

Table 31. Cotton insect loss estimates for Virginia 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	29,100	30.0%	48,500	50.0%	1.0	\$18.00	3.00%	0.50	\$9.00	0.90%	2,183	\$1,037,302	\$10.69	10.8%
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	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$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	97,000	100.0%	92,150	95.0%	2.0	\$10.00	5.00%	1.90	\$19.00	5.00%	12,125	\$6,149,800	\$63.40	63.7%
Cotton Fleahopper	0	0.0%	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)	9,700	10.0%	9,700	10.0%	1.0	\$10.00	3.00%	0.10	\$1.00	0.30%	728	\$268,286	\$2.77	2.8%
Brown Stink Bug	19,400	20.0%	19,400	20.0%	1.0	\$10.00	3.00%	0.20	\$2.00	0.60%	1,455	\$555,616	\$5.73	5.8%
Clouded Plant Bug	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
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	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	97,000	100.0%	97,000	100.0%	1.0	\$8.00	1.00%	1.00	\$8.00	1.00%	2,425	\$1,637,360	\$16.88	17.0%
Aphids	0	0.0%	0	0.0%	0.0	\$0.00	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					3.70	\$39.00	7.80%		\$78.00	7.80%	18,916	\$9,648,364	\$99.47	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results	
State	Virginia	Total Acres	97,000		Total	Per Acre
Region	Southeast	Total Bales Harvested	195,010	Foliar Insecticide Costs	\$3,783,000	\$39.00
Year	2018	Total Bales Lost to Insects	18,916	Seed Treatment Costs	\$931,200	\$9.60
Total Acres (Upland)	97,000	Percent Yield Loss	7.8%	In-Furrow Costs	\$116,400	\$1.20
Yield / Acre (Upland)	965	Yield w/o Insects (lb/acre)	1,047	Scouting Costs	\$58,200	\$0.60
Price / lb	\$0.74	Av. # Applications	3.7	Eradication Costs	\$388,000	\$4.00
yield potential (lb/acre)	1,200	Total Bales lost (all factors)	79,540	Bt Cotton	\$1,661,125	\$17.13
Acres (Pima)	0	Total % yield Loss	32.8%	Total Costs	\$6,937,925	\$71.53
Yield / Acre (Pima)	0	Transgenic Cotton (arthropods) (# acres)	97,000	Yield Loss to Insects	\$6,718,963	\$69.27
% Acres Scouted	5%	Boll Weevil Eradication (# acres)	97,000	Total Losses + Costs	\$13,656,888	\$140.79
Fee / Scouted Acre	\$12.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	# Scouted Acres	4,850			
% acres Transgenic (Bt) Cotton	100%	Seed Treatments (arthropods) (# acres)	77,600			
Cost/treated acre (Bt) Cotton	\$17.14	In-Furrow Applications (# acres)	19,400			
% acres with seed treatment	80%	Applications by Air (acres)	24,250			
Seed trt. cost/ treated acre	\$12.00	Applications by Ground (acres)	72,750			
% acres with in-furrow	20%	No. acres with no foliar insecticide applications	0			
		% loss to other (chemical injury, weeds, diseases, etc.)	5.0%			

Table 31. Cotton insect loss estimates Virginia 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	45.5%	44,135	\$130.00	\$15.00	80%	35,308	1.0
Bollgard III	7.5%	7,275	\$130.00	\$20.00	0%	0	0.0
WideStrike	5.0%	4,850	\$130.00	\$15.00	100%	4,850	1.0
WideStrike 3	35.0%	33,950	\$130.00	\$20.00	0%	0	0.0
TwinLink	7.0%	6,790	\$130.00	\$15.00	100%	6,790	1.0
TwinLink Plus	0.0%	0	\$130.00	\$20.00	0%	0	0.0
Total Bt	100.0%	97,000	\$130.00	\$17.13	48.4%	46,948	0.6
Herbicide Traits Only	0%	0	\$0.00	-	0%	0	0.0
Conventional	0%	0	\$0.00	-	0%	0	0.0
Organic	0%	0	\$0.00	-	0%	0	0.0
Total Upland Cotton	100.0%	97,000	\$120.25	\$17.13	48.4%	46,948	0.6
Non Upland Cotton							
Pima	0%	0	\$0.00	-	0%	0	0
Other	0%	0	\$0.00	-	0%	0	0
Organic	0%	0	\$0.00	-	0%	0	0
Total (all Cotton)		97,000	\$120.25		48.4%	46,948	0.6