

Table 5. Cotton insect loss estimates for Southeast Arkansas during 2019.

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	244,000	100%	170,800	70%	1.5	\$31.46	4.2%	1.05	\$33.03	4.20%	33,221	\$19,270,146	\$78.98	33.4%
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	24,400	10%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	3,660	2%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	61,000	25%	12,200	5%	1.0	\$0.90	0.0%	0.05	\$0.05	0.00%	0	\$2,745	\$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	36,600	15%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	244,000	100%	244,000	100%	4.5	\$20.00	4.1%	4.50	\$90.00	4.10%	32,430	\$32,903,179	\$134.85	57.0%
Cotton Fleahopper	146,400	60%	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)	170,800	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Brown Stink Bug	170,800	70%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	122,000	50%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,200	5%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	146,400	60%	73,200	30%	1.3	\$20.00	1.7%	0.39	\$7.80	1.02%	8,068	\$3,864,386	\$15.84	6.7%
Thrips	244,000	100%	36,600	15%	1.0	\$13.00	0.0%	0.15	\$1.95	0.00%	0	\$475,800	\$1.95	0.8%
Aphids	244,000	100%	61,000	25%	1.0	\$20.00	0.0%	0.25	\$5.00	0.00%	0	\$1,220,000	\$5.00	2.1%
Grasshoppers	24,400	10%	0	0%	0.0	\$0.00	0.0%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	48,800	20%	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>								6.39	\$137.83	9.32%	73,719	\$57,736,256	\$236.62	

**SUMMARY DATA**

Data Input			Yield and Management Results			Economic Results	
State	Arkansas		Total Acres	244,000		Total	Per Acre
Region	MidSouth		Total Bales Harvested	584,583		Foliar Insecticide Costs	\$137.83
Year	2019		Total Bales Lost to Insects	73,719		Seed Treatment Costs	\$11.88
Total Acres (Upland)	244,000	In-furrow cost/treated acre	Percent Yield Loss	9.3%		In-Furrow Costs	\$1.80
Yield / Acre (Upland)	1,150	% acres in Boll Weevil Eradication	Yield w/o Insects (lb/acre)	1,268		Scouting Costs	\$10.00
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	Av. # Applications	6.39		Eradication Costs	\$3.00
yield potential (lb/acre)	1,556	% acres in Pink Bollworm Eradication	Total Bales lost (all factors)	279,369		Bt Cotton	\$34.48
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	Total % yield Loss	35.3%		Total Costs	\$198.98
Yield / Acre (Pima)	0	% Insect apps by air	Transgenic Cotton (arthropods) (# acres)	240,340		Yield Loss to Insects	\$101.95
% Acres Scouted	100%	No. apps by air	Boll Weevil Eradication (# acres)	244,000		Total Losses + Costs	\$300.93
Fee / Scouted Acre	\$10.00	Cost/app by air	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	# Scouted Acres	244,000			
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	Seed Treatments (arthropods) (# acres)	231,800			
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	In-Furrow Applications (# acres)	29,280			
% acres with seed treatment	95%	% Loss to weather	Applications by Air (acres)	195,200			
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	Applications by Ground (acres)	244,000			
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	No. acres with no foliar insecticide applications	0			

Table 5. Cotton insect loss estimates for Southeast Arkansas during 2019, 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	81.5%	198,860	\$112.00	\$35.00	85%	169,031	1.3
Bollgard III	7.0%	17,080	\$112.00	\$35.00	0%	0	0.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	5.0%	12,200	\$112.00	\$35.00	2%	244	0.5
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	12,200	\$112.00	\$35.00	0%	0	0.0
<b>Total Bt</b>	<b>98.5%</b>	<b>240,340</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>70.4%</b>	<b>169,275</b>	<b>1.1</b>
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.5%	3,660	\$26.00	-	100%	3,660	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>244,000</b>	<b>\$110.71</b>	<b>\$35.00</b>	<b>70.9%</b>	<b>172,935</b>	<b>1.1</b>
<b>Non Upland Cotton</b>							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
<b>Total (all Cotton)</b>		<b>244,000</b>	<b>\$110.71</b>	<b>-</b>	<b>70.9%</b>	<b>172,935</b>	<b>1.1</b>