

Table 11. Cotton insect loss estimates for California upland cotton 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	347	2.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	347	2.0%	174	1.0%	1.0	\$19.00	0.20%	0.01	\$0.19	0.00%	3	\$1,722	\$0.10	0.1%
Fall Armyworm	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	521	3.0%	260	1.5%	1.0	\$19.00	0.20%	0.01	\$0.19	0.01%	5	\$2,859	\$0.16	0.1%
Cutworms	0	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	\$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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	14,760	85.0%	13,024	75.0%	2.0	\$27.00	3.50%	1.50	\$40.50	2.98%	2,295	\$1,864,630	\$107.38	83.2%
Cotton Fleahopper	0	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)	521	3.0%	347	2.0%	1.0	\$18.00	0.03%	0.02	\$0.36	0.00%	1	\$740	\$0.04	0.0%
Brown Stink Bug	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Clouded Plant Bug	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	14,760	85.0%	10,419	60.0%	1.0	\$22.00	0.08%	0.60	\$13.20	0.07%	52	\$223,539	\$12.87	10.0%
Thrips	4,341	25.0%	1,737	10.0%	1.0	\$13.00	0.05%	0.10	\$1.30	0.01%	10	\$11,164	\$0.64	0.5%
Aphids	3,473	20.0%	1,737	10.0%	1.0	\$25.00	0.04%	0.10	\$2.50	0.01%	6	\$11,995	\$0.69	0.5%
Grasshoppers	0	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	5,210	30.0%	4,341	25.0%	1.3	\$36.00	0.50%	0.32	\$11.52	0.15%	116	\$124,045	\$7.14	5.5%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL					2.66			\$69.76		3.23%	2,488	\$2,240,694	\$129.04	

SUMMARY DATA

Data Input		Yield and Management Results				Economic Results	
State	California	Total Acres				Total	Per Acre
Region	West	Total Bales Harvested			67,687	Foliar Insecticide Costs	\$1,211,382
Year	2022	Total Bales Lost to Insects			2,488	Seed Treatment Costs	\$140,657
Total Acres (Upland)	17,365	Percent Yield Loss			3.2%	In-Furrow Costs	\$31,257
Yield / Acre (Upland)	1,871	Yield w/o Insects (lb/acre)			1,933	Scouting Costs	\$247,451
Price / lb	\$1.15	Av. # Applications			2.66	Eradication Costs	\$34,730
yield potential (lb/acre)	2,132	Total Bales lost (all factors)			9,429	Bt Cotton	\$711,019
Acres (Pima)	-	Total % yield Loss			12.2%	Total Costs	\$2,376,496
Yield / Acre (Pima)	-	Transgenic Cotton (arthropods) (# acres)			15,800	Yield Loss to Insects	\$1,373,376
% Acres Scouted	95%	Boll Weevil Eradication (# acres)			0	Total Losses + Costs	\$3,749,872
Fee / Scouted Acre	\$15.00	Pink Bollworm Eradication (# acres)			17,365		
No. times scouted/week	1.5	# Scouted Acres			16,497		
% acres Transgenic (Bt) Cotton	91%	Seed Treatments (arthropods) (# acres)			15,629		
Cost/treated acre (Bt) Cotton	\$45.00	In-Furrow Applications (# acres)			1,737		
% acres with seed treatment	90%	Applications by Air (acres)			11,287		
Seed trt. cost/ treated acre	\$9.00	Applications by Ground (acres)			9,551		
% acres with in-furrow	10%	No. acres with no foliar insecticide applications			868		
		% loss to other (chemical injury, weeds, diseases, etc.)					

Table 11. Cotton insect loss estimates for California upland cotton 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	13.1%	2,273	-	\$45.00	0%	0	0.0
Bollgard III	7.9%	1,365	-	\$45.00	0%	0	0.0
WideStrike	48.5%	8,420	-	\$45.00	0%	0	0.0
WideStrike 3	7.0%	1,212	-	\$45.00	0%	0	0.0
TwinLink	4.4%	757	-	\$45.00	0%	0	0.0
TwinLink Plus	10.2%	1,773	-	\$45.00	0%	0	0.0
Total Bt	91.0%	15,800	\$0.00	\$45.00	0.0%	0	0.0
Herbicide Traits Only	4.8%	834	-	-	0%	0	0.0
Conventional	4.2%	729	-	-	0%	0	0.0
Organic	0.0%	0	-	-	0%	0	0.0
Total Upland Cotton	100.0%	17,363	\$0.00	\$45.00	0.0%	0	0.0