

Table 26. Cotton insect loss estimates for Texas during 2019.

| 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                        | 2,739,922      | 39%              | 5%              | 331,805       | 1.0                      | \$19.49               | 0.60%                 | 0.05                   | \$0.92    | 0.23%               | 34,826            | \$13,876,185  | \$1.96           | 7.6%              |
| Beet Armyworm                           | 444,801        | 6%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0           | \$0.00           | 0.0%              |
| Fall Armyworm                           | 379,570        | 5%               | 0%              | 0             | 0.1                      | \$2.38                | 0.01%                 | 0.00                   | \$0.00    | 0.00%               | 93                | \$30,326      | \$0.00           | 0.0%              |
| Loopers                                 | 429,371        | 6%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0           | \$0.00           | 0.0%              |
| Cutworms                                | 30,860         | 0%               | 0%              | 0             | 0.0                      | \$0.00                | 0.01%                 | 0.00                   | \$0.00    | 0.00%               | 7                 | \$2,318       | \$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                   | 215            | 0%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0           | \$0.00           | 0.0%              |
| Lygus                                   | 2,069,627      | 29%              | 5%              | 371,225       | 0.7                      | \$12.08               | 0.54%                 | 0.04                   | \$0.46    | 0.16%               | 23,736            | \$8,699,155   | \$1.23           | 4.8%              |
| Cotton Fleahopper                       | 3,439,199      | 49%              | 20%             | 1,393,955     | 1.1                      | \$13.23               | 2.96%                 | 0.23                   | \$2.99    | 1.44%               | 214,215           | \$80,192,899  | \$11.36          | 44.2%             |
| Stink Bugs (other than brown stink bug) | 2,134,804      | 30%              | 3%              | 245,568       | 1.0                      | \$11.22               | 0.59%                 | 0.03                   | \$0.39    | 0.18%               | 26,541            | \$9,495,732   | \$1.34           | 5.2%              |
| Brown Stink Bug                         | 732,846        | 10%              | 6%              | 447,335       | 0.2                      | \$1.91                | 0.81%                 | 0.01                   | \$0.02    | 0.08%               | 12,430            | \$4,072,606   | \$0.58           | 2.2%              |
| 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                        | 659,462        | 9%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0           | \$0.00           | 0.0%              |
| Spider Mites                            | 929,056        | 13%              | 3%              | 231,963       | 0.4                      | \$5.68                | 1.44%                 | 0.01                   | \$0.07    | 0.19%               | 28,120            | \$9,246,258   | \$1.31           | 5.1%              |
| Thrips                                  | 6,444,795      | 91%              | 16%             | 1,108,491     | 1.0                      | \$8.69                | 0.42%                 | 0.16                   | \$1.36    | 0.38%               | 56,819            | \$27,338,057  | \$3.87           | 15.1%             |
| Aphids                                  | 2,899,144      | 41%              | 13%             | 908,412       | 1.0                      | \$16.56               | 0.34%                 | 0.13                   | \$2.19    | 0.14%               | 20,778            | \$13,135,917  | \$1.86           | 7.2%              |
| Grasshoppers                            | 1,726,879      | 24%              | 1%              | 81,444        | 0.4                      | \$15.87               | 1.10%                 | 0.01                   | \$0.08    | 0.27%               | 39,957            | \$13,180,159  | \$1.87           | 7.3%              |
| Banded Winged Whitefly                  | 85,874         | 1%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0           | \$0.00           | 0.0%              |
| Silverleaf Whitefly                     | 493,204        | 7%               | 5%              | 329,060       | 1.0                      | \$4.88                | 0.55%                 | 0.05                   | \$0.23    | 0.04%               | 5,747             | \$1,986,719   | \$0.28           | 1.1%              |
| Verde Plant Bug                         | 180,559        | 3%               | 3%              | 180,559       | 0.1                      | \$0.93                | 0.12%                 | 0.00                   | \$0.00    | 0.00%               | 442               | \$144,759     | \$0.02           | 0.1%              |
| Wireworms                               | 107,343        | 2%               | 0%              | 0             | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 8                 | \$2,692       | \$0.00           | 0.0%              |
| Boll Weevil                             | 820,721        | 12%              | 9%              | 656,576       | 0.1                      | \$0.00                | 0.03%                 | 0.01                   | \$0.00    | 0.00%               | 603               | \$196,718     | \$0.03           | 0.1%              |
| <b>TOTAL</b>                            |                |                  |                 |               |                          |                       |                       | 0.72                   | \$8.71    | 3.12%               | 464,321           | \$181,600,500 | \$25.72          |                   |

