

Table 4. Cotton insect loss estimates for Southeast 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	202,000	100%	23,634	12%	1.0	\$34.50	1.2%	0.12	\$4.14	1.20%	9,777	\$4,449,859	\$22.03	9.6%
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	2,020	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	2,020	1%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	20,200	10%	1,010	1%	1.0	\$14.50	0.0%	0.01	\$0.15	0.00%	0	\$2,929	\$0.01	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	6,060	3%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	202,000	100%	198,970	99%	3.0	\$23.50	4.5%	2.96	\$69.56	4.50%	36,663	\$27,601,765	\$136.64	59.4%
Cotton Fleahopper	131,300	65%	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)	191,900	95%	4,040	2%	1.0	\$23.50	0.2%	0.02	\$0.47	0.19%	1,548	\$662,334	\$3.28	1.4%
Brown Stink Bug	191,900	95%	4,040	2%	1.0	\$23.50	0.2%	0.02	\$0.47	0.19%	1,548	\$662,334	\$3.28	1.4%
Clouded Plant Bug	181,800	90%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	4,040	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	141,400	70%	70,700	35%	1.5	\$23.50	2.0%	0.53	\$12.46	1.40%	11,406	\$5,976,795	\$29.59	12.9%
Thrips	202,000	100%	131,300	65%	1.5	\$17.50	1.2%	0.98	\$17.15	1.20%	9,777	\$7,077,879	\$35.04	15.2%
Aphids	202,000	100%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	50,500	25%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	20,200	10%	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>					<b>4.64</b>	<b>\$104.39</b>			<b>8.68%</b>		<b>70,719</b>	<b>\$46,433,895</b>	<b>\$229.87</b>	

**SUMMARY DATA**

Data Input		Yield and Management Results				Economic Results	
State	Arkansas	Total Acres			202,000	Total	Per Acre
Region	MidSouth	Total Bales Harvested			563,917	Foliar Insecticide Costs	\$21,086,780
Year	2023	Total Bales Lost to Insects			70,719	Seed Treatment Costs	\$2,424,000
Total Acres (Upland)	202,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.7%	In-Furrow Costs	\$363,600
Yield / Acre (Upland)	1,340	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,467	Scouting Costs	\$2,020,000
Price / lb	\$0.77	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	4.64	Eradication Costs	\$606,000
yield potential (lb/acre)	1,936	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	250,775	Bt Cotton	\$7,724,480
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	30.8%	Total Costs	\$34,224,860
Yield / Acre (Pima)	0	% Insect apps by air	100%	Transgenic Cotton (arthropods) (# acres)	202,000	Yield Loss to Insects	\$26,137,742
% Acres Scouted	100%	No. apps by air	2.5	Boll Weevil Eradication (# acres)	202,000	Total Losses + Costs	\$60,362,602
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	202,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2.5	Seed Treatments (arthropods) (# acres)	202,000		
Cost/treated acre (Bt) Cotton	\$38.24	Cost/app by ground	\$8.50	In-Furrow Applications (# acres)	24,240		
% acres with seed treatment	100%	% Loss to weather	14.0%	Applications by Air (acres)	202,000		
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	4.0%	Applications by Ground (acres)	202,000		
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	4.1%	No. acres with no foliar insecticide applications	0		

Table 4. Cotton insect loss estimates for Southeast 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%	3,030	\$112.00	\$35.00	100%	3,030	1.5
Bollgard III	84.5%	170,690	\$112.00	\$35.00	10%	17,069	1.0
Bollgard III/Thryvon	12.0%	24,240	\$139.00	\$35.00	10%	2,424	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.0%	4,040	\$112.00	\$35.00	10%	404	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>202,000</b>	<b>\$115.24</b>	<b>\$38.24</b>	<b>11.4%</b>	<b>22,927</b>	<b>0.1</b>
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
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>202,000</b>	<b>\$115.24</b>	<b>\$38.24</b>	<b>11.4%</b>	<b>22,927</b>	<b>0.1</b>
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
<b>Total (all Cotton)</b>		<b>202,000</b>	<b>\$115.24</b>		<b>11.4%</b>	<b>22,927</b>	<b>0.1</b>

  

Upland Cotton	Thryvon Bt cost/acre	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	\$27.00	3%	727	1.0	90%	21,816	2.0