

Table 11. Least square means for lint yield, yield components, and fiber quality traits in the 2016 RBTN trial conducted at Mississippi State, MS. (Cooperator: Jack McCarty)

| Cultivar                  | Lint Yield  | Lint Percent | Lint Index  | Boll Size   | Seed per Boll | Seed Index   | MIC         | UHM         | UI           | STRN         | ELO         | SFC         | QS1 <sup>1</sup> | QS2 <sup>1</sup> | QS3 <sup>1</sup> |
|---------------------------|-------------|--------------|-------------|-------------|---------------|--------------|-------------|-------------|--------------|--------------|-------------|-------------|------------------|------------------|------------------|
|                           | lbs/a       | %            | grams       | grams       | #             | grams        | mic         | inch        | %            | g/tex        | %           | %           | %                | %                | %                |
| GA 2011113                | <b>1881</b> | <b>43.91</b> | 7.79        | 5.25        | 29.61         | 9.95         | 5.09        | 1.18        | <b>85.00</b> | 32.45        | 5.40        | 7.00        | 52.00            | 61.50            | 58.00            |
| MD 16-1                   | <b>1856</b> | <b>44.39</b> | <b>8.50</b> | 6.14        | 32.10         | 10.65        | 4.96        | 1.14        | <b>84.88</b> | 31.25        | 5.30        | 7.23        | 44.50            | 57.00            | 51.00            |
| GA 2012082                | <b>1787</b> | 43.42        | <b>8.48</b> | 6.25        | 32.08         | 11.05        | 4.87        | 1.17        | 83.83        | 29.63        | 5.70        | <b>8.18</b> | 48.25            | 46.00            | 53.50            |
| Ark 0818-23               | <b>1749</b> | 42.34        | 8.30        | 5.93        | 30.24         | <b>11.30</b> | 4.69        | 1.18        | 84.45        | 30.53        | 5.75        | 7.58        | 57.25            | 54.25            | 60.25            |
| Ark 0822-48               | <b>1736</b> | 43.07        | <b>9.16</b> | <b>6.44</b> | 30.49         | <b>12.10</b> | 5.09        | 1.22        | <b>85.38</b> | 31.25        | <b>6.63</b> | 7.25        | 66.00            | 69.00            | 68.75            |
| GA 2012050                | <b>1730</b> | 42.45        | 7.78        | 6.08        | <b>33.19</b>  | 10.55        | 4.64        | 1.18        | <b>85.38</b> | 33.23        | 5.90        | 7.00        | 61.25            | 67.50            | 65.75            |
| MS 0043-28-1              | <b>1728</b> | 42.84        | 7.83        | 5.64        | 30.88         | 10.45        | 5.07        | 1.13        | 83.98        | 30.15        | 5.40        | 7.78        | 37.00            | 47.75            | 47.00            |
| DP 493 CK                 | <b>1725</b> | 43.40        | 7.28        | 5.21        | 31.09         | 9.50         | 5.09        | 1.13        | 82.68        | 29.30        | 4.75        | <b>8.65</b> | 31.50            | 38.00            | 44.75            |
| Ark 0812-87ne             | <b>1716</b> | <b>44.36</b> | <b>8.97</b> | 6.08        | 30.12         | <b>11.25</b> | 4.78        | 1.19        | 84.68        | 30.38        | 6.08        | 7.80        | 60.75            | 62.25            | 67.00            |
| SG 105 CK                 | <b>1699</b> | 41.92        | 8.45        | 5.61        | 28.15         | <b>11.70</b> | 5.00        | 1.16        | <b>85.30</b> | 29.80        | 5.63        | 7.18        | 49.00            | 61.75            | 54.25            |
| GA 2012141                | <b>1684</b> | 41.81        | 7.87        | 6.07        | 32.31         | 10.95        | 4.97        | 1.20        | <b>85.38</b> | 31.15        | 5.58        | 7.30        | 63.50            | 68.00            | 67.00            |
| DP 393 CK                 | <b>1680</b> | 42.76        | 7.62        | 5.78        | <b>32.41</b>  | 10.20        | 5.02        | 1.15        | 83.88        | 31.48        | 6.45        | 7.50        | 42.25            | 49.50            | 51.75            |
| UA 222 CK                 | <b>1664</b> | 42.93        | 8.02        | 5.74        | 30.78         | 10.65        | 4.82        | 1.20        | 84.08        | 31.15        | <b>6.85</b> | 7.60        | 60.75            | 58.00            | 68.50            |
| Ark 0824-89               | <b>1664</b> | 43.03        | <b>8.65</b> | 6.10        | 30.36         | <b>11.45</b> | <b>5.45</b> | 1.21        | <b>86.03</b> | 33.33        | 5.75        | 7.10        | 57.75            | 70.50            | 59.00            |
| MS 0152-3-11              | 1630        | 43.09        | 7.73        | 5.73        | 32.01         | 10.20        | 4.68        | 1.19        | 84.35        | 29.70        | 5.43        | 7.63        | 61.25            | 60.25            | 68.00            |
| AU77082                   | 1628        | 42.55        | 8.14        | 6.10        | 32.01         | 11.00        | 4.98        | 1.19        | 83.75        | 31.00        | 5.30        | 8.03        | 55.50            | 53.75            | 64.00            |
| NM 13G1029                | 1622        | 41.13        | 7.16        | 5.29        | 30.37         | 10.25        | 4.36        | 1.18        | 83.60        | 30.95        | 5.40        | 7.48        | 58.25            | 54.00            | 68.25            |
