# 2005 COTTON DISEASE LOSS ESTIMATE Don Blasingame Extension Plant Pathologists, Poting

## Extension Plant Pathologists, Retired Mississippi State, MS

Table 1. Estimated Reduction in 2005 Cotton Yield Resulting from Diseases.\*

| Table 1.   | Estimated I   | Reduction      | III 2005 C          | OCCON TIE      | IG REBUIL     | Ing IIOM I          | raeases.       | 1                   |  |
|--|---|----------------|---------------------|----------------|---------------|---------------------|----------------|---------------------|--|
| DISEASES   | AL  | AZ             | AR                  | CA             | FL            | GA                  | LA             | 155<br><b>MS</b>    |  |
|  | Note: Table entries are % loss (top figure) and bales lost (lower figure)** |                |                     |                |               |                     |                |                     |  |
| Fusarium Wilt F. oxysporium f. sp. vasinfectum     | 0.50<br>5,247   | -              | 2.00<br>51,163      | 0.20<br>2,452  | Trace         | Trace               | 1.00<br>13,257 | Trace               |  |
| Verticillium Wilt<br><i>V. dahlia</i> e            | 0.50<br>5,247   | -              | 1.00<br>25,581      | 1.50<br>18,390 | -             | -                   | Trace          | Trace               |  |
| Bacterial Blight X. malvacearum                    | -   | -              | -                   | -              | -             | -                   | Trace          | -                   |  |
| Phymatrotrichum<br>Root Rot<br><i>P. omnivorum</i> | -   | 1.00<br>6,952  | -                   | -              | -             | -                   | Trace          | -                   |  |
| Seedling Diseases<br>Several fungi                 | 4.50<br>47,226  | 1.00<br>6,952  | 3.00<br>76,744      | 4.00<br>49,041 | 0.50<br>682   | 1.00<br>22,099      | 2.00<br>26,514 | 2.50<br>62,500      |  |
| Ascochyta Blight  A. gossypii                      | 0.30<br>3,148   | -              | -                   | -              | -             | 0.50<br>11,050      | Trace          | Trace               |  |
| Boll Rots  | 2.30<br>24,138  | 0.50<br>3,476  | 0.50<br>12,791      | Trace          | 1.50<br>2,046 | 1.00<br>22,099      | 2.00<br>26,514 | 1.50<br>37,500      |  |
| Nematode (Total)                                   | 9.00<br>94,451  | 4.00<br>27,807 | 7.50<br>191,860     | 0.50<br>6,130  | 5.10<br>6,957 | 7.00<br>154,696     | 7.50<br>99,429 | 11.00<br>275,000    |  |
| Root-knot  | 0.50<br>5,2 <b>4</b> 7  | 4.00<br>27,807 | 4.00<br>102,32<br>6 | 0.50<br>6,130  | 2.90<br>3,956 | 5.00<br>110,49<br>7 | 2.50<br>33,143 | 2.00<br>50,000      |  |
| Reniform   | 8.50<br>89,204  | 1              | 3.50<br>89,535      | -              | 2.20<br>3,001 | 1.50<br>33,149      | 5.00<br>66,286 | 9.00<br>225,00<br>0 |  |
| Others   | -   | -              | -                   | -              | -             | 0.50<br>11,050      | Trace          | Trace               |  |
| Leaf Spots And<br>Others***                        | Trace   | -              | -                   | Trace          | 2.00<br>2,728 | Trace               | Trace          | 1.00                |  |
| TOTAL PERCENT                                      | 17.00   | 6.50           | 14.00               | 6.20           | 9.10          | 9.50                | 12.50          | 16.00               |  |
| BALES LOST   | 179,457   | 45,187         | 358,140             | 76,013         | 12,414        | 209,945             | 165,714        | 400,000             |  |
| YIELDS IN BALES****                                | 1,049,457   | 695,187        | 2,558,14            | 1,226,01       | 136,41<br>4   | 2,209,94            | 1,325,<br>714  | 2,500,00            |  |

- \* Cotton disease loss estimates were made by extension and research plant pathologists and agronomists with cotton responsibilities in their respective states. \*\* Rounding errors present \*\*\*Leaf spots (Alternaria, Cercospora, Phomopsis, etc.) and various root rots.
- \*\*\*\* Yield potential had not disease been present.

