

Table 31. Cotton insect loss estimates for the United States 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	4,658,304	66%	917,115	12.9%	1.1	\$21.79	0.81%	0.15	\$3.19	0.53%	137,807	\$73,707,242	\$10.38	9.5%
Beet Armyworm	89,407	1%	174	0.0%	1.0	\$19.00	0.00%	0.00	\$0.00	0.00%	6	\$2,570	\$0.00	0.0%
Fall Armyworm	235,203	3%	5,300	0.1%	1.0	\$11.50	0.10%	0.00	\$0.01	0.00%	798	\$342,943	\$0.05	0.0%
Loopers	186,266	3%	260	0.0%	1.0	\$19.00	0.00%	0.00	\$0.00	0.00%	5	\$2,222	\$0.00	0.0%
Cutworms	311,606	4%	197,435	2.8%	1.0	\$6.94	0.01%	0.03	\$0.19	0.00%	150	\$124,526	\$0.02	0.0%
Cotton Leaf Perforator	422	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	68,344	1%	248	0.0%	1.0	\$22.91	0.00%	0.00	\$0.00	0.00%	0	\$75	\$0.00	0.0%
Lygus	5,410,199	76%	3,212,241	45.2%	3.4	\$15.81	2.25%	1.53	\$24.19	1.71%	452,526	\$324,125,923	\$45.65	41.7%
Cotton Fleahopper	3,173,590	45%	976,837	13.8%	1.2	\$12.85	0.92%	0.16	\$2.10	0.41%	121,856	\$58,694,142	\$8.27	7.6%
Stink Bugs (other than brown stink bug)	4,460,840	63%	2,292,146	32.3%	1.4	\$9.74	0.75%	0.45	\$4.40	0.47%	110,882	\$66,972,146	\$9.43	8.6%
Brown Stink Bug	4,422,116	62%	1,894,778	26.7%	1.0	\$10.36	0.81%	0.27	\$2.76	0.51%	128,511	\$67,093,317	\$9.45	8.6%
Clouded Plant Bug	1,550,350	22%	98,961	1.4%	0.9	\$8.04	0.15%	0.01	\$0.11	0.03%	7,423	\$3,334,806	\$0.47	0.4%
Leaf Footed Bugs	959,344	14%	101,308	1.4%	1.0	\$6.90	0.18%	0.01	\$0.10	0.02%	6,671	\$2,940,587	\$0.41	0.4%
Spider Mites	3,500,715	49%	937,699	13.2%	1.3	\$15.21	0.63%	0.18	\$2.67	0.31%	81,206	\$44,014,521	\$6.20	5.7%
Thrips	6,969,939	98%	3,197,912	45.0%	1.2	\$11.50	0.65%	0.54	\$6.21	0.64%	164,451	\$113,486,754	\$15.98	14.6%
Aphids	4,892,161	69%	638,530	9.0%	1.0	\$11.00	0.05%	0.09	\$0.99	0.03%	8,515	\$8,472,177	\$1.19	1.1%
Grasshoppers	2,086,043	29%	132,858	1.9%	1.0	\$8.29	0.00%	0.02	\$0.16	0.00%	343	\$470,381	\$0.07	0.1%
Banded Winged Whitefly	356,115	5%	576	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	1,169,675	16%	369,412	5.2%	1.0	\$12.78	0.68%	0.05	\$0.64	0.11%	29,831	\$13,487,317	\$1.90	1.7%
Other insect pests*	332,770	5%	40,112	0.6%	0.1	\$2.35	0.002%	0.0004	\$0.00	0.0001%	21	\$9,413	\$0.00	0.001%
Boll Weevil	72,046	1%	67,666	1.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								3.49	\$47.70	4.80%	1,251,003	\$777,281,062	\$109.48	

SUMMARY DATA

Data Input		Yield and Management Results			Economic Results		
		Total Acres		7,099,912	Total Bales Harvested		14,046,137
Year	2022	Total Bales Lost to Insects		1,251,003	Foliar Insecticide Costs		\$338,634,036
Total Acres (Upland)	7,099,912	Percent Yield Loss		4.8%	Seed Treatment Costs		\$67,830,150
Yield / Acre (Upland)	945	Yield w/o Insects (lb/acre)		993	In-Furrow Costs		\$13,789,472
Price / lb	\$0.89	Av. # Applications		3.5	Scouting Costs		\$45,721,877
yield potential (lb/acre)	1,757	Total Bales lost (all factors)		12,017,829	Eradication Costs		\$16,688,691
-	-	Total % yield Loss		44.0%	Bt Cotton		\$162,744,630
-	-	Transgenic Cotton (arthropods) (# acres)		6,798,595	Total Costs		\$645,408,857
% Acres Scouted	72%	Boll Weevil Eradication (# acres)		7,082,547	Yield Loss to Insects		\$534,261,013
Fee / Scouted Acre	\$8.98	Pink Bollworm Eradication (# acres)		110,725	Total Losses + Costs		\$1,179,669,870
No. times scouted/week	1.3	# Scouted Acres		5,090,443			
% acres Transgenic (Bt) Cotton	96%	Seed Treatments (arthropods) (# acres)		6,014,555			
Cost/treated acre (Bt) Cotton	\$23.94	In-Furrow Applications (# acres)		970,581			
% acres with seed treatment	85%	Applications by Air (acres)		2,307,881			
Seed trt. cost/ treated acre	\$11.28	Applications by Ground (acres)		5,189,052			
% acres with in-furrow	14%	No. acres with no foliar insecticide applications		545,204			

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

Table 31. Cotton insect loss estimates for the United States 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	20.9%	1,481,700	\$89.91	\$21.68	37.0%	548,165	1.4
Bollgard III	54.0%	3,830,864	\$95.24	\$25.49	2.1%	81,905	1.0
WideStrike	0.4%	26,228	\$77.01	\$13.62	1.4%	368	1.0
WideStrike 3	13.8%	978,686	\$90.71	\$22.05	0.3%	2,764	1.0
TwinLink	2.4%	172,302	\$77.78	\$17.20	0.5%	889	1.0
TwinLink Plus	4.3%	308,816	\$93.48	\$26.11	0.1%	386	1.0
Total Bt	96%	6,798,596	\$92.83	\$23.94	9.3%	634,476	0.1
Herbicide Traits Only	3.1%	222,878	\$23.72	-	1.7%	3,898	1.0
Conventional	0.9%	65,805	\$9.26	-	9.6%	6,313	1.7
Organic	0.1%	10,644	\$8.24	-	0.0%	0	0.0
Total Upland Cotton	100.0%	7,097,923	\$89.76	\$23.94	9.1%	644,687	0.1

See individual states for Pima cotton data.