Table 18. Cotton insect loss estimates for Mississippi during 2017.

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	551,000	87%	534,700	84.9%	1.7	$16.50	1.50%	1.43	$23.52	1.31%	33,554	$24,232,657	$38.46	19.8%
Beet Armyworm	1,900	0%	0	0.0%	0.0	$0.00	0.03%	0.00	$0.00	0.00%	2	$782	$0.00	0.0%
Fall Armyworm	145,000	23%	14,500	2.3%	1.0	$11.50	1.00%	0.02	$0.26	0.23%	5,887	$2,016,325	$3.20	1.6%
Loopers	6,300	1%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Cutworms	179,500	28%	116,500	18.5%	1.0	$6.00	0.10%	0.18	$1.11	0.03%	729	$444,016	$0.70	0.4%
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	630,000	100%	510,000	81.0%	2.8	$11.00	4.00%	2.27	$24.99	4.00%	102,308	$50,118,949	$79.55	41.0%
Cotton Fleahopper	94,500	15%	0	0.0%	1.0	$0.00	0.10%	0.00	$0.00	0.02%	384	$128,907	$0.20	0.1%
Stink Bugs (other than brown stink bug)	82,000	13%	8,200	1.3%	1.0	$9.00	1.00%	0.01	$0.12	0.13%	3,329	$1,128,168	$1.79	0.9%
Brown Stink Bug	277,000	44%	53,500	8.5%	1.0	$9.00	1.50%	0.08	$0.76	0.66%	16,869	$5,879,544	$9.33	4.8%
Clouded Plant Bug	23,400	4%	1,900	0.3%	0.3	$2.71	0.90%	0.00	$0.00	0.03%	860	$288,857	$0.46	0.2%
Leaf Footed Bugs	53,500	8%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Spider Mites	491,000	78%	362,000	57.5%	1.7	$12.00	2.25%	0.99	$11.92	1.75%	44,851	$20,922,085	$33.21	17.1%
Thrips	630,000	100%	340,000	54.0%	1.0	$9.00	1.00%	0.54	$4.86	1.00%	25,577	$11,653,833	$18.50	9.5%
Aphids	485,000	77%	277,000	44.0%	1.0	$10.00	0.50%	0.45	$4.53	0.38%	9,845	$5,504,716	$8.74	4.5%
Grasshoppers	31,500	5%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Banded Winged Whitefly	31,500	5%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Silverleaf Whitefly	6,300	1%	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								5.99	$72.07	9.55%	244,193	$122,318,839	$194.16	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results		
State	Mississippi			Total Acres	630,000		Total	Per Acre
Region	MidSouth			Total Bales Harvested	1,421,146	Foliar Insecticide Costs	$45,404,961	$72.07
Year	2017			Total Bales Lost to Insects	244,193	Seed Treatment Costs	$5,925,150	$9.41
Total Acres (Upland)	630,000	In-furrow cost/treated acre	$12.35	Percent Yield Loss	9.5%	In-Furrow Costs	$77,800	$0.12
Yield / Acre (Upland)	1,083	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,197	Scouting Costs	$4,801,500	$7.62
Price / lb	$0.70	Cost/acre Boll Weevil Eradication	$4.00	Av. # Applications	6.0	Eradication Costs	$2,520,000	$4.00
yield potential (lb/acre)	1,949	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	1,005,063	Bt Cotton	$19,970,560	$31.70
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	$0.00	Total % yield Loss	44.4%	Total Costs	$78,699,971	$124.92
Yield / Acre (Pima)	0	% Insect apps by air	62%	Transgenic Cotton (arthropods) (# acres)	624,080	Yield Loss to Insects	$82,048,985	$130.24
% Acres Scouted	99%	No. apps by air	4.2	Boll Weevil Eradication (# acres)	630,000	Total Losses + Costs	$160,748,956	$255.16
Fee / Scouted Acre	$7.70	Cost/app by air	$6.45	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1.7	% insect apps by ground	59%	# Scouted Acres	623,700			
% acres Transgenic (Bt) Cotton	99%	No. apps by ground	1.6	Seed Treatments (arthropods) (# acres)	623,700			
Cost/treated acre (Bt) Cotton	$32.00	Cost/app by ground	$5.50	In-Furrow Applications (# acres)	6,300			
% acres with seed treatment	99%	% Loss to weather	23.5%	Applications by Air (acres)	390,000			
Seed trt. cost/ treated acre	$9.50	% loss to non-arthropods	2.9%	Applications by Ground (acres)	372,000			
% acres with in-furrow	1%	% loss to other (chemical injury, weeds, diseases, etc.)	8.5%	No. acres with no foliar insecticide applications	0			

Table 18. Cotton insect loss estimates for Mississippi during 2017, 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	% of Population Bollworm
Bollgard II	81%	509,100	$130.00	$32.00	84%	427,482	1.5	100%
Bollgard III	0%	630	$130.00	$32.00	0%	0	0.0	100%
WideStrike	16%	99,800	$130.00	$32.00	99%	98,802	2.6	100%
WideStrike 3	1%	7,620	$130.00	$32.00	0%	0	0.0	100%
TwinLink	1%	6,300	$130.00	$32.00	90%	5,670	1.7	100%
TwinLink Plus	0%	630	$130.00	$32.00	0%	0	0.0	100%
Total Bt	99%	624,080	$130.00	$32.00	85.2%	531,954	1.6	100.0%
Herbicide Traits Only	0%	0	-	-	-	-	-	-
Conventional	1%	6,300	$22.00		100%	6,300	2.7	77%
Organic	0%	0	-	-	-	-	-	-
Total Upland Cotton	100.1%	630,380	$128.79	$32.00	85.4%	538,254	1.7	99.8%
Non Upland Cotton								
Pima	0%	0	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total (all Cotton)		630,380	$128.79		85.4%	538,254	1.7	