
Cotton Fleahopper	268,800	42.0%	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)	608,000	95.0%	16,640	2.6%	2.4	\$23.50	0.26%	0.06	\$1.46	0.25%	6,155	\$2,835,836	\$4.43	2.1%
Brown Stink Bug	608,000	95.0%	16,640	2.6%	2.4	\$23.50	0.20%	0.06	\$1.46	0.19%	4,735	\$2,385,841	\$3.73	1.8%
Clouded Plant Bug	587,520	91.8%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,800	2.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	435,200	68.0%	179,200	28.0%	1.5	\$23.50	1.69%	0.42	\$9.87	1.15%	28,658	\$13,374,278	\$20.90	10.1%
Thrips	640,000	100.0%	358,400	56.0%	1.4	\$17.50	1.38%	0.80	\$14.00	1.38%	34,390	\$19,854,625	\$31.02	15.0%
Aphids	640,000	100.0%	7,680	1.2%	1.0	\$0.00	0.00%	0.01	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	148,480	23.2%	256	0.0%	1.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	48,640	7.6%	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	\$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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					4.80				\$108.88	8.23%	205,136	\$132,473,332	\$206.99	

SUMMARY DATA

Data Input				Yield and Management Results				Economic Results		
State	Arkansas			Total Acres	640,000			Total	Per Acre	
Region	MidSouth			Total Bales Harvested	1,680,267	Foliar Insecticide Costs		\$69,682,688	\$108.88	
Year	2024			Total Bales Lost to Insects	205,136	Seed Treatment Costs		\$7,680,000	\$12.00	
Total Acres (Upland)	640,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.2%	In-Furrow Costs		\$960,000	\$1.50	
Yield / Acre (Upland)	1,260	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,373	Scouting Costs		\$6,400,000	\$10.00	
Price / lb	\$0.66	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	4.80	Eradication Costs		\$1,920,000	\$3.00	
yield potential (lb/acre)	1,869	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	811,725	Bt Cotton		\$24,224,000	\$37.85	
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	32.6%	Total Costs		\$110,866,688	\$173.23	
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	640,000	Yield Loss to Insects		\$64,987,229	\$101.54	
% Acres Scouted	100%	No. apps by air	2.5	Boll Weevil Eradication (# acres)	640,000	Total Losses + Costs		\$175,853,917	\$274.77	
Fee / Scouted Acre	\$10.00	Cost/app by air	\$11.00	Pink Bollworm Eradication (# acres)	0					
No. times scouted/week	1.62	% insect apps by ground	100%	# Scouted Acres	640,000					
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	640,000					
Cost/treated acre (Bt) Cotton	\$37.85	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	64,000					
% acres with seed treatment	100%	% Loss to weather	14.3%	Applications by Air (acres)	640,000					
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	5.0%	Applications by Ground (acres)	640,000					
% acres with in-furrow	10%	% 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 Arkansas during 2024, 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	1.0%	6,400	\$112.00	\$35.00	100%	6,400	2.0
Bollgard III	82.0%	524,800	\$112.00	\$35.00	10%	52,480	1.0
Bollgard III/Thryvon	15.0%	96,000	\$131.00	\$35.00	10%	9,600	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.0%	12,800	\$112.00	\$35.00	10%	1,280	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%	640,000	\$114.85	\$37.85	10.9%	69,760	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%	640,000	\$114.85	\$37.85	10.9%	69,760	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)		640,000	\$114.85		10.9%	69,760	0.1

Upland Cotton	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	Thryvon Bt cost/acre	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	2.0%	1,920	1.0	\$19.00	75.0	72,000	1.5