Table 6. Cotton insect loss estimates for Arizona 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	17,949	11%	2,229	1.4%	0.1	$0.93	0.06%	0.00	$0.00	0.01%	44	$14,863	$0.09	0.1%
Beet Armyworm	16,814	11%	2,597	1.6%	0.5	$7.28	0.01%	0.01	$0.07	0.00%	4	$2,415	$0.02	0.0%
Fall Armyworm	13,140	8%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Loopers	26,442	17%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Cutworms	1,476	1%	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	0%	0	0.0%	0.0	$0.00	0.01%	0.00	$0.00	0.00%	0	$125	$0.00	0.0%
Saltmarsh Caterpillar	22,327	14%	103	0.1%	0.0	$0.58	0.01%	0.00	$0.00	0.00%	6	$2,053	$0.01	0.0%
Lygus	156,168	98%	118,902	74.7%	1.8	$22.06	3.23%	1.31	$28.89	3.17%	21,652	$11,787,101	$74.06	75.7%
Cotton Fleahopper	96,734	61%	14,026	8.8%	0.8	$10.89	0.17%	0.07	$0.75	0.10%	703	$309,322	$1.94	2.0%
Stink Bugs (other than brown stink bug)	57,543	36%	0	0.0%	0.0	$0.00	0.17%	0.00	$0.00	0.06%	425	$142,750	$0.90	0.9%
Brown Stink Bug	58,418	37%	960	0.6%	0.8	$9.68	0.32%	0.00	$0.05	0.12%	805	$273,123	$1.72	1.8%
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	1,476	1%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Spider Mites	32,449	20%	11,470	7.2%	1.0	$15.59	0.40%	0.07	$1.12	0.08%	552	$221,736	$1.39	1.4%
Thrips	159,155	100%	12,422	7.8%	0.8	$9.75	0.00%	0.07	$0.64	0.00%	33	$113,188	$0.71	0.7%
Aphids	21,636	14%	5,849	3.7%	0.9	$16.03	0.05%	0.03	$0.53	0.01%	51	$28,424	$0.18	0.2%
Grasshoppers	7,152	4%	0	0.0%	0.0	$0.00	0.00%	0.00	$0.00	0.00%	0	$0	$0.00	0.0%
Banded Winged Whitefly	34,118	21%	1,070	0.7%	1.0	$34.35	0.02%	0.01	$0.22	0.00%	34	$19,055	$0.12	0.1%
Silverleaf Whitefly	95,878	60%	62,808	39.5%	1.4	$27.15	0.83%	0.54	$14.56	0.50%	3,407	$2,540,615	$15.96	16.3%
Darkling Beetles	25,081	16%	2,160	1.4%	1.0	$14.55	0.10%	0.01	$0.20	0.02%	112	$42,705	$0.27	0.3%
Pale-Striped Flea Beetle	57,389	36%	7,426	4.7%	0.7	$16.13	0.06%	0.03	$0.53	0.02%	144	$79,178	$0.50	0.5%
Empoasca leafhoppers	4,051	3%	387	0.2%	1.0	$23.45	0.00%	0.00	$0.06	0.00%	0	$223	$0.00	0.0%
Mealybugs	92	0%	92	0.1%	0.5	$19.35	0.00%	0.00	$0.01	0.00%	0	$1	$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								2.16	$47.62	4.10%	27,973	$15,576,876	$97.87	

SUMMARY DATA

Data Input				Yield and Management Results		Economic Results		
State	Arizona			Total Acres	173,369		Total	Per Acre
Region	West			Total Bales Harvested	538,076	Foliar Insecticide Costs	$7,578,693	$47.62
Year	2017			Total Bales Lost to Insects	27,973	Seed Treatment Costs	$148,036	$0.93
Total Acres (Upland)	159,155	In-furrow cost/treated acre	$15.74	Percent Yield Loss	4.1%	In-Furrow Costs	$123,375	$0.78
Yield / Acre (Upland)	1,623	% acres in Boll Weevil Eradication	100%	Yield w/o Insects (lb/acre)	1,692	Scouting Costs	$1,868,680	$11.74
Price / lb	$0.70	Cost/acre Boll Weevil Eradication	$1.47	Av. # Applications	2.2	Eradication Costs	$1,109,310	$6.97
yield potential (lb/acre)	2,057	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	145,506	Bt Cotton	$5,790,030	$36.38
Acres (Pima)	14,214	Cost/acre Pink Bollworm Eradication	$5.50	Total % yield Loss	21.1%	Total Costs	$16,618,123	$104.41
Yield / Acre (Pima)	1,383	% Insect apps by air	60%	Transgenic Cotton (arthropods) (# acres)	150,390	Yield Loss to Insects	$9,398,959	$59.06
% Acres Scouted	98%	No. apps by air	1.5	Boll Weevil Eradication (# acres)	159,155	Total Losses + Costs	$26,017,082	$163.47
Fee / Scouted Acre	$11.93	Cost/app by air	$11.19	Pink Bollworm Eradication (# acres)	159,155			
No. times scouted/week	2.0	% insect apps by ground	57%	# Scouted Acres	156,583			
% acres Transgenic (Bt) Cotton	94%	No. apps by ground	2.3	Seed Treatments (arthropods) (# acres)	20,217			
Cost/treated acre (Bt) Cotton	$38.50	Cost/app by ground	$10.13	In-Furrow Applications (# acres)	7,837			
% acres with seed treatment	13%	% Loss to weather	9.6%	Applications by Air (acres)	95,648			
Seed trt. cost/ treated acre	$7.32	% loss to non-arthropods	1.6%	Applications by Ground (acres)	90,574			
% acres with in-furrow	5%	% loss to other (chemical injury, weeds, diseases, etc.)	5.8%	No. acres with no foliar insecticide applications	22,387			

Table 6. Cotton insect loss estimates for Arizona 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	74.9%	119,246	-	$38.50	-	-	-	-
Bollgard III	5.0%	7,988	-	$38.50	-	-	-	-
WideStrike	4.6%	7,358	-	$38.50	-	-	-	-
WideStrike 3	3.2%	5,057	-	$38.50	-	-	-	-
TwinLink	1.9%	2,956	-	$38.50	-	-	-	-
TwinLink Plus	4.9%	7,786	-	$38.50	-	-	-	-
Total Bt	94.5%	150,390	-	$38.50	-	-	-	-
Herbicide Traits Only	4.9%	7,801	-	-	-	-	-	-
Conventional	0.6%	964	-	-	-	-	-	-
Organic	0.0%	0	-	-	-	-	-	-
Total Upland Cotton	100.0%	159,155	-	-	-	-	-	-
Non Upland Cotton			-	-	-	-	-	-
Pima	100.0%	14,214	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-	-
Organic	0%	0	-	-	-	-	-	-
Total (all Cotton)		173,369	-	-	-	-	-	-