

Table 30. Cotton insect loss estimates for Virginia during 2022.

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	6,720	8%	4,200	5.0%	1.0	\$20.00	0.00%	0.05	\$1.00	0.00%	0	\$6,720	\$0.08	0.1%
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	84,000	100%	63,000	75.0%	2.0	\$15.00	3.00%	1.50	\$22.50	3.00%	7,555	\$5,117,496	\$60.92	49.4%
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)	71,400	85%	6,720	8.0%	1.0	\$15.00	1.00%	0.08	\$1.20	0.85%	2,141	\$1,000,315	\$11.91	9.7%
Brown Stink Bug	58,800	70%	6,720	8.0%	1.0	\$15.00	1.00%	0.08	\$1.20	0.70%	1,763	\$823,714	\$9.81	8.0%
Clouded Plant Bug	1,680	2%	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	4,200	5%	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%	1.0	\$15.00	2.00%	1.00	\$15.00	2.00%	5,037	\$3,411,806	\$40.62	32.9%
Aphids	16,800	20%	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					2.71			\$40.90		6.55%	16,496	\$10,360,051	\$123.33	

SUMMARY DATA

	Data Input		Yield and Management Results				Economic Results	
	Virginia	Region	Total Acres	Total Bales Harvested	Total Bales Lost to Insects	Foliar Insecticide Costs	Total	Per Acre
State	Virginia	Southeast	84,000	215,250	16,496	\$3,435,600	\$40.90	
Region	Southeast							
Year	2022							
Total Acres (Upland)	84,000	In-furrow cost/treated acre	\$7.50	Percent Yield Loss	6.6%	In-Furrow Costs	\$189,000	\$2.25
Yield / Acre (Upland)	1,230	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,316	Scouting Costs	\$201,600	\$2.40
Price / lb	\$0.89	Cost/acre Boll Weevil Eradication	\$1.25	Av. # Applications	2.71	Eradication Costs	\$105,000	\$1.25
yield potential (lb/acre)	1,439	% acres in Pink Bollworm Eradication	0%	Total Bales lost (all factors)	36,641	Bt Cotton	\$1,260,000	\$15.00
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total % yield Loss	14.6%	Total Costs	\$6,199,200	\$73.80
Yield / Acre (Pima)	0	% Insect apps by air	5%	Transgenic Cotton (arthropods) (# acres)	84,000	Yield Loss to Insects	\$7,047,091	\$83.89
% Acres Scouted	20%	No. apps by air	1	Boll Weevil Eradication (# acres)	84,000	Total Losses + Costs	\$13,246,291	\$157.69
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	100%	# Scouted Acres	16,800			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	84,000			
Cost/treated acre (Bt) Cotton	\$15.00	Cost/app by ground	\$10.00	In-Furrow Applications (# acres)	25,200			
% acres with seed treatment	100%	% Loss to weather	8.0%	Applications by Air (acres)	4,200			
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	84,000			
% acres with in-furrow	30%	% loss to other (chemical injury, weeds, diseases, etc.)	0.0%	No. acres with no foliar insecticide applications	0			

Table 30. Cotton insect loss estimates for Virginia during 2022, 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	10.0%	8,400	\$130.00	\$15.00	50%	4,200	1.0
Bollgard III	40.0%	33,600	\$130.00	\$15.00	0%	0	0.0
WideStrike	0.0%	0	\$130.00	\$15.00	50%	0	1.0
WideStrike 3	15.0%	12,600	\$130.00	\$15.00	0%	0	0.0
TwinLink	0.0%	0	\$130.00	\$15.00	50%	0	1.0
TwinLink Plus	35.0%	29,400	\$130.00	\$15.00	0%	0	0.0
Total Bt	100.0%	84,000	\$130.00	\$15.00	5.0%	4,200	0.1
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%	84,000	\$130.00	\$15.00	5.0%	4,200	0.1
Non Upland Cotton							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
Total (all Cotton)		84,000	\$130.00	-	5.0%	4,200	0.1