

Table 31. Cotton insect loss estimates for the United States during 2023.

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	6,649,067	78%	590,625	6.9%	1.2	\$21.11	0.69%	0.08	\$1.71	0.54%	168,336	\$75,563,963	\$8.85	10.2%
Beet Armyworm	41,440	0%	3,528	0.0%	1.0	\$0.69	0.00%	0.00	\$0.00	0.00%	2	\$775	\$0.00	0.0%
Fall Armyworm	382,180	4%	5,300	0.1%	1.0	\$2.15	0.02%	0.00	\$0.00	0.00%	322	\$123,315	\$0.01	0.0%
Loopers	81,010	1%	192	0.0%	1.0	\$19.00	0.00%	0.00	\$0.00	0.00%	3	\$1,190	\$0.00	0.0%
Cutworms	458,824	5%	119,825	1.4%	1.0	\$6.79	0.17%	0.01	\$0.10	0.01%	2,593	\$1,032,613	\$0.12	0.1%
Cotton Leaf Perforator	130	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	44,049	1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	5,659,338	66%	3,533,660	41.4%	3.3	\$15.48	2.12%	1.37	\$21.17	1.41%	427,301	\$282,767,464	\$33.11	38.0%
Cotton Fleahopper	4,156,431	49%	1,316,073	15.4%	1.3	\$14.74	1.14%	0.20	\$2.99	0.55%	182,169	\$81,909,285	\$9.59	11.0%
Stink Bugs (other than brown stink bug)	4,580,995	54%	2,307,094	27.0%	1.2	\$10.66	0.77%	0.32	\$3.45	0.41%	117,339	\$60,550,814	\$7.09	8.1%
Brown Stink Bug	4,199,334	49%	2,242,100	26.3%	1.0	\$11.71	0.96%	0.26	\$2.99	0.47%	144,757	\$67,761,371	\$7.94	9.1%
Clouded Plant Bug	1,684,804	20%	549,022	6.4%	2.4	\$10.79	0.43%	0.15	\$1.64	0.09%	25,733	\$12,580,084	\$1.47	1.7%
Leaf Footed Bugs	1,244,670	15%	34,074	0.4%	1.0	\$5.32	0.00%	0.00	\$0.02	0.00%	29	\$37,479	\$0.00	0.0%
Spider Mites	3,874,471	45%	1,037,987	12.2%	1.3	\$12.95	0.68%	0.16	\$2.12	0.31%	94,056	\$44,071,195	\$5.16	5.9%
Thrips	8,259,353	97%	3,205,821	37.5%	1.3	\$11.68	0.54%	0.49	\$5.71	0.53%	160,513	\$108,396,432	\$12.69	14.6%
Aphids	4,095,370	48%	352,400	4.1%	1.0	\$8.60	0.04%	0.04	\$0.35	0.02%	5,743	\$3,643,669	\$0.43	0.5%
Grasshoppers	4,443,436	52%	102,147	1.2%	1.0	\$6.98	0.01%	0.01	\$0.08	0.01%	1,497	\$942,915	\$0.11	0.1%
Banded Winged Whitefly	237,077	3%	223	0.0%	1.0	\$11.34	0.00%	0.00	\$0.00	0.00%	0	\$70	\$0.00	0.0%
Silverleaf Whitefly	813,617	10%	236,825	2.8%	1.9	\$14.00	0.30%	0.05	\$0.74	0.03%	9,240	\$4,123,192	\$0.48	0.6%
Other insect pests*	216,157	3%	8,591	0.1%	0.8	\$19.21	0.073%	0.0007	\$0.01	0.0018%	606	\$233,973	\$0.03	0.031%
Boll Weevil	37,173	0%	1,076	0.0%	1.0	\$20.00	0.01%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								3.16	\$43.09	4.37%	1,340,241	\$743,739,801	\$87.10	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results	
		Total Acres		8,539,284	Total	Per Acre
Year	2023	Total Bales Harvested		14,637,129	Foliar Insecticide Costs	\$367,947,374
Total Acres (Upland)	8,539,284	Total Bales Lost to Insects		1,340,241	Seed Treatment Costs	\$68,683,324
Yield / Acre (Upland)	814	Percent Yield Loss		4.4%	In-Furrow Costs	\$17,708,028
Price / lb	\$0.79	Yield w/o Insects (lb/acre)		852	Scouting Costs	\$56,067,188
yield potential (lb/acre)	1,746	Av. # Applications		3.160897993	Eradication Costs	\$16,653,148
Acres (Pima)	77,842	Total Bales lost (all factors)		17,008,947	Bt Cotton	\$197,155,827
Yield / Acre (Pima)	929	Total % yield Loss		50.4%	Total Costs	\$724,214,889
% Acres Scouted	74%	Transgenic Cotton (arthropods) (# acres)		8,014,970	Yield Loss to Insects	\$511,127,517
Fee / Scouted Acre	\$8.86	Boll Weevil Eradication (# acres)		8,526,484	Total Losses + Costs	\$1,235,342,406
No. times scouted/week	1.3	Pink Bollworm Eradication (# acres)		88,354		
% acres Transgenic (Bt) Cotton	94%	# Scouted Acres		6,328,642		
Cost/treated acre (Bt) Cotton	\$24.60	Seed Treatments (arthropods) (# acres)		6,493,880		
% acres with seed treatment	76%	In-Furrow Applications (# acres)		1,062,826		
Seed trt. cost/ treated acre	\$10.58	Applications by Air (acres)		2,619,515		
% acres with in-furrow	12%	Applications by Ground (acres)		4,465,791		
		% loss to other (chemical injury, weeds, diseases, etc.)		5.9%		
		No. acres with no foliar insecticide applications		2,635,050		

* See individual states for details on "other insect pests".

Table 31. Cotton insect loss estimates for the United States during 2023, 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	13.8%	1,180,053	\$95.10	\$20.34	33.2%	392,110	1.4
Bollgard III	47.0%	4,011,069	\$100.32	\$23.88	1.3%	50,818	0.9
Bollgard III/Thryvon	10.9%	927,393	\$117.57	\$32.88	0.8%	7,513	1.0
WideStrike	0.2%	16,026	\$39.37	\$13.49	5.8%	925	1.0
WideStrike 3	11.8%	1,009,387	\$93.89	\$14.61	1.6%	15,648	0.6
TwinLink	2.6%	218,936	\$74.57	\$12.10	4.2%	9,220	1.1
TwinLink Plus	7.6%	652,104	\$91.33	\$17.39	0.9%	6,041	0.0
Total Bt	93.9%	8,014,969	\$99.18	\$24.60	6.0%	482,274	0.1
Herbicide Traits Only	3.9%	336,711	\$36.43		6.8%	22,939	1.0
Conventional	1.9%	159,943	\$13.58		9.8%	15,603	1.2
Organic	0.2%	18,203	\$10.57		0.0%	0	0.0
Total Upland Cotton	99.9%	8,529,825	\$94.91	\$24.60	6.1%	520,817	0.1

Upland Cotton	Thryvon Bt cost/acre	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	\$19.35	0.8%	6,961	0.9	48.3%	447,828	2.1

See individual states for Pima cotton data.