

Table 26. Cotton insect loss estimates for Texas during 2020.

| 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 | 1,339,948 | 39% | 189,018 | 5% | 1.0 | \$19.72 | 1.40% | 0.05 | \$1.07 | 0.54% | 79,534 | \$27,395,543 | \$7.87 | 14.0% |
| Beet Armyworm | 40,000 | 1% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Fall Armyworm | 84,793 | 2% | 800 | 0% | 0.1 | \$1.95 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$4 | \$0.00 | 0.0% |
| Loopers | 40,000 | 1% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Cutworms | 11,286 | 0% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Cotton Leaf Perforator | 0 | 0% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Saltmarsh Caterpillar | 10,000 | 0% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Lygus | 1,263,708 | 36% | 112,206 | 3% | 0.9 | \$13.84 | 0.62% | 0.03 | \$0.39 | 0.22% | 33,210 | \$11,335,974 | \$3.26 | 5.8% |
| Cotton Fleahopper | 2,155,948 | 62% | 1,147,356 | 33% | 1.0 | \$11.52 | 2.39% | 0.34 | \$3.93 | 1.48% | 218,181 | \$79,687,980 | \$22.90 | 40.8% |
| Stink Bugs (other than brown stink bug) | 1,110,932 | 32% | 190,088 | 5% | 0.9 | \$10.76 | 1.37% | 0.05 | \$0.52 | 0.44% | 64,371 | \$21,585,095 | \$6.20 | 11.1% |
| Brown Stink Bug | 246,876 | 7% | 149,326 | 4% | 0.2 | \$2.03 | 2.95% | 0.01 | \$0.02 | 0.21% | 30,906 | \$10,091,686 | \$2.90 | 5.2% |
| Clouded Plant Bug | 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 | 228,157 | 7% | 800 | 0% | 0.1 | \$1.15 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$7 | \$0.00 | 0.0% |
| Spider Mites | 272,112 | 8% | 28,949 | 1% | 0.4 | \$3.87 | 0.02% | 0.00 | \$0.01 | 0.00% | 244 | \$83,269 | \$0.02 | 0.0% |
| Thrips | 3,479,948 | 100% | 478,901 | 14% | 1.0 | \$9.86 | 0.48% | 0.14 | \$1.36 | 0.48% | 70,466 | \$27,722,734 | \$7.97 | 14.2% |
| Aphids | 1,059,493 | 30% | 499,843 | 14% | 1.0 | \$13.54 | 0.67% | 0.14 | \$1.95 | 0.20% | 30,134 | \$11,896,802 | \$3.42 | 6.1% |
| Grasshoppers | 682,876 | 20% | 30,000 | 1% | 0.7 | \$10.34 | 0.01% | 0.01 | \$0.06 | 0.00% | 170 | \$97,380 | \$0.03 | 0.0% |
| Banded Winged Whitefly | 40,000 | 1% | 0 | 0% | 0.0 | \$0.00 | 0.00% | 0.00 | \$0.00 | 0.00% | 0 | \$0 | \$0.00 | 0.0% |
| Silverleaf Whitefly | 214,632 | 6% | 125,375 | 4% | 0.6 | \$4.61 | 0.29% | 0.02 | \$0.10 | 0.02% | 2,681 | \$895,704 | \$0.26 | 0.5% |
| Other Insect Pests | 252,099 | 7% | 62,609 | 2% | 0.2 | \$0.92 | 1.07% | 0.00 | \$0.00 | 0.08% | 11,415 | \$3,726,480 | \$1.07 | 1.9% |
| Boll Weevil | 163,313 | 5% | 220,652 | 6% | 1.0 | \$0.00 | 0.26% | 0.06 | \$0.00 | 0.01% | 1,801 | \$587,869 | \$0.17 | 0.3% |
| TOTAL | | | | | | | | 0.86 | \$9.40 | 3.68% | 543,113 | \$195,106,527 | \$56.07 | |