**SUMMARY DATA**

| Data Input                     |           | Yield and Management Results                      |            |                          | Economic Results |         |          |
|--------------------------------|-----------|---|------------|--------------------------|------------------|---------|----------|
| State                          | Texas     | Total Acres                                       | 7,080,029  | Total Bales Harvested    | 7,760,259        | Total   | Per Acre |
| Region                         | Central   | Total Bales Lost to Insects                       | 464,321    | Foliar Insecticide Costs | \$61,513,750     | \$8.71  |          |
| Year                           | 2019      | Percent Yield Loss                                | 3.1%       | Seed Treatment Costs     | \$64,734,068     | \$9.17  |          |
| Total Acres (Upland)           | 7,062,000 | Yield w/o Insects (lb/acre)                       | 544        | In-Furrow Costs          | \$2,272,172      | \$0.32  |          |
| Yield / Acre (Upland)          | 527       | Av. # Applications                                | 0.7        | Scouting Costs           | \$30,079,288     | \$4.26  |          |
| Price / lb                     | \$0.68    | Total Bales lost (all factors)                    | 27,394,508 | Eradication Costs        | \$13,231,120     | \$1.87  |          |
| yield potential (lb/acre)      | 1,011     | Total % yield Loss                                | 91.7%      | Bt Cotton                | \$125,619,089    | \$17.79 |          |
| Acres (Pima)                   | 18,029    | Transgenic Cotton (arthropods) (# acres)          | 6,286,720  | Total Costs              | \$297,449,487    | \$42.12 |          |
| Yield / Acre (Pima)            | 1,034     | Boll Weevil Eradication (# acres)                 | 7,062,000  | Yield Loss to Insects    | \$151,554,524    | \$21.46 |          |
| % Acres Scouted                | 46%       | Pink Bollworm Eradication (# acres)               | 0          | Total Losses + Costs     | \$449,004,011    | \$63.58 |          |
| Fee / Scouted Acre             | \$9.28    | # Scouted Acres                                   | 3,240,342  |                          |                  |         |          |
| No. times scouted/week         | 1.1       | Seed Treatments (arthropods) (# acres)            | 6,473,407  |                          |                  |         |          |
| % acres Transgenic (Bt) Cotton | 89%       | In-Furrow Applications (# acres)                  | 161,524    |                          |                  |         |          |
| Cost/treated acre (Bt) Cotton  | \$19.98   | Applications by Air (acres)                       | 1,435,043  |                          |                  |         |          |
| % acres with seed treatment    | 92%       | Applications by Ground (acres)                    | 1,886,101  |                          |                  |         |          |
| Seed trt. cost/ treated acre   | \$10.00   | No. acres with no foliar insecticide applications | 4,884,063  |                          |                  |         |          |
| % acres with in-furrow         | 2%        |   |            |                          |                  |         |          |

Table 26. Cotton insect loss estimates for Texas during 2019, 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                | 50.78%         | 3,586,124        | \$81.00         | \$19.00        | 5.4%                       | 194,791                    | 0.4               |
| Bollgard III               | 8.97%          | 633,787          | \$93.00         | \$26.00        | 0.1%                       | 363                        | 0.1               |
| WideStrike                 | 4.07%          | 287,194          | \$67.00         | \$5.00         | 18.3%                      | 52,633                     | 0.4               |
| WideStrike 3               | 13.86%         | 979,117          | \$87.00         | \$24.00        | 0.6%                       | 6,250                      | 0.2               |
| TwinLink                   | 9.60%          | 677,637          | \$76.00         | \$19.00        | 5.4%                       | 36,808                     | 0.4               |
| TwinLink Plus              | 1.74%          | 122,861          | \$86.00         | \$26.00        | 0.0%                       | 0                          | 0.0               |
| <b>Total Bt</b>            | <b>89.02%</b>  | <b>6,286,720</b> | <b>\$82.06</b>  | <b>\$19.98</b> | <b>4.6%</b>                | <b>290,845</b>             | <b>0.3</b>        |
| Herbicide Traits Only      | 7.78%          | 549,459          | \$53.11         | -              | 2.3%                       | 12,423                     | 0.8               |
| Conventional               | 2.65%          | 187,178          | \$19.45         | -              | 2.3%                       | 4,232                      | 0.8               |
| Organic                    | 0.61%          | 42,937           | \$13.98         | -              | 0.4%                       | 188                        | 0.0               |
| <b>Total Upland Cotton</b> | <b>100.06%</b> | <b>7,066,294</b> | <b>\$77.74</b>  | <b>\$19.98</b> | <b>4.4%</b>                | <b>307,688</b>             | <b>0.4</b>        |
| <b>Non Upland Cotton</b>   |                |                  |                 |                |                            |                            |                   |
| Pima                       | 0.2%           | 12,322           | \$49.59         | -              | 1%                         | 75                         | 0.6               |
| Other                      | 0.0%           | 0                | \$0.00          | -              | 0%                         | 0                          | 0.0               |
| Organic                    | 0.3%           | 21,469           | \$13.98         | -              | 1%                         | 261                        | 0.6               |
| <b>Total (all Cotton)</b>  |                | <b>7,100,085</b> | <b>\$77.50</b>  | <b>-</b>       | <b>4.3%</b>                | <b>308,024</b>             | <b>0.4</b>        |