

Table 6. Cotton insect loss estimates for Arkansas during 2021.

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	470,000	100%	92,120	19.6%	1.2	\$31.46	2.50%	0.23	\$7.28	2.50%	55,886	\$23,243,612	\$49.45	16.6%
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	48,880	10%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	3,290	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	117,500	25%	47,940	10.2%	1.0	\$11.00	0.06%	0.10	\$1.12	0.02%	335	\$250,778	\$0.53	0.2%
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	26,320	6%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	470,000	100%	470,000	100.0%	5.2	\$20.00	5.74%	5.20	\$104.00	5.74%	128,314	\$94,395,582	\$200.84	67.3%
Cotton Fleahopper	305,500	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)	470,000	100%	11,280	2.4%	1.0	\$20.00	0.30%	0.02	\$0.48	0.30%	6,706	\$2,604,463	\$5.54	1.9%
Brown Stink Bug	470,000	100%	11,280	2.4%	1.0	\$20.00	0.30%	0.02	\$0.48	0.30%	6,706	\$2,604,463	\$5.54	1.9%
Clouded Plant Bug	310,200	66%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	12,220	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	244,400	52%	136,300	29.0%	1.2	\$20.00	1.50%	0.34	\$6.84	0.78%	17,436	\$7,857,718	\$16.72	5.6%
Thrips	470,000	100%	197,400	42.0%	1.1	\$13.00	0.50%	0.45	\$5.79	0.50%	11,177	\$6,684,944	\$14.22	4.8%
Aphids	470,000	100%	131,600	28.0%	1.0	\$20.00	0.00%	0.28	\$5.60	0.00%	0	\$2,632,000	\$5.60	1.9%
Grasshoppers	47,000	10%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	94,000	20%	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%
<b>TOTAL</b>					<b>6.65</b>			<b>\$131.59</b>		<b>10.14%</b>	<b>226,562</b>	<b>\$140,273,560</b>	<b>\$298.45</b>	

**SUMMARY DATA**

	Data Input		Yield and Management Results			Economic Results	
						Total	Per Acre
State	Arkansas		Total Acres		470,000		
Region	MidSouth		Total Bales Harvested		1,260,188	Foliar Insecticide Costs	\$61,847,144
Year	2021		Total Bales Lost to Insects		226,562	Seed Treatment Costs	\$5,875,000
Total Acres (Upland)	470,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	10.1%	In-Furrow Costs	\$846,000
Yield / Acre (Upland)	1,287	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,432	Scouting Costs	\$4,700,000
Price / lb	\$0.74	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	6.65	Eradication Costs	\$1,410,000
yield potential (lb/acre)	2,283	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	975,609	Bt Cotton	\$16,450,000
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	43.6%	Total Costs	\$91,128,144
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	470,000	Yield Loss to Insects	\$80,365,927
% Acres Scouted	100%	No. apps by air	4.0	Boll Weevil Eradication (# acres)	470,000	Total Losses + Costs	\$171,494,072
Fee / Scouted Acre	\$10.00	Cost/app by air	\$10.00	Pink Bollworm Eradication (# acres)	0		
No. times scouted/week	1.5	% insect apps by ground	100%	# Scouted Acres	470,000		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	4.0	Seed Treatments (arthropods) (# acres)	470,000		
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	56,400		
% acres with seed treatment	100%	% Loss to weather	19.5%	Applications by Air (acres)	376,000		
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	6.0%	Applications by Ground (acres)	470,000		
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	8.0%	No. acres with no foliar insecticide applications	0		

Table 6. Cotton insect loss estimates for Arkansas during 2021, 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	11.1%	52,170	\$112.00	\$35.00	86%	44,658	1.5
Bollgard III	84.5%	397,150	\$112.00	\$35.00	8%	30,183	1.0
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	2.9%	13,630	\$112.00	\$35.00	8%	1,118	1.0
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	1.5%	7,050	\$112.00	\$35.00	4%	254	0.6
<b>Total Bt</b>	<b>100.0%</b>	<b>470,000</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>16.2%</b>	<b>76,212</b>	<b>0.2</b>
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$10.40	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>470,000</b>	<b>\$112.00</b>	<b>\$35.00</b>	<b>16.2%</b>	<b>76,212</b>	<b>0.2</b>
<b>Non Upland Cotton</b>							
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>470,000</b>	<b>\$112.00</b>		<b>16.2%</b>	<b>76,212</b>	<b>0.2</b>