

Table 4. Cotton insect loss estimates for Arizona non Bt cotton during 2017.

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	2,890	56%	2,229	43.2%	1.6	\$28.83	1.77%	0.68	\$19.61	0.99%	195	\$122,175	\$23.68	25.3%
Beet Armyworm	1,238	24%	826	16.0%	2.0	\$15.50	0.00%	0.32	\$4.96	0.00%	0	\$6,142	\$1.19	1.3%
Fall Armyworm	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	310	6%	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	722	14%	0	0.0%	0.0	\$0.00	0.37%	0.00	\$0.00	0.05%	10	\$3,360	\$0.65	0.7%
Saltmarsh Caterpillar	2,374	46%	103	2.0%	1.0	\$18.00	0.20%	0.02	\$0.36	0.09%	18	\$6,902	\$1.34	1.4%
Lygus	4,954	96%	3,406	66.0%	1.8	\$25.10	2.00%	1.19	\$29.87	1.92%	377	\$274,631	\$53.22	56.9%
Cotton Fleahopper	2,786	54%	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)	1,197	23%	0	0.0%	0.0	\$0.00	0.74%	0.00	\$0.00	0.17%	34	\$11,424	\$2.21	2.4%
Brown Stink Bug	619	12%	0	0.0%	0.0	\$0.00	0.74%	0.00	\$0.00	0.09%	17	\$5,712	\$1.11	1.2%
Clouded Plant Bug	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	310	6%	155	3.0%	1.0	\$17.00	0.00%	0.03	\$0.51	0.00%	0	\$158	\$0.03	0.0%
Thrips	5,160	100%	413	8.0%	1.0	\$7.00	0.00%	0.08	\$0.56	0.00%	0	\$2,890	\$0.56	0.6%
Aphids	413	8%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshoppers	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	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	2,477	48%	1,290	25.0%	1.3	\$30.00	0.50%	0.33	\$9.90	0.24%	47	\$40,312	\$7.81	8.4%
Darkling Beetles	1,754	34%	93	1.8%	1.0	\$16.00	0.37%	0.02	\$0.32	0.13%	25	\$8,961	\$1.74	1.9%
Pale-Striped Flea Beetle	1,754	34%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Empoasca leafhoppers	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mealybugs	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL								2.67	\$66.09	3.68%	723	\$482,667	\$93.54	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results		
State	Arizona		Total Acres	19,374		Total	\$341,002	
Region	West		Total Bales Harvested	14,710		Per Acre	\$66.09	
Year	2017		Total Bales Lost to Insects	723		Foliar Insecticide Costs	\$6,192	
Total Acres (Upland)	5,160	In-furrow cost/treated acre	\$18.00	Percent Yield Loss	3.7%	Seed Treatment Costs	\$6,192	
Yield / Acre (Upland)	1,368	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,421	In-Furrow Costs	\$31,579	
Price / lb	\$0.70	Cost/acre Boll Weevil Eradication	\$1.47	Av. # Applications	2.67	Scouting Costs	\$59,030	
yield potential (lb/acre)	1,826	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	4,511	Eradication Costs	\$35,965	
Acres (Pima)	14,214	Cost/acre Pink Bollworm Eradication	\$5.50	Total % yield Loss	23.0%	Bt Cotton	\$0	
Yield / Acre (Pima)	1,383	% Insect apps by air	85%	Transgenic Cotton (arthropods) (# acres)	0	Total Costs	\$473,768	
% Acres Scouted	80%	No. apps by air	2.4	Boll Weevil Eradication (# acres)	5,160	Yield Loss to Insects	\$242,928	
Fee / Scouted Acre	\$14.30	Cost/app by air	\$18.50	Pink Bollworm Eradication (# acres)	5,160	Total Losses + Costs	\$716,696	
No. times scouted/week	2.5	% insect apps by ground	75%	# Scouted Acres	4,128			
% acres Transgenic (Bt) Cotton	0%	No. apps by ground	1.625	Seed Treatments (arthropods) (# acres)	1,238			
Cost/treated acre (Bt) Cotton	\$0.00	Cost/app by ground	\$13.38	In-Furrow Applications (# acres)	1,754			
% acres with seed treatment	24%	% Loss to weather	7.7%	Applications by Air (acres)	4,386			
Seed trt. cost/ treated acre	\$5.00	% loss to non-arthropods	7.5%	Applications by Ground (acres)	3,870			
% acres with in-furrow	34%	% loss to other (chemical injury, weeds, diseases, etc.)	4.1%	No. acres with no foliar insecticide applications	1,290			

Table 4. Cotton insect loss estimates for Arizona non Bt cotton during 2017, 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	% of Population Bollworm
Bollgard II	-	-	-	-	-	-	-	-
Bollgard III	-	-	-	-	-	-	-	-
WideStrike	-	-	-	-	-	-	-	-
WideStrike 3	-	-	-	-	-	-	-	-
TwinLink	-	-	-	-	-	-	-	-
TwinLink Plus	-	-	-	-	-	-	-	-
Total Bt	0%	0						
Herbicide Traits Only	89%	4,644	-	-	-	-	-	-
Conventional	11%	516	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total Upland Cotton	100.0%	5,160						
Non Upland Cotton			-	-	-	-	-	-
Pima	100.0%	14,214	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Organic	-	-	-	-	-	-	-	-
Total (all Cotton)		19,374						