

Table 4. Cotton insect loss estimates for Southeast 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	256,000	100.0%	28,160	11.0%	1.0	\$34.50	1.2%	0.11	\$3.80	1.20%	11,667	\$4,667,626	\$18.23	10.4%
Beet Armyworm	0	0.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	2,560	1.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,560	1.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	20,480	8.0%	2,304	0.9%	1.0	\$14.50	0.0%	0.01	\$0.15	0.00%	0	\$2,970	\$0.01	0.0%
Cotton Leaf Perforator	0	0.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	5,120	2.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	256,000	100.0%	243,200	95.0%	2.5	\$23.50	4.0%	2.38	\$55.93	4.00%	38,891	\$26,638,749	\$104.06	59.5%
Cotton Fleahopper	153,600	60.0%	0	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)	243,200	95.0%	5,120	2.0%	1.0	\$23.50	0.2%	0.02	\$0.47	0.19%	1,847	\$699,434	\$2.73	1.6%
Brown Stink Bug	243,200	95.0%	5,120	2.0%	1.0	\$23.50	0.2%	0.02	\$0.47	0.19%	1,847	\$699,434	\$2.73	1.6%
Clouded Plant Bug	238,080	93.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	5,120	2.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	166,400	65.0%	64,000	25.0%	1.5	\$23.50	2.0%	0.38	\$8.93	1.30%	12,639	\$5,489,987	\$21.45	12.3%
Thrips	256,000	100.0%	128,000	50.0%	1.3	\$17.50	1.2%	0.65	\$11.38	1.20%	11,667	\$6,608,106	\$25.81	14.7%
Aphids	256,000	100.0%	7,680	3.0%	1.0	\$0.00	0.0%	0.03	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	71,680	28.0%	256	0.1%	1.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	25,600	10.0%	0	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%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					3.60			\$81.12	8.08%		78,558	\$44,806,306	\$175.02	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Arkansas		Total Acres	256,000		Total	Per Acre	
Region	MidSouth		Total Bales Harvested	660,267	Foliar Insecticide Costs	\$20,765,440	\$81.12	
Year	2024		Total Bales Lost to Insects	78,558	Seed Treatment Costs	\$3,072,000	\$12.00	
Total Acres (Upland)	256,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.1%	In-Furrow Costs	\$384,000	\$1.50
Yield / Acre (Upland)	1,238	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,347	Scouting Costs	\$2,560,000	\$10.00
Price / lb	\$0.66	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	3.6	Eradication Costs	\$768,000	\$3.00
yield potential (lb/acre)	1,823	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	311,903	Bt Cotton	\$9,689,600	\$37.85
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	32.1%	Total Costs	\$37,239,040	\$145.47
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	256,000	Yield Loss to Insects	\$24,887,174	\$97.22
% Acres Scouted	100%	No. apps by air	2.5	Boll Weevil Eradication (# acres)	256,000	Total Losses + Costs	\$62,126,214	\$242.68
Fee / Scouted Acre	\$10.00	Cost/app by air	\$11.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.8	% insect apps by ground	100%	# Scouted Acres	256,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	256,000			
Cost/treated acre (Bt) Cotton	\$37.85	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	25,600			
% acres with seed treatment	100%	% Loss to weather	14.0%	Applications by Air (acres)	256,000			
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	5.0%	Applications by Ground (acres)	256,000			
% acres with in-furrow	10%	% loss to other (chemical injury, weeds, diseases, etc.)	5.0%	No. acres with no foliar insecticide applications	0			

Table 4. Cotton insect loss estimates for Southeast 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%	2,560	\$112.00	\$35.00	100%	2,560	2.0
Bollgard III	82.0%	209,920	\$112.00	\$35.00	10%	20,992	1.0
Bollgard III/Thryvon	15.0%	38,400	\$131.00	\$35.00	10%	3,840	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.0%	5,120	\$112.00	\$35.00	10%	512	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%	256,000	\$114.85	\$37.85	10.9%	27,904	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%	256,000	\$114.85	\$37.85	10.9%	27,904	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)		256,000	\$114.85		10.9%	27,904	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%	768	1.0	\$19.00	75.0%	28,800	1.5