

Table 27. Cotton insect loss estimates for Virginia during 2021.

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	7,800	10%	3,900	5.0%	1.0	\$18.00	0.00%	0.05	\$0.90	0.00%	0	\$7,020	\$0.09	0.1%
Beet Armyworm	1,560	2%	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	78,000	100%	58,500	75.0%	2.0	\$12.50	3.00%	1.50	\$18.75	3.00%	7,088	\$5,307,031	\$68.04	55.6%
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)	66,300	85%	7,800	10.0%	1.0	\$10.00	1.00%	0.10	\$1.00	0.85%	2,008	\$1,155,439	\$14.81	12.1%
Brown Stink Bug	58,500	75%	7,800	10.0%	1.0	\$10.00	1.00%	0.10	\$1.00	0.75%	1,772	\$1,019,633	\$13.07	10.7%
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	3,900	5%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	78,000	100%	78,000	100.0%	1.0	\$10.00	1.00%	1.00	\$10.00	1.00%	2,363	\$2,061,691	\$26.43	21.6%
Aphids	19,500	25%	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					2.75			\$31.65		5.60%	13,231	\$9,550,814	\$122.45	

SUMMARY DATA

	Data Input		Yield and Management Results				Economic Results	
	Virginia	Region	Total Acres	Total Bales Harvested	Foliar Insecticide Costs	Total	Per Acre	
State	Virginia	Southeast	78,000	211,250	\$2,468,700		\$31.65	
Region								
Year	2021							
Total Acres (Upland)	78,000	In-furrow cost/treated acre	\$6.00	Total Bales Lost to Insects	13,231	Seed Treatment Costs	\$936,000	\$12.00
Yield / Acre (Upland)	1,300	% acres in Boll Weevil Eradication	100%	Percent Yield Loss	5.6%	In-Furrow Costs	\$140,400	\$1.80
Price / lb	\$1.13	Cost/acre Boll Weevil Eradication	\$1.25	Yield w/o Insects (lb/acre)	1,377	Scouting Costs	\$234,000	\$3.00
yield potential (lb/acre)	1,454	% acres in Pink Bollworm Eradication	0%	Av. # Applications	2.75	Eradication Costs	\$97,500	\$1.25
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$0.00	Total Bales lost (all factors)	25,045	Bt Cotton	\$1,345,500	\$17.25
Yield / Acre (Pima)	0	% Insect apps by air	5%	Total % yield Loss	10.6%	Total Costs	\$5,222,100	\$66.95
% Acres Scouted	25%	No. apps by air	1	Transgenic Cotton (arthropods) (# acres)	78,000	Yield Loss to Insects	\$7,176,494	\$92.01
Fee / Scouted Acre	\$12.00	Cost/app by air	\$15.00	Boll Weevil Eradication (# acres)	78,000	Total Losses + Costs	\$12,398,594	\$158.96
No. times scouted/week	1	% insect apps by ground	100%	Pink Bollworm Eradication (# acres)	0			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	2	# Scouted Acres	19,500			
Cost/treated acre (Bt) Cotton	\$17.25	Cost/app by ground	\$7.50	Seed Treatments (arthropods) (# acres)	78,000			
% acres with seed treatment	100%	% Loss to weather	5.0%	In-Furrow Applications (# acres)	23,400			
Seed trt. cost/ treated acre	\$12.00	% loss to non-arthropods	0.0%	Applications by Air (acres)	3,900			
% acres with in-furrow	30%	% loss to other (chemical injury, weeds, diseases, etc.)	0.0%	Applications by Ground (acres)	78,000			
				No. acres with no foliar insecticide applications	0			

Table 27. Cotton insect loss estimates for Virginia during 2021, 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	25.0%	19,500	\$130.00	\$15.00	75%	14,625	1.0
Bollgard III	30.0%	23,400	\$130.00	\$20.00	0%	0	0.0
WideStrike	0.0%	0	\$130.00	\$15.00	0%	0	0.0
WideStrike 3	15.0%	11,700	\$130.00	\$20.00	0%	0	0.0
TwinLink	30.0%	23,400	\$130.00	\$15.00	75%	17,550	1.0
TwinLink Plus	0.0%	0	\$130.00	\$20.00	0%	0	0.0
Total Bt	100.0%	78,000	\$130.00	\$17.25	41.3%	32,175	0.4
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%	78,000	\$130.00	\$17.25	41.3%	32,175	0.4
Non Upland Cotton					0		
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)		78,000	\$130.00		41.3%	32,175	0.4