

Table 27. Cotton insect loss estimates for Virginia during 2019.

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	52,500	50%	60,113	57.3%	1.0	\$18.00	3.00%	0.57	\$10.26	1.50%	4,594	\$1,949,927	\$18.57	12.9%
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	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	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	\$0.00	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	105,000	100%	84,000	80.0%	1.5	\$10.00	5.00%	1.20	\$12.00	5.00%	15,313	\$5,964,154	\$56.80	39.6%
Cotton Fleahopper	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)	94,500	90%	15,750	15.0%	1.0	\$10.00	3.00%	0.15	\$1.50	2.70%	8,269	\$2,681,987	\$25.54	17.8%
Brown Stink Bug	94,500	90%	15,750	15.0%	1.0	\$10.00	3.00%	0.15	\$1.50	2.70%	8,269	\$2,681,987	\$25.54	17.8%
Clouded Plant Bug	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	5,250	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	105,000	100%	105,000	100.0%	1.0	\$8.00	1.00%	1.00	\$8.00	1.00%	3,063	\$1,780,954	\$16.96	11.8%
Aphids	10,500	10%	5,250	5.0%	1.0	\$10.00	0.00%	0.05	\$0.50	0.00%	0	\$5,250	\$0.05	0.0%
Grasshoppers	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	\$0.00	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%
<b>TOTAL</b>								3.12	\$33.76	12.90%	39,508	\$15,064,259	\$143.47	

**SUMMARY DATA**

Data Input			Yield and Management Results			Economic Results		
State	Virginia		Total Acres	105,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	273,438	Foliar Insecticide Costs	\$3,544,800	\$33.76	
Year	2019		Total Bales Lost to Insects	39,508	Seed Treatment Costs	\$1,197,000	\$11.40	
Total Acres (Upland)	105,000	In-furrow cost/treated acre	\$6.00	Percent Yield Loss	12.9%	In-Furrow Costs	\$189,000	\$1.80
Yield / Acre (Upland)	1,250	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,435	Scouting Costs	\$189,000	\$1.80
Price / lb	\$0.64	Cost/acre Boll Weevil Eradication	\$4.00	Av. # Applications	3.12	Eradication Costs	\$420,000	\$4.00
yield potential (lb/acre)	1,400	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	76,256	Bt Cotton	\$1,627,500	\$15.50
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	24.9%	Total Costs	\$7,167,300	\$68.26
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	105,000	Yield Loss to Insects	\$12,136,858	\$115.59
% Acres Scouted	15%	No. apps by air	1	Boll Weevil Eradication (# acres)	105,000	Total Losses + Costs	\$19,304,158	\$183.85
Fee / Scouted Acre	\$12.00	Cost/app by air	\$15.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	1	% insect apps by ground	95%	# Scouted Acres	15,750			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	99,750			
Cost/treated acre (Bt) Cotton	\$15.50	Cost/app by ground	\$7.50	In-Furrow Applications (# acres)	31,500			
% acres with seed treatment	95%	% Loss to weather	10.0%	Applications by Air (acres)	5,250			
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	99,750			
% acres with in-furrow	30%	% loss to other (chemical injury, weeds, diseases, etc.)	2.0%	No. acres with no foliar insecticide applications	0			

Table 27. Cotton insect loss estimates for Virginia during 2019, 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	80.0%	84,000	\$130.00	\$15.00	60%	50,400	1.0
Bollgard III	5.0%	5,250	\$130.00	\$20.00	10%	525	1.0
WideStrike	5.0%	5,250	\$130.00	\$15.00	90%	4,725	1.0
WideStrike 3	5.0%	5,250	\$130.00	\$20.00	10%	525	1.0
TwinLink	5.0%	5,250	\$130.00	\$15.00	75%	3,938	1.0
TwinLink Plus	0.0%	0	\$130.00	\$20.00	0%	0	0.0
<b>Total Bt</b>	<b>100.0%</b>	<b>105,000</b>	<b>\$130.00</b>	<b>\$15.50</b>	<b>57.3%</b>	<b>60,113</b>	<b>1.0</b>
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
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>105,000</b>	<b>\$130.00</b>	<b>\$15.50</b>	<b>57.3%</b>	<b>60,113</b>	<b>1.0</b>
<b>Non Upland Cotton</b>							
Pima	0.0%	0	\$0.00	-	0%	0	0
Other	0.0%	0	\$0.00	-	0%	0	0
Organic	0.0%	0	\$0.00	-	0%	0	0
<b>Total (all Cotton)</b>		<b>105,000</b>	<b>\$130.00</b>	<b>-</b>	<b>57.3%</b>	<b>60,113</b>	<b>1.0</b>