

Table 9. Insect loss estimates for Arizona upland cotton 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	7,164	9%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	3,425	5%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	65	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	4,378	6%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	78	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	130	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	1,090	1%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	60,542	80%	16,282	21.6%	1.22	\$33.52	1.31%	0.262	\$8.79	1.05%	3,225	\$1,770,935	\$23.44	51.7%
Cotton Fleahopper	24,480	32%	571	0.8%	0.4	\$20.12	0.18%	0.003	\$0.06	0.06%	175	\$68,634	\$0.91	2.0%
Stink Bugs (other than brown stink bug)	13,206	17%	0	0.0%	0.0	\$0.00	0.14%	0.000	\$0.00	0.02%	74	\$28,474	\$0.38	0.8%
Brown Stink Bug	23,974	32%	0	0.0%	0.0	\$0.00	0.16%	0.000	\$0.00	0.05%	154	\$59,081	\$0.78	1.7%
Clouded Plant Bug	33	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	5,126	7%	0	0.0%	0.0	\$0.00	0.06%	0.000	\$0.00	0.00%	13	\$5,000	\$0.07	0.1%
Spider Mites	12,502	17%	484	0.6%	1.0	\$20.03	0.10%	0.006	\$0.13	0.02%	51	\$21,265	\$0.28	0.6%
Thrips	75,554	100%	948	1.3%	0.8	\$14.99	0.19%	0.010	\$0.16	0.19%	586	\$236,828	\$3.13	6.9%
Aphids	2,737	4%	0	0.0%	0.0	\$0.00	0.02%	0.000	\$0.00	0.00%	2	\$812	\$0.01	0.0%
Grasshoppers	34,629	46%	5,877	7.8%	1.0	\$18.63	0.67%	0.081	\$1.50	0.31%	942	\$413,935	\$5.48	12.1%
Banded Winged Whitefly	12,394	16%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	50,865	67%	9,459	12.5%	1.1	\$37.42	0.34%	0.134	\$5.01	0.23%	693	\$520,787	\$6.89	15.2%
Cockroaches	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Colaspis beetles	12,134	16%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton stainers	14,477	19%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Crickets	15,618	21%	3,601	4.8%	0.5	\$18.09	0.61%	0.023	\$0.42	0.13%	385	\$154,526	\$2.05	4.5%
Darkling Beetles	5,454	7%	1,076	1.4%	1.0	\$20.00	0.06%	0.014	\$0.28	0.00%	13	\$6,391	\$0.08	0.2%
False Chinch Bug	7,115	9%	1,989	2.6%	0.7	\$23.42	0.54%	0.019	\$0.45	0.05%	156	\$63,080	\$0.83	1.8%
Mealybugs	456	1%	621	0.8%	0.8	\$40.88	0.01%	0.007	\$0.27	0.00%	0	\$158	\$0.00	0.0%
Other Armyworms	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Pale-Striped Flea Beetle	31,306	41%	608	0.8%	0.6	\$10.83	0.07%	0.005	\$0.05	0.03%	93	\$37,573	\$0.50	1.1%
Potato leafhopper	28,272	37%	3,751	5.0%	0.3	\$22.37	0.06%	0.017	\$0.38	0.02%	70	\$37,576	\$0.50	1.1%
Thrips (Bean)	699	1%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips (Citrus)	130	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
<b>TOTAL</b>								<b>0.582</b>	<b>\$17.51</b>	<b>2.17%</b>	<b>6,633</b>	<b>\$3,425,056</b>	<b>\$45.33</b>	

Table 9. Insect loss estimates for Arizona upland cotton during 2023, continued.

**SUMMARY DATA**

Data Input		Yield and Management Results			Economic Results	
State	Arizona	Total Acres	75,554		Total	Per Acre
Region	West	Total Bales Harvested	238,242	Foliar Insecticide Costs	\$1,323,166	\$17.51
Year	2023	Total Bales Lost to Insects	6,633	Seed Treatment Costs	\$771,987	\$10.22
Total Acres (Upland)	75,554	In-furrow cost/treated acre	\$5.08	Percent Yield Loss	\$49,799	\$0.66
Yield / Acre (Upland)	1,514	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	\$1,266,587	\$16.76
Price / lb	\$0.80	Cost/acre Boll Weevil Eradication	\$6.22	Av. # Applications	\$939,136	\$12.43
yield potential (lb/acre)	1,945	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	\$3,928,045	\$51.99
Acres (Pima)	30,920	Cost/acre Pink Bollworm Eradication	\$6.22	Total % yield Loss	\$8,278,720	\$109.57
Yield / Acre (Pima)	825	% Insect apps by air	26%	Transgenic Cotton (arthropods) (# acres)	\$2,546,946	\$33.71
% Acres Scouted	100%	No. apps by air	1.5	Boll Weevil Eradication (# acres)	\$10,825,666	\$143.28
Fee / Scouted Acre	\$16.76	Cost/app by air	\$12.02	Pink Bollworm Eradication (# acres)		
No. times scouted/week	1.9	% insect apps by ground	22%	# Scouted Acres		
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	1.3	Seed Treatments (arthropods) (# acres)		
Cost/treated acre (Bt) Cotton	\$51.99	Cost/app by ground	\$15.32	In-Furrow Applications (# acres)		
% acres with seed treatment	42%	% Loss to weather	13.7%	Applications by Air (acres)		
Seed trt. cost/ treated acre	\$24.36	% loss to non-arthropods	0.0%	Applications by Ground (acres)		
% acres with in-furrow	13%	% loss to other (chemical injury, weeds, diseases, etc.)	6.3%	No. acres with no foliar insecticide applications		

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	6.2%	4,686	\$0.00	\$49.80	0%	0	0.0
Bollgard III	62.7%	47,372	\$0.00	\$49.80	0%	0	0.0
Bollgard III/Thryvon	18.2%	13,788	\$0.00	\$49.80	0%	0	0.0
WideStrike	6.3%	4,752	\$0.00	\$49.80	0%	0	0.0
WideStrike 3	3.7%	2,808	\$0.00	\$49.80	0%	0	0.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	2.8%	2,148	\$0.00	\$49.80	0%	0	0.0
<b>Total Bt</b>	<b>100.0%</b>	<b>75,554</b>	<b>\$0.00</b>	<b>\$51.99</b>	<b>0.0%</b>	<b>0</b>	<b>0.0</b>
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
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>75,554</b>	<b>\$0.00</b>	<b>\$51.99</b>	<b>0.0%</b>	<b>0</b>	<b>0.0</b>

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	\$12.00	0%	0	0	0%	0	0