

Table 6. Cotton insect loss estimates for Arkansas during 2020.

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	525,000	100%	360,150	68.6%	1.2	\$27.58	3.20%	0.81	\$22.33	3.20%	68,285	\$32,044,182	\$61.04	27.2%
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	32,550	6%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	5,250	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	115,500	22%	31,500	6.0%	1.0	\$11.00	0.00%	0.06	\$0.66	0.00%	0	\$76,230	\$0.15	0.1%
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	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	525,000	100%	525,000	100.0%	4.2	\$20.00	3.98%	4.20	\$84.00	3.98%	84,929	\$69,375,010	\$132.14	58.8%
Cotton Fleahopper	372,750	71%	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)	367,500	70%	14,700	2.8%	1.0	\$20.00	0.28%	0.03	\$0.56	0.20%	4,182	\$1,450,499	\$2.76	1.2%
Brown Stink Bug	367,500	70%	14,700	2.8%	1.0	\$20.00	0.28%	0.03	\$0.56	0.20%	4,182	\$1,450,499	\$2.76	1.2%
Clouded Plant Bug	357,000	68%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	13,650	3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	336,000	64%	152,250	29.0%	1.1	\$20.00	1.58%	0.31	\$6.15	1.01%	21,510	\$8,467,037	\$16.13	7.2%
Thrips	525,000	100%	105,000	20.0%	1.0	\$13.00	0.32%	0.20	\$2.60	0.32%	6,829	\$3,397,162	\$6.47	2.9%
Aphids	525,000	100%	84,000	16.0%	1.0	\$20.00	0.00%	0.16	\$3.20	0.00%	0	\$1,680,000	\$3.20	1.4%
Grasshoppers	52,500	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	57,750	11%	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%
TOTAL					5.79			\$120.06		8.90%	189,918	\$117,940,618	\$224.65	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
State	Arkansas	Total Acres		525,000	Total	Per Acre	
Region	MidSouth	Total Bales Harvested		1,312,500	Foliar Insecticide Costs	\$63,029,766	
Year	2020	Total Bales Lost to Insects		189,918	Seed Treatment Costs	\$6,234,375	
Total Acres (Upland)	525,000	In-furrow cost/treated acre	\$15.00	Percent Yield Loss	8.9%	In-Furrow Costs	\$945,000
Yield / Acre (Upland)	1,200	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,317	Scouting Costs	\$5,250,000
Price / lb	\$0.62	Cost/acre Boll Weevil Eradication	\$3.00	Av. # Applications	5.79	Eradication Costs	\$1,575,000
yield potential (lb/acre)	1,951	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	833,592	Bt Cotton	\$18,191,250
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	38.5%	Total Costs	\$95,225,391
Yield / Acre (Pima)	0	% Insect apps by air	80%	Transgenic Cotton (arthropods) (# acres)	519,750	Yield Loss to Insects	\$56,519,495
% Acres Scouted	100%	No. apps by air	3.7	Boll Weevil Eradication (# acres)	525,000	Total Losses + Costs	\$151,744,885
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	525,000		
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	4.0	Seed Treatments (arthropods) (# acres)	498,750		
Cost/treated acre (Bt) Cotton	\$35.00	Cost/app by ground	\$7.00	In-Furrow Applications (# acres)	63,000		
% acres with seed treatment	95%	% Loss to weather	18.0%	Applications by Air (acres)	420,000		
Seed trt. cost/ treated acre	\$12.50	% loss to non-arthropods	5.4%	Applications by Ground (acres)	525,000		
% acres with in-furrow	12%	% loss to other (chemical injury, weeds, diseases, etc.)	6.2%	No. acres with no foliar insecticide applications	0		

Table 6. Cotton insect loss estimates for Arkansas during 2020, 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	71.0%	372,750	\$112.00	\$35.00	78%	290,745	1.5
Bollgard III	14.0%	73,500	\$112.00	\$35.00	2%	1,470	0.4
WideStrike	0.0%	0	\$97.00	\$35.00	0%	0	0.0
WideStrike 3	9.0%	47,250	\$112.00	\$35.00	5%	2,457	0.7
TwinLink	0.0%	0	\$112.00	\$35.00	0%	0	0.0
TwinLink Plus	5.0%	26,250	\$112.00	\$35.00	0%	0	0.0
Total Bt	99.0%	519,750	\$112.00	\$35.00	56.7%	294,672	0.8
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	1.0%	5,250	\$26.00	-	100%	5,250	2.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	525,000	\$111.14	\$35.00	57.1%	299,922	0.9
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)		525,000	\$111.14	-	57.1%	299,922	0.9