

Table 3. Cotton insect loss estimates for Alabama during 2023.

| 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                        | 245,118        | 65%              | 5,993         | 1.6%            | 1.0                      | \$11.92               | 0.00%                 | 0.02                   | \$0.19    | 0.00%               | 22                | \$55,021     | \$0.15           | 0.2%              |
| Beet Armyworm                           | 0              | 0%               | 0             | 0.0%            | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0          | \$0.00           | 0.0%              |
| 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                                 | 0              | 0%               | 0             | 0.0%            | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0          | \$0.00           | 0.0%              |
| Cutworms                                | 37,710         | 10%              | 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                      | \$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                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0          | \$0.00           | 0.0%              |
| Lygus                                   | 377,104        | 100%             | 358,249       | 95.0%           | 2.7                      | \$11.10               | 0.75%                 | 2.53                   | \$28.07   | 0.75%               | 7,513             | \$13,577,388 | \$36.00          | 53.4%             |
| Cotton Fleahopper                       | 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) | 377,104        | 100%             | 327,525       | 86.9%           | 1.1                      | \$8.50                | 0.67%                 | 0.98                   | \$8.32    | 0.67%               | 6,700             | \$5,805,243  | \$15.39          | 22.8%             |
| Brown Stink Bug                         | 339,394        | 90%              | 188,552       | 50.0%           | 0.5                      | \$10.00               | 0.23%                 | 0.25                   | \$2.50    | 0.21%               | 2,108             | \$1,688,134  | \$4.48           | 6.6%              |
| Clouded Plant Bug                       | 100,140        | 27%              | 24,972        | 6.6%            | 1.0                      | \$5.30                | 0.00%                 | 0.07                   | \$0.35    | 0.00%               | 0                 | \$35,130     | \$0.09           | 0.1%              |
| Leaf Footed Bugs                        | 137,598        | 36%              | 12,486        | 3.3%            | 1.0                      | \$6.62                | 0.00%                 | 0.03                   | \$0.22    | 0.00%               | 0                 | \$30,169     | \$0.08           | 0.1%              |
| Spider Mites                            | 256,846        | 68%              | 93,771        | 24.9%           | 1.0                      | \$10.32               | 0.08%                 | 0.25                   | \$2.57    | 0.06%               | 564               | \$884,022    | \$2.34           | 3.5%              |
| Thrips                                  | 377,104        | 100%             | 207,660       | 55.1%           | 1.0                      | \$7.25                | 0.42%                 | 0.55                   | \$3.99    | 0.42%               | 4,163             | \$3,163,876  | \$8.39           | 12.4%             |
| Aphids                                  | 113,131        | 30%              | 2,497         | 0.7%            | 1.0                      | \$4.64                | 0.00%                 | 0.01                   | \$0.03    | 0.00%               | 0                 | \$3,472      | \$0.01           | 0.0%              |
| Grasshoppers                            | 162,570        | 43%              | 74,916        | 19.9%           | 1.0                      | \$5.30                | 0.00%                 | 0.20                   | \$1.05    | 0.00%               | 0                 | \$171,095    | \$0.45           | 0.7%              |
| Banded Winged Whitefly                  | 4,994          | 1%               | 0             | 0.0%            | 0.0                      | \$0.00                | 0.00%                 | 0.00                   | \$0.00    | 0.00%               | 0                 | \$0          | \$0.00           | 0.0%              |
| Silverleaf Whitefly                     | 12,486         | 3%               | 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%              |
| <b>TOTAL</b>                            |                |                  |               |                 |                          |                       |                       | 4.88                   | \$47.29   | 2.10%               | 21,068            | \$25,413,552 | \$67.39          |                   |

