

Table 30. Cotton insect loss estimates for Virginia 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	63,000	75%	42,000	50.0%	1.0	\$18.00	5.00%	0.50	\$9.00	3.75%	9,844	\$4,110,840	\$48.94	19.0%
Beet Armyworm	4,200	5%	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	84,000	100%	79,800	95.0%	2.0	\$10.00	10.00%	1.90	\$19.00	10.00%	26,250	\$11,046,000	\$131.50	51.2%
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)	12,600	15%	8,400	10.0%	1.0	\$10.00	1.50%	0.10	\$1.00	0.23%	591	\$225,360	\$2.68	1.0%
Brown Stink Bug	12,600	15%	8,400	10.0%	1.0	\$10.00	1.50%	0.10	\$1.00	0.23%	591	\$225,360	\$2.68	1.0%
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	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	84,000	100%	84,000	100.0%	2.0	\$7.50	5.00%	2.00	\$15.00	5.00%	13,125	\$5,985,000	\$71.25	27.7%
Aphids	4,200	5%	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	\$0.00	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%
TOTAL								4.60	\$45.00	19.20%	50,401	\$21,592,560	\$257.05	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Virginia		Total Acres	84,000		Total	Per Acre	
Region	Southeast		Total Bales Harvested	210,525	Foliar Insecticide Costs	\$3,780,000	\$45.00	
Year	2017		Total Bales Lost to Insects	50,401	Seed Treatment Costs	\$537,600	\$6.40	
Total Acres (Upland)	84,000	In-furrow cost/treated acre	\$1.80	Percent Yield Loss	19.2%	In-Furrow Costs	\$30,240	\$0.36
Yield / Acre (Upland)	1,203	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,489	Scouting Costs	\$84,000	\$1.00
Price / lb	\$0.75	Cost/acre Boll Weevil Eradication	\$0.50	Av. # Applications	4.6	Eradication Costs	\$42,000	\$0.50
yield potential (lb/acre)	1,500	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	116,025	Bt Cotton	\$1,680,000	\$20.00
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	44.2%	Total Costs	\$6,153,840	\$73.26
Yield / Acre (Pima)	0	% Insect apps by air	0%	Transgenic Cotton (arthropods) (# acres)	84,000	Yield Loss to Insects	\$18,144,360	\$216.00
% Acres Scouted	10%	No. apps by air	0	Boll Weevil Eradication (# acres)	84,000	Total Losses + Costs	\$24,298,200	\$289.26
Fee / Scouted Acre	\$10.00	Cost/app by air	\$0.00	Pink Bollworm Eradication (# acres)	0			
No. times scouted/week	2	% insect apps by ground	100%	# Scouted Acres	8,400			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	3	Seed Treatments (arthropods) (# acres)	67,200			
Cost/treated acre (Bt) Cotton	\$20.00	Cost/app by ground	\$11.00	In-Furrow Applications (# acres)	16,800			
% acres with seed treatment	80%	% Loss to weather	10.0%	Applications by Air (acres)	0			
Seed trt. cost/ treated acre	\$8.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	84,000			
% acres with in-furrow	20%	% loss to other (chemical injury, weeds, diseases, etc.)	15.0%	No. acres with no foliar insecticide applications	0			

Table 30. Cotton insect loss estimates for Virginia 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	51.0%	42,840	\$100.00	\$20.00	40%	17,136	1.0	100%
Bollgard III	0.0%	0	-	-	-	-	-	-
WideStrike	30.0%	25,200	\$100.00	\$20.00	100%	25,200	1.0	100%
WideStrike 3	12.0%	10,080	\$100.00	\$20.00	0%	0	0.0	100%
TwinLink	7.0%	5,880	\$100.00	\$20.00	0%	0	0.0	100%
TwinLink Plus	0.0%	0	-	-	-	-	-	-
Total Bt	100%	84,000	\$100.00	\$20.00	50.4%	42,336	0.8	100%
Herbicide Traits Only	0%	0	-	-	-	-	-	-
Conventional	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total Upland Cotton	100.0%	84,000	\$100.00	\$20.00	50.4%	42,336	0.8	100.0%
Non Upland Cotton								
Pima	0%	0	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total (all Cotton)		84,000	\$100.00		50.4%	42,336	0.8	