Table 14. Cotton insect loss estimates for the Hills region of Mississippi 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	120,000	60.0%	12,000	6.0%	1.0	$21.00	1.50%	0.06	$1.26	0.90%	6,446	$2,317,056	$11.59	11.4%
Beet Armyworm	0	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	2,000	1.0%	2,000	1.0%	1.0	$11.50	1.00%	0.01	$0.12	0.01%	72	$24,422	$0.12	0.1%
Loopers	0	0.0%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Cutworms	40,000	20.0%	40,000	20.0%	1.0	$6.50	0.02%	0.20	$1.30	0.00%	29	$61,744	$0.31	0.3%
Cotton Leaf Perforator	0	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	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Lygus	170,000	85.0%	170,000	85.0%	2.5	$12.00	4.00%	2.13	$25.56	3.40%	24,353	$12,527,808	$62.64	61.5%
Cotton Fleahopper	0	0.0%	0	0.0%	0.0	$0.00	0.10%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Stink Bugs (other than brown stink bug)	10,000	5.0%	10,000	5.0%	0.0	$9.50	0.30%	0.00	$0.00	0.02%	107	$35,952	$0.18	0.2%
Brown Stink Bug	40,000	20.0%	40,000	20.0%	1.0	$9.50	0.68%	0.20	$1.90	0.14%	974	$403,264	$2.02	2.0%
Clouded Plant Bug	10,000	5.0%	10,000	5.0%	0.0	$9.50	0.60%	0.00	$0.00	0.03%	215	$72,240	$0.36	0.4%
Leaf Footed Bugs	0	0.0%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Spider Mites	100,000	50.0%	100,000	50.0%	1.0	$12.00	1.50%	0.50	$6.00	0.75%	5,372	$2,404,992	$12.02	11.8%
Thrips	100,000	50.0%	100,000	50.0%	1.5	$9.50	1.50%	0.75	$7.13	0.75%	5,372	$2,517,492	$12.59	12.4%
Aphids	60,000	30.0%	60,000	30.0%	0.0	$10.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Grasshoppers	0	0.0%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Banded Winged Whitefly	0	0.0%	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	$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	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
TOTAL								3.85	$43.26	6.00%	42,940	$20,364,970	$101.82	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results		
State	Mississippi			Total Acres	200,000		Total	Per Acre
Region	MidSouth			Total Bales Harvested	458,333	Foliar Insecticide Costs	$8,652,000	$43.26
Year	2024			Total Bales Lost to Insects	42,940	Seed Treatment Costs	$1,843,000	$9.22
Total Acres (Upland)	200,000	In-furrow cost/treated acre	$12.50	Percent Yield Loss	6.0%	In-Furrow Costs	$50,000	$0.25
Yield / Acre (Upland)	1,100	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,170	Scouting Costs	$1,372,000	$6.86
Price / lb	$0.70	Cost/acre Boll Weevil Eradication	$1.00	Av. # Applications	3.85	Eradication Costs	$200,000	$1.00
yield potential (lb/acre)	1,719	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	257,814	Bt Cotton	$7,040,000	$35.20
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	$0.00	Total % yield Loss	36.0%	Total Costs	$19,157,000	$95.79
Yield / Acre (Pima)	0	% Insect apps by air	20%	Transgenic Cotton (arthropods) (# acres)	200,000	Yield Loss to Insects	$14,427,840	$72.14
% Acres Scouted	98%	No. apps by air	1	Boll Weevil Eradication (# acres)	200,000	Total Losses + Costs	$33,584,840	$167.92
Fee / Scouted Acre	$7.00	Cost/app by air	$9.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.5	% insect apps by ground	80%	# Scouted Acres	196,000			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	194,000			
Cost/treated acre (Bt) Cotton	$35.20	Cost/app by ground	$6.00	In-Furrow Applications (# acres)	4,000			
% acres with seed treatment	97%	% Loss to weather	18.0%	Applications by Air (acres)	40,000			
Seed trt. cost/ treated acre	$9.50	% loss to non-arthropods	5.0%	Applications by Ground (acres)	160,000			
% acres with in-furrow	2%	% loss to other (chemical injury, weeds, diseases, etc.)	7.0%	No. acres with no foliar insecticide applications	2,000			

Table 14. Cotton insect loss estimates for the Hills region of Mississippi 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	10.0%	20,000	$140.00	$32.00	60%	12,000	1.0
Bollgard III	70.0%	140,000	$140.00	$32.00	0%	0	0.0
Bollgard III/Thryvon	10.0%	20,000	$155.00	$48.00	0%	0	0.0
WideStrike	0.0%	0	$140.00	$32.00	0%	0	0.0
WideStrike 3	8.0%	16,000	$140.00	$32.00	0%	0	0.0
TwinLink	0.0%	0	$140.00	$32.00	0%	0	0.0
TwinLink Plus	2.0%	4,000	$140.00	$32.00	0%	0	0.0
	100.0%	200,000	$141.50	$35.20	6.0%	12,000	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
	100.0%	200,000	$141.50	$35.20	6.0%	12,000	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
		200,000	$141.50		6.0%	12,000	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	0.0%	0	0.0	$16.00	75.0%	15,000	1.5