**SUMMARY DATA**

|                                | Data Input |  | Yield and Management Results |   |                          |                       | Economic Results |          |
|--------------------------------|------------|--|------------------------------|---|--------------------------|-----------------------|------------------|----------|
|                                | Alabama    | Region   | Total Acres                  | Total Bales Harvested                             | Foliar Insecticide Costs | Total                 | Per Acre         |          |
| State                          | Alabama    | Southeast  | 377,104                      | 716,451   | \$17,831,519             | \$47.29               |                  |          |
| Region                         |            |  |                              |   |                          |                       |                  |          |
| Year                           | 2023       |  |                              | 21,068  | \$4,576,706              | \$12.14               |                  |          |
| Total Acres (Upland)           | 377,104    | In-furrow cost/treated acre                              | \$15.00                      | Percent Yield Loss                                | 2.1%                     | In-Furrow Costs       | \$752,946        | \$2.00   |
| Yield / Acre (Upland)          | 912        | % acres in Boll Weevil Eradication                       | 100%                         | Yield w/o Insects (lb/acre)                       | 932                      | Scouting Costs        | \$2,830,707      | \$7.51   |
| Price / lb                     | \$0.83     | Cost/acre Boll Weevil Eradication                        | \$1.50                       | Av. # Applications                                | 4.9                      | Eradication Costs     | \$565,656        | \$1.50   |
| yield potential (lb/acre)      | 1,275      | % acres in Pink Bollworm Eradication                     | 0%                           | Total Bales lost (all factors)                    | 277,352                  | Bt Cotton             | \$13,380,559     | \$35.48  |
| Acres (Pima)                   | 0          | Cost/acre Pink Bollworm Eradication                      | \$0.00                       | Total % yield Loss                                | 28.5%                    | Total Costs           | \$39,938,094     | \$105.91 |
| Yield / Acre (Pima)            | 0          | % Insect apps by air                                     | 15%                          | Transgenic Cotton (arthropods) (# acres)          | 377,104                  | Yield Loss to Insects | \$8,393,606      | \$22.26  |
| % Acres Scouted                | 88%        | No. apps by air  | 0.0                          | Boll Weevil Eradication (# acres)                 | 377,104                  | Total Losses + Costs  | \$48,331,699     | \$128.17 |
| Fee / Scouted Acre             | \$8.50     | Cost/app by air  | \$7.50                       | Pink Bollworm Eradication (# acres)               | 0                        |                       |                  |          |
| No. times scouted/week         | 1.0        | % insect apps by ground                                  | 56%                          | # Scouted Acres                                   | 333,024                  |                       |                  |          |
| % acres Transgenic (Bt) Cotton | 100%       | No. apps by ground                                       | 0.0                          | Seed Treatments (arthropods) (# acres)            | 326,908                  |                       |                  |          |
| Cost/treated acre (Bt) Cotton  | \$35.48    | Cost/app by ground                                       | \$5.50                       | In-Furrow Applications (# acres)                  | 50,196                   |                       |                  |          |
| % acres with seed treatment    | 87%        | % Loss to weather  | 22.9%                        | Applications by Air (acres)                       | 56,566                   |                       |                  |          |
| Seed trt. cost/ treated acre   | \$14.00    | % loss to non-arthropods                                 | 1.0%                         | Applications by Ground (acres)                    | 212,262                  |                       |                  |          |
| % acres with in-furrow         | 13%        | % loss to other (chemical injury, weeds, diseases, etc.) | 2.5%                         | No. acres with no foliar insecticide applications | 0                        |                       |                  |          |

Table 3. Cotton insect loss estimates for Alabama during 2023, 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                | 16.6%         | 62,682         | \$60.00         | \$35.00        | 12%                        | 7,522                      | 1.0               |
| Bollgard III               | 63.7%         | 240,275        | \$63.00         | \$35.00        | 0%                         | 0                          | 0.0               |
| Bollgard III/Thryvon       | 10.3%         | 38,984         | \$83.00         | \$35.00        | 0%                         | 0                          | 0.0               |
| WideStrike                 | 0.0%          | 0              | \$45.00         | \$0.00         | 0%                         | 0                          | 0.0               |
| WideStrike 3               | 9.3%          | 35,163         | \$48.00         | \$18.00        | 0%                         | 0                          | 0.0               |
| TwinLink                   | 0.0%          | 0              | \$0.00          | \$0.00         | 0%                         | 0                          | 0.0               |
| TwinLink Plus              | 0.0%          | 0              | \$60.00         | \$38.00        | 0%                         | 0                          | 0.0               |
| <b>Total Bt</b>            | <b>100.0%</b> | <b>377,104</b> | <b>\$63.17</b>  | <b>\$35.48</b> | <b>2.0%</b>                | <b>7,522</b>               | <b>0.0</b>        |
| Herbicide Traits Only      | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| Conventional               | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| Organic                    | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| <b>Total Upland Cotton</b> | <b>100.0%</b> | <b>377,104</b> | <b>\$63.17</b>  | <b>\$35.48</b> | <b>2.0%</b>                | <b>7,522</b>               | <b>0.0</b>        |
| Non Upland Cotton          |               |                |                 |                |                            |                            |                   |
| Pima                       | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| Other                      | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| Organic                    | 0.0%          | 0              | \$0.00          |                | 0%                         | 0                          | 0.0               |
| <b>Total (all Cotton)</b>  |               | <b>377,104</b> | <b>\$63.17</b>  |                | <b>2.0%</b>                | <b>7,522</b>               | <b>0.0</b>        |

  

| Upland Cotton        | Thryvon Bt cost/acre | % acres treated for Thrips | # acres treated for Thrips | # apps for Thrips | % acres treated for Lygus | # acres treated for Lygus | # apps for Lygus |
|----------------------|----------------------|----------------------------|----------------------------|-------------------|---------------------------|---------------------------|------------------|
| Bollgard III/Thryvon | \$20.00              | 0%                         | 0                          | 0.0               | 100%                      | 38,984                    | 2.1              |