

Table 7. Insect loss estimates for Arizona Bt cotton during 2024.

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	1,384	2.1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	737	1.1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	7	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	7,212	10.9%	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	736	1.1%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	1,766	2.7%	394	0.6%	1.0	\$27.50	0.02%	0.01	\$0.28	0.00%	0	\$486	\$0.01	0.0%
Lygus	65,966	99.7%	49,862	75.4%	1.5	\$31.13	4.00%	1.12	\$34.87	3.99%	11,225	\$6,340,925	\$95.84	78.6%
Cotton Fleahopper	32,165	48.6%	0	0.0%	0.0	\$0.00	0.14%	0.00	\$0.00	0.07%	194	\$69,840	\$1.06	0.9%
Stink Bugs (other than brown stink bug)	19,781	29.9%	319	0.5%	0.1	\$12.00	0.18%	0.00	\$0.00	0.05%	152	\$54,720	\$0.83	0.7%
Brown Stink Bug	21,201	32.0%	1,586	2.4%	1.0	\$24.50	0.24%	0.02	\$0.49	0.08%	217	\$88,509	\$1.34	1.1%
Clouded Plant Bug	2,134	3.2%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Leaf Footed Bugs	4,813	7.3%	662	1.0%	1.0	\$17.50	0.04%	0.01	\$0.18	0.00%	8	\$3,722	\$0.06	0.0%
Spider Mites	10,266	15.5%	2,424	3.7%	1.0	\$17.67	0.00%	0.04	\$0.71	0.00%	0	\$7,254	\$0.11	0.1%
Thrips	66,162	100.0%	7,872	11.9%	0.7	\$19.75	0.08%	0.09	\$1.78	0.08%	211	\$193,563	\$2.93	2.4%
Aphids	6,212	9.4%	904	1.4%	0.8	\$25.00	0.11%	0.01	\$0.25	0.01%	31	\$12,713	\$0.19	0.2%
Grasshoppers	15,687	23.7%	155	0.2%	1.0	\$25.00	0.06%	0.00	\$0.00	0.02%	42	\$15,120	\$0.23	0.2%
Banded Winged Whitefly	8,356	12.6%	353	0.5%	0.5	\$25.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	48,602	73.5%	30,665	46.3%	0.9	\$38.40	0.51%	0.41	\$15.74	0.38%	1,058	\$1,146,015	\$17.32	14.2%
Cockroaches	3,533	5.3%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Colaspis beetles	13,896	21.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton stainers	280	0.4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Crickets	11,768	17.8%	388	0.6%	1.0	\$30.00	0.30%	0.01	\$0.30	0.05%	149	\$57,170	\$0.86	0.7%
Darkling Beetles	6,872	10.4%	1,532	2.3%	1.0	\$20.00	0.00%	0.02	\$0.40	0.00%	0	\$2,749	\$0.04	0.0%
False Chinch Bug	9,561	14.5%	1,876	2.8%	0.7	\$25.00	0.17%	0.02	\$0.50	0.03%	70	\$29,980	\$0.45	0.4%
Mealybugs	13	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other Armyworms	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Pale-Striped Flea Beetle	26,667	40.3%	2,257	3.4%	1.0	\$21.50	0.06%	0.03	\$0.65	0.03%	70	\$42,400	\$0.64	0.5%
Potato leafhopper	24,036	36.3%	120	0.2%	1.6	\$30.00	0.01%	0.00	\$0.00	0.00%	8	\$2,880	\$0.04	0.0%
Thrips (Bean)	294	0.4%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips (Citrus)	336	0.5%	176	0.3%	1.0	\$30.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
White-marked flea hopper	662	1.0%	120	0.2%	0.3	\$30.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								1.79	\$56.13	4.77%	13,435	\$8,068,046	\$121.94	

Table 7. Insect loss estimates for Arizona Bt cotton during 2024, continued.

SUMMARY DATA								
Data Input				Yield and Management Results			Economic Results	
State	Arizona			Total Acres	66,162		Total	Per Acre
Region	West			Total Bales Harvested	207,431	Foliar Insecticide Costs	\$3,713,484	\$56.13
Year	2024			Total Bales Lost to Insects	13,435	Seed Treatment Costs	\$465,110	\$7.03
Total Acres (Upland)	66,162	In-furrow cost/treated acre	\$7.79	Percent Yield Loss	4.8%	In-Furrow Costs	\$46,955	\$0.71
Yield / Acre (Upland)	1,505	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,580	Scouting Costs	\$1,091,673	\$16.50
Price / lb	\$0.75	Cost/acre Boll Weevil Eradication	\$4.01	Av. # Applications	1.79	Eradication Costs	\$530,619	\$8.02
yield potential (lb/acre)	2,042	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	74,075	Bt Cotton	\$2,768,625	\$41.85
Acres (Pima)	-	Cost/acre Pink Bollworm Eradication	\$4.01	Total % yield Loss	26.3%	Total Costs	\$8,616,466	\$130.23
Yield / Acre (Pima)	-	% Insect apps by air	54%	Transgenic Cotton (arthropods) (# acres)	66,162	Yield Loss to Insects	\$4,836,600	\$73.10
% Acres Scouted	100%	No. apps by air	1.8	Boll Weevil Eradication (# acres)	66,162	Total Losses + Costs	\$13,453,066	\$203.34
Fee / Scouted Acre	\$16.50	Cost/app by air	\$12.30	Pink Bollworm Eradication (# acres)	66,162			
No. times scouted/week	2.0	% insect apps by ground	40%	# Scouted Acres	66,162			
% acres Transgenic (Bt) Cotton	100%	No. apps by ground	1.7	Seed Treatments (arthropods) (# acres)	11,253			
Cost/treated acre (Bt) Cotton	\$41.85	Cost/app by ground	\$13.67	In-Furrow Applications (# acres)	6,031			
% acres with seed treatment	17%	% Loss to weather	16.7%	Applications by Air (acres)	35,978			
Seed trt. cost/ treated acre	\$41.33	% loss to non-arthropods	0.1%	Applications by Ground (acres)	26,599			
% acres with in-furrow	9%	% loss to other (chemical injury, weeds, diseases, etc.)	4.7%	No. acres with no foliar insecticide applications	27,453			

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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	6.3%	4,171	-	\$41.85	0%	0	0.0
Bollgard III	83.2%	55,034	-	\$41.85	0%	0	0.0
Bollgard III/Thryvon	-	-	-	-	-	-	-
WideStrike	2.5%	1,656	-	\$41.85	0%	0	0.0
WideStrike 3	5.6%	3,680	-	\$41.85	0%	0	0.0
TwinLink	0.0%	0	-	-	-	-	-
TwinLink Plus	2.4%	1,621	-	\$41.85	0%	0	0.0
Total Bt	100.0%	66,162	\$0.00	\$41.85	0.0%	0	0.0
Herbicide Traits Only	0.0%	0	-	-	-	0	
Conventional	0.0%	0	-	-	-	0	
Organic	0.0%	0	-	-	-	0	
Total Upland Cotton	100.0%	66,162	\$0.00	\$41.85	0.0%	0	0.0
Non Upland Cotton							
Pima	0.0%	0	-	-	-	0	
Other	0.0%	0	-	-	-	0	
Organic	0.0%	0	-	-	-	0	
Total (all Cotton)		66,162	\$0.00		0.0%	0	0.0