

Table 11. Cotton insect loss estimates for California-Upland during 2018.

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	1,920	4.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Beet Armyworm	3,600	7.5%	960	2.0%	1.0	\$11.00	0.50%	0.02	\$0.22	0.04%	82	\$36,216	\$0.75	0.7%
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	4,801	10.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	480	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cotton Leaf Perforator	1,440	3.0%	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	38,404	80.0%	28,803	60.0%	1.5	\$21.00	4.00%	0.90	\$18.90	3.20%	6,881	\$3,698,428	\$77.04	73.9%
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)	3,840	8.0%	0	0.0%	0.0	\$0.00	1.00%	0.00	\$0.00	0.08%	172	\$74,304	\$1.55	1.5%
Brown Stink Bug	2,400	5.0%	0	0.0%	0.0	\$0.00	1.50%	0.00	\$0.00	0.08%	161	\$69,552	\$1.45	1.4%
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	19,202	40.0%	9,601	20.0%	1.2	\$17.00	1.00%	0.24	\$4.08	0.40%	860	\$449,864	\$9.37	9.0%
Thrips	43,205	90.0%	4,801	10.0%	1.0	\$8.00	0.00%	0.10	\$0.80	0.00%	0	\$34,564	\$0.72	0.7%
Aphids	7,201	15.0%	4,801	10.0%	1.2	\$19.00	0.75%	0.12	\$2.28	0.11%	243	\$121,394	\$2.53	2.4%
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	24,003	50.0%	12,001	25.0%	2.0	\$32.00	0.30%	0.50	\$16.00	0.15%	323	\$523,576	\$10.91	10.5%
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								1.88	\$42.28	4.06%	8,722	\$5,007,898	\$104.32	

SUMMARY DATA

Data Input			Yield and Management Results			Economic Results	
State	California		Total Acres	48,005		Total	Per Acre
Region	West		Total Bales Harvested	182,019		Foliar Insecticide Costs	\$2,029,651
Year	2018		Total Bales Lost to Insects	8,722		Seed Treatment Costs	\$285,630
Total Acres (Upland)	48,005	In-furrow cost/treated acre	\$21.00	Percent Yield Loss	4.1%	In-Furrow Costs	\$50,405
Yield / Acre (Upland)	1,820	% acres in Boll Weevil Eradication	0%	Yield w/o Insects (lb/acre)	1,897	Scouting Costs	\$570,299
Price / lb	\$0.90	Cost/acre Boll Weevil Eradication	\$0.00	Av. # Applications	1.9	Eradication Costs	\$331,235
yield potential (lb/acre)	2,150	% acres in Pink Bollworm Eradication	100%	Total Bales lost (all factors)	22,698	Bt Cotton	\$1,178,235
Acres (Pima)	0	Cost/acre Pink Bollworm Eradication	\$6.90	Total % yield Loss	10.6%	Total Costs	\$4,445,455
Yield / Acre (Pima)	0	% Insect apps by air	50%	Transgenic Cotton (arthropods) (# acres)	36,820	Yield Loss to Insects	\$3,767,904
% Acres Scouted	99%	No. apps by air	1.2	Boll Weevil Eradication (# acres)	0	Total Losses + Costs	\$8,213,359
Fee / Scouted Acre	\$12.00	Cost/app by air	\$16.00	Pink Bollworm Eradication (# acres)	48,005		
No. times scouted/week	1.5	% insect apps by ground	50%	# Scouted Acres	47,525		
% acres Transgenic (Bt) Cotton	77%	No. apps by ground	2	Seed Treatments (arthropods) (# acres)	40,804		
Cost/treated acre (Bt) Cotton	\$32.00	Cost/app by ground	\$13.00	In-Furrow Applications (# acres)	2,400		
% acres with seed treatment	85%	% Loss to weather	2.5%	Applications by Air (acres)	24,003		
Seed trt. cost/ treated acre	\$7.00	% loss to non-arthropods	0.0%	Applications by Ground (acres)	24,003		
% acres with in-furrow	5%	% loss to other (chemical injury, weeds, diseases, etc.)	4.0%	No. acres with no foliar insecticide applications	0		

Table 11. Cotton insect loss estimates for California-Upland during 2018, 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	20.8%	9,985	-	-	-	-	-
Bollgard III	1.0%	480	-	-	-	-	-
WideStrike	44.9%	21,554	-	-	-	-	-
WideStrike 3	0.0%	0	-	-	-	-	-
TwinLink	7.8%	3,744	-	-	-	-	-
TwinLink Plus	2.2%	1,056	-	-	-	-	-
Total Bt	76.7%	36,819	-	-	-	-	-
Herbicide Traits Only	20.9%	10,033	-	-	-	-	-
Conventional	2.4%	1,152	-	-	-	-	-
Organic	-	0	-	-	-	-	-
Total Upland Cotton	100.0%	48,004	-	-	-	-	-
Non Upland Cotton							
Pima	-	-	-	-	-	-	-
Other	0%	0	-	-	-	-	-
Organic	0.2%	96	-	-	-	-	-
Total (all Cotton)		48,100					