

Table 3. Cotton insect loss estimates for Alabama during 2018.

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	437,568	87.0%	15,518	3.1%	1.0	\$9.19	0.41%	0.03	\$0.28	0.36%	4,957	\$1,909,085	\$3.81	9.0%
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	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
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	9,158	2.0%	1,832	0.4%	0.4	\$2.74	0.00%	0.00	\$0.00	0.00%	1	\$368	\$0.00	0.0%
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	246,768	49.0%	180,751	36.1%	1.1	\$7.83	0.31%	0.39	\$3.08	0.15%	2,118	\$1,522,894	\$3.04	7.2%
Cotton Fleahopper	18,317	4.0%	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)	501,168	100.0%	307,595	61.4%	1.0	\$7.55	1.13%	0.61	\$4.63	1.13%	15,763	\$7,996,501	\$15.96	37.9%
Brown Stink Bug	501,168	100.0%	303,932	60.6%	1.0	\$8.73	0.99%	0.61	\$5.29	0.99%	13,732	\$7,597,084	\$15.16	36.0%
Clouded Plant Bug	97,944	20.0%	15,518	3.1%	1.0	\$8.10	0.04%	0.03	\$0.25	0.01%	99	\$60,281	\$0.12	0.3%
Leaf Footed Bugs	120,458	24.0%	63,600	12.7%	0.6	\$5.08	0.00%	0.08	\$0.41	0.00%	0	\$49,237	\$0.10	0.2%
Spider Mites	230,868	46.0%	10,456	2.1%	1.0	\$8.00	0.00%	0.02	\$0.17	0.00%	0	\$38,533	\$0.08	0.2%
Thrips	501,168	100.0%	118,550	23.7%	1.0	\$7.73	0.10%	0.24	\$1.83	0.10%	1,389	\$1,416,695	\$2.83	6.7%
Aphids	310,368	62.0%	63,600	12.7%	0.6	\$3.17	0.13%	0.08	\$0.26	0.08%	1,092	\$472,385	\$0.94	2.2%
Grasshoppers	268,392	54.0%	31,800	6.3%	0.6	\$3.81	0.00%	0.04	\$0.15	0.00%	0	\$41,139	\$0.08	0.2%
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	47,700	10.0%	3,180	0.6%	0.6	\$11.42	0.00%	0.00	\$0.05	0.00%	0	\$2,193	\$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								2.14	\$16.41	2.82%	39,152	\$21,106,395	\$42.11	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results				
State	Alabama	Total Acres	501,168	Total Bales Harvested	999,448	Foliar Insecticide Costs	\$8,222,537	Per Acre	\$16.41
Region	Southeast	Total Bales Lost to Insects	39,152	Seed Treatment Costs	\$6,038,393	In-Furrow Costs	\$234,760		\$0.47
Year	2018	Percent Yield Loss	2.8%	In-Furrow Applications (# acres)	19,563	Scouting Costs	\$3,333,792		\$6.65
Total Acres (Upland)	501,168	Yield w/o Insects (lb/acre)	985	Eradication Costs	\$1,277,088	Bt Cotton	\$13,628,162		\$27.19
Yield / Acre (Upland)	957	Av. # Applications	2.1	Total Bales lost (all factors)	131,766	Total Costs	\$32,734,733		\$65.32
Price / lb	\$0.75	Total % yield Loss	28.1%	Transgenic Cotton (arthropods) (# acres)	501,168	Yield Loss to Insects	\$14,094,654		\$28.12
yield potential (lb/acre)	1,331	Boll Weevil Eradication (# acres)	501,168	Boll Weevil Eradication (# acres)	501,168	Total Losses + Costs	\$46,829,386		\$93.44
Acres (Pima)	0	Pink Bollworm Eradication (# acres)	0	# Scouted Acres	419,251				
Yield / Acre (Pima)	0	Total % yield Loss	28.1%	Seed Treatments (arthropods) (# acres)	481,605				
% Acres Scouted	84%	Transgenic Cotton (arthropods) (# acres)	501,168	In-Furrow Applications (# acres)	19,563				
Fee / Scouted Acre	\$7.95	Boll Weevil Eradication (# acres)	501,168	Applications by Air (acres)	91,075				
No. times scouted/week	1.1	Pink Bollworm Eradication (# acres)	0	Applications by Ground (acres)	410,093				
% acres Transgenic (Bt) Cotton	100%	# Scouted Acres	419,251	No. acres with no foliar insecticide applications	19,563				
Cost/treated acre (Bt) Cotton	\$27.19	Seed Treatments (arthropods) (# acres)	481,605						
% acres with seed treatment	96%	In-Furrow Applications (# acres)	19,563						
Seed trt. cost/ treated acre	\$12.54	Applications by Air (acres)	91,075						
% acres with in-furrow	4%	Applications by Ground (acres)	410,093						
		% loss to non-arthropods	5.0%						
		% loss to other (chemical injury, weeds, diseases, etc.)	3.9%						

Table 3. Cotton insect loss estimates for Alabama during 2018, 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	69.8%	350,054	\$59.27	\$28.79	5%	16,223	1.0
Bollgard III	10.6%	53,195	\$63.73	\$31.35	0%	0	0.0
WideStrike	3.7%	18,698	\$44.27	\$14.27	49%	9,240	1.0
WideStrike 3	13.2%	66,017	\$48.00	\$18.18	0%	0	0.0
TwinLink	1.0%	5,012	\$56.35	\$28.79	4%	196	1.0
TwinLink Plus	1.6%	8,192	\$58.17	\$33.25	0%	0	0.0
Total Bt	100.0%	501,168	\$57.65	\$27.19	5.1%	25,659	0.7
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
Total Upland Cotton	100.0%	501,168	\$50.89	\$27.19	5.1%	25,659	0.7
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0.0
Other	0%	0	\$0.00	-	0%	0	0.0
Organic	0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		501,168	\$50.89		5.1%	25,659	0.7