SUMMARY DATA

| Data Input | | Yield and Management Results | | | Economic Results | | |
|--------------------------------|-----------|--|---------|---|--------------------------|-----------------------|---------------|
| | | | | | Total | Per Acre | |
| State | Texas | Total Acres | | 3,479,948 | | | |
| Region | Central | Total Bales Harvested | | 5,550,644 | Foliar Insecticide Costs | \$32,726,213 | |
| Year | 2020 | Total Bales Lost to Insects | | 543,113 | Seed Treatment Costs | \$29,516,041 | |
| Total Acres (Upland) | 3,479,948 | In-furrow cost/treated acre | \$18.09 | Percent Yield Loss | 3.7% | In-Furrow Costs | \$1,280,980 |
| Yield / Acre (Upland) | 766 | % acres in Boll Weevil Eradication | 100% | Yield w/o Insects (lb/acre) | 795 | Scouting Costs | \$16,911,627 |
| Price / lb | \$0.68 | Cost/acre Boll Weevil Eradication | \$2.31 | Av. # Applications | 0.9 | Eradication Costs | \$8,027,525 |
| yield potential (lb/acre) | 2,036 | % acres in Pink Bollworm Eradication | 0% | Total Bales lost (all factors) | 9,301,528 | Bt Cotton | \$56,323,923 |
| Acres (Pima) | 52,290 | Cost/acre Pink Bollworm Eradication | \$0.00 | Total % yield Loss | 62.4% | Total Costs | \$144,786,308 |
| Yield / Acre (Pima) | 933 | % Insect apps by air | 33% | Transgenic Cotton (arthropods) (# acres) | 2,980,748 | Yield Loss to Insects | \$177,272,172 |
| % Acres Scouted | 55% | No. apps by air | 0.7 | Boll Weevil Eradication (# acres) | 3,479,948 | Total Losses + Costs | \$322,058,480 |
| Fee / Scouted Acre | \$8.77 | Cost/app by air | \$6.31 | Pink Bollworm Eradication (# acres) | 0 | | |
| No. times scouted/week | 1.2 | % insect apps by ground | 75% | # Scouted Acres | 1,927,959 | | |
| % acres Transgenic (Bt) Cotton | 86% | No. apps by ground | 1.7 | Seed Treatments (arthropods) (# acres) | 3,063,948 | | |
| Cost/treated acre (Bt) Cotton | \$18.90 | Cost/app by ground | \$5.23 | In-Furrow Applications (# acres) | 70,803 | | |
| % acres with seed treatment | 88% | % Loss to weather | 52.7% | Applications by Air (acres) | 1,160,011 | | |
| Seed trt. cost/ treated acre | \$9.63 | % loss to non-arthropods | 2.1% | Applications by Ground (acres) | 2,607,783 | | |
| % acres with in-furrow | 2% | % loss to other (chemical injury, weeds, diseases, etc.) | 3.9% | No. acres with no foliar insecticide applications | 2,000,000 | | |

Table 26. Cotton insect loss estimates for Texas during 2020, 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 | 28.95% | 1,007,396 | \$82.08 | \$16.00 | 8.1% | 81,695 | 0.4 |
| Bollgard III | 27.16% | 945,189 | \$89.85 | \$22.77 | 0.0% | 0 | 0.0 |
| WideStrike | 3.05% | 106,107 | \$68.97 | \$0.92 | 31.6% | 33,538 | 0.4 |
| WideStrike 3 | 19.67% | 684,518 | \$89.85 | \$20.00 | 0.4% | 2,800 | 0.3 |
| TwinLink | 3.41% | 118,584 | \$77.31 | \$18.44 | 8.2% | 9,768 | 0.4 |
| TwinLink Plus | 3.42% | 118,954 | \$81.20 | \$22.77 | 0.0% | 0 | 0.0 |
| Total Bt | 85.65% | 2,980,748 | \$85.64 | \$18.90 | 4.3% | 127,802 | 0.018 |
| Herbicide Traits Only | 10.09% | 351,200 | \$44.25 | - | 1.8% | 6,459 | 0.7 |
| Conventional | 3.56% | 124,000 | \$13.22 | - | 1.8% | 2,280 | 0.7 |
| Organic | 0.52% | 18,000 | \$13.22 | - | 0.1% | 21 | 0.0 |
| Total Upland Cotton | 99.83% | 3,473,948 | \$78.49 | \$18.90 | 3.9% | 136,562 | 0.017 |
| Non Upland Cotton | | | | | | | |
| Pima | 0.7% | 23,800 | \$40.81 | - | 9% | 2,230 | 0.7 |
| Other | 0.0% | 0 | \$0.00 | - | 0% | 0 | 0.0 |
| Organic | 0.0% | 0 | \$0.00 | - | 0% | 0 | 0.0 |
| Total (all Cotton) | | 3,497,748 | \$78.24 | - | 4.0% | 138,791 | 0.018 |