### Cotton Disease Loss Estimate Committee

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AZ - Dr. Mary Olsen, University of Arizona

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VA - Dr. Patrick Phipps, Virginia Tech,

Tidewater

## COTTON DISEASE LOSS ESTIMATE COMMITTEE REPORT Compiled by: Don Blasingame, and Mukund V. Patel, Extension Plant Pathologists, Retired, Mississippi State, MS 39762

Table 1. (continued)

|               |               |             |                 |                |               |               | (COLLTIN       |               |                |
|---------------|---------------|-------------|-----------------|----------------|---------------|---------------|----------------|---------------|----------------|
| AVG5%<br>LOST | BALES<br>LOST | VA          | TX              | TN             | SC            | ОК            | NC             | NM            | МО             |
| 0.33          | 81,358        | -           | 0.50<br>43,580  | -              | 0.50<br>2,396 | 0.50<br>1,749 | -              | -             | -              |
| 0.54          | 134,553       | -           | 0.80<br>69,728  | 0.20<br>2,582  | 1             | 0.60<br>2,099 | Ĺ              | 3.50<br>3,558 | 0.50<br>4,555  |
| 0.01          | 3,129         | ı           | 1               | -              | 1             | 0.20<br>700   | ı              | Trace         | _              |
| 0.50          | 125,166       | -           | 7.00<br>610,124 | -              | 1             | 1             | 1              | Trace         | -              |
| 1.88          | 470,154       | 0.50<br>766 | 0.90<br>78,445  | 4.00<br>51,648 | 0.75<br>3,593 | 0.40<br>1,399 | 2.00<br>29,670 | 1.00<br>1,017 | 2.00<br>18,220 |
| 0.09          | 22,686        | -           | -               | 0.50<br>6,456  | _             | 0.10<br>350   | 0.05<br>742    | Trace         | Trace          |

| 1    |                | T             | 1               | 1              |                |               |                |               |                |
|------|----------------|---------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|
| 1.49 | 372,368        | 3.00<br>4,595 | _               | 4.50<br>58,104 | 3.00<br>14,373 | .10<br>350    | 3.90<br>57,856 | -             | Trace          |
| 4.71 | 1,178,280      | 5.10<br>7,812 | 1.20<br>104,593 | 2.21<br>28,536 | 6.00<br>28,747 | 0.50<br>1,749 | 1.70<br>25,219 | 5.00<br>5,083 | 2.00<br>18,220 |
| 2.24 | 561,838        | 2.00<br>3,063 | 1.00<br>87,161  | 0.01<br>129    | 3.00<br>14,373 | 0.50<br>1,749 | 1.00<br>14,835 | 5.00<br>5,083 | 2.00<br>18,220 |
| 2.10 | 525,697        | 0.10<br>153   | 0.20<br>17,432  | 2.20<br>28,406 | 1.00<br>4,791  | I             | 0.40<br>5,934  | ı             | _              |
| 0.36 | 90,745         | 3.00<br>4,595 | 1               | -              | 2.00<br>9,582  | 1             | 0.30<br>4,450  | 1             | _              |
| 0.24 | 59,610         | -             | 0.11<br>9,588   | 0.30<br>3,874  | Trace          | 0.40<br>1,399 | 1              | Trace         | Trace          |
| 9.78 |                | 8.60          | 10.51           | 11.71          | 10.25          | 2.80          | 7.65           | 9.50          | 4.50           |
|      | 2,447,305      | 13,173        | 916,058         | 151,199        | 49,109         | 9,794         | 113,487        | 9,657         | 40,995         |
|      | 25,033,1<br>68 | 153,173       | 8,716,0<br>58   | 1,291,19       | 479,109        | 349,794       | 1,483,<br>487  | 101,657       | 910,995        |

#### Comments:

- AL More boll rot was seen across the state as a result os hurricanes, heavy dews and frequent rains during the growing season. In north Alabama, there was less Verticillium wilt due to growers switching the 5242 cotton variety. Root-knot nematodes are also increasing in north Alabama where corn is used in rotation systems to control reniform nematodes. Nematodes in general were a more serious problem because some growers did not use a nematicide in nematode problem fields. Drs. Charles Burmester, Dale Monks, and William Gazaway provided information on losses.
- LA Hurricane Katrina did minimal damage to the cotton crop in the state. However, high winds associated with hurricane Rita knocked lint to the ground and reduced yields by 15 to 20 percent
- MS Wind damage was 6 to 10 percent due to hurricanes. Drs. Don Blasingame and Gary Lawrence provided information on nematode losses.
- SC A very wet, cool spring resulted in higher than normal seedling diseases and leaching of granular nematicides. This resulted in higher than normal levels of yield loss due to nematodes.

November 2005