| AU82074                   | 1620        | 40.63        | 7.63        | 5.91        | 31.48         | 11.15        | 4.46        | 1.19        | <b>85.03</b> | 31.98        | 5.33        | 7.30        | 66.75            | 66.75            | 71.50            |
| NM 13G2019                | 1596        | 43.37        | 8.00        | 5.35        | 29.04         | 10.45        | 4.81        | 1.19        | 83.63        | 33.50        | 5.40        | <b>8.08</b> | 56.50            | 53.75            | 66.50            |
| TAM13Q-18                 | 1589        | 39.47        | 7.50        | 5.72        | 30.17         | <b>11.50</b> | 4.81        | 1.20        | <b>84.80</b> | 32.73        | 5.55        | 7.33        | 64.50            | 64.50            | 69.50            |
| FM 958 CK                 | 1527        | 40.96        | 8.01        | 5.76        | 29.47         | <b>11.55</b> | 4.83        | 1.19        | <b>84.88</b> | 32.58        | 4.85        | 7.30        | 59.75            | 63.25            | 65.25            |
| MD 16-2                   | 1496        | 41.20        | 8.39        | 6.21        | 30.59         | <b>12.00</b> | 4.27        | 1.23        | 84.43        | <b>35.45</b> | 5.70        | 7.15        | 77.00            | 70.25            | <b>85.00</b>     |
| Ark 0819-89               | 1478        | 40.31        | 7.79        | 5.71        | 29.54         | <b>11.55</b> | <b>5.19</b> | 1.21        | <b>85.58</b> | 33.08        | 5.88        | 7.15        | 60.25            | 68.50            | 63.25            |
| PD07040                   | 1412        | 39.68        | 7.95        | 5.97        | 30.01         | <b>12.10</b> | 4.68        | 1.20        | 84.30        | 32.35        | 5.18        | 7.45        | 64.50            | 61.00            | 71.00            |
| PD08028                   | 1411        | 38.90        | 7.39        | <b>6.74</b> | <b>35.68</b>  | <b>11.60</b> | 4.51        | 1.22        | <b>85.90</b> | <b>34.00</b> | 5.60        | 7.13        | 76.00            | <b>77.50</b>     | 78.50            |
| PD09084                   | 1402        | 38.33        | 7.48        | 5.71        | 29.53         | <b>12.05</b> | 4.90        | 1.20        | <b>84.93</b> | <b>33.85</b> | 5.78        | 6.95        | 63.00            | 65.50            | 68.25            |
| TAM11L-24                 | 1205        | 37.00        | 7.16        | 5.53        | 28.57         | <b>12.20</b> | 4.18        | <b>1.31</b> | <b>86.00</b> | <b>34.05</b> | 4.75        | 6.35        | <b>95.00</b>     | <b>85.50</b>     | <b>94.50</b>     |
| PD09046                   | 1126        | 35.38        | 6.13        | 5.23        | 30.20         | <b>11.20</b> | 4.29        | 1.25        | 84.48        | <b>34.50</b> | 4.55        | 7.33        | <b>82.00</b>     | 70.25            | <b>88.00</b>     |
|                           |             |              |             |             |               |              |             |             |              |              |             |             |                  |                  |                  |
| <b>Mean</b>               | 1609        | 41.59        | 7.90        | 5.83        | 30.80         | 11.09        | 4.80        | 1.19        | 84.66        | 31.96        | 5.57        | 7.42        | 59.71            | 61.63            | 65.64            |
| <b>Cultivar LSD (.05)</b> | 221         | 0.88         | 0.68        | 0.48        | 3.34          | 1.04         | 0.26        | 0.04        | 1.24         | 1.75         | 0.37        | 0.59        | 14.49            | 14.91            | 12.66            |
| <b>Cultivar (P&gt;F)</b>  | <0.0001     | <0.0001      | <0.0001     | <0.0001     | 0.0333        | <0.0001      | <0.0001     | <0.0001     | <0.0001      | <0.0001      | <0.0001     | <0.0001     | <0.0001          | <0.0001          | <0.0001          |
| <b>CV(%)</b>              | 9.74        | 1.50         | 6.10        | 5.85        | 7.71          | 6.64         | 3.50        | 2.27        | 1.04         | 3.89         | 4.69        | 5.63        | 17.25            | 17.19            | 13.71            |
| <b>R-Square</b>           | 0.64        | 0.95         | 0.69        | 0.63        | 0.41          | 0.58         | 0.81        | 0.72        | 0.56         | 0.71         | 0.85        | 0.62        | 0.69             | 0.57             | 0.69             |
| <b>Reps</b>               | 4           | 4            | 4           | 4           | 4             | 4            | 4           | 4           | 4            | 4            | 4           | 4           | 4                | 4                | 4                |

Values in bold are not significantly different from highest value according to LSD(0.05).

<sup>1</sup> QS1, QS2, and QS3 - Qscore, very similar to a selection index, adds the weighted values of selected fiber traits (length, mic, UI, strength) to provide a single measure (0-100) of desirable fiber qualities, and was calculated by weighting selected fiber traits as follows: QS1 - fiber length (0.5), mic (0.25), UI (0.15), and strength (0.10) ; QS2 - fiber length (0.2), mic (0.1), UI (0.4), and strength (0.3); QS3 - fiber length (0.45), mic (0.25), UI (0.0), and strength (0.3).