# 2008 COTTON VARIETY TRIALS

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## Introduction

The 2008 University of Georgia Cotton Variety Trials (OVT) were conducted at five locations across Georgia, spanning the cotton belt from southwest to northeast Georgia. Irrigated trials were conducted on-farm in Decatur County and at University research stations and/or education centers in Midville, Plains, and Tifton. Dryland trials were conducted on University research stations and/or education centers in Athens, Midville, Plains, and Tifton. Performance data in these tables, combined with data from previous years should assist growers in variety selection, one of the most important if not most important decisions in an economically viable cotton production plan. Data collected from the University of Georgia Variety Testing Cotton Program can be found at the Statewide Variety Testing Website: www.swvt.uga.edu. Also, the data is published in the UGA Agricultural Experiment Station Research Report Number 719, January 2009.

## Materials and Methods

The University of Georgia conducts Official Cotton Variety and Strain trials across Georgia to provide growers and county agents with performance data to help in selecting varieties. Data from the OVT also helps the private seed companies assess the fit of their products in Georgia. The University of Georgia cotton OVT is conducted by J. LaDon Day, Program Coordinator Cotton OVT, Griffin, GA. along with Mr. Larry Thompson, Research Professional I, Tifton, GA. The OVT is split into variety and strain trials with placement of varieties or strains into the particular trial chosen by its owner. Trials are separated by maturity. Irrigated OVT trials are conducted at Bainbridge, Midville, Plains, and Tifton, while dryland OVTs are conducted at Athens, Midville, Plains, and Tifton, thus varieties placed into the OVT are included in eight trials per year, giving a fair size data set with which to evaluate variety performance. The strains trials are irrigated and conducted at Midville, Plains, and Tifton. Trials consist of 4-replicate, randomized complete block designs. An accepted, common, management system is employed at each location for agronomic and pest management, but transgenic cultivars are not produced according to their intended pest management system(s). A random quality sample was taken on the picker during harvest and ginned to measure lint fraction on all plots including the irrigated late maturing trial at Tifton, but a portion of the seed cotton from the later maturity plots was bagged and sent to the Micro Gin at Tifton for processing. All fiber samples were submitted to Starlab, Knoxville, TN for HVI analyses. All trials were harvested with a state-of-the-art harvest system composed of a International IH 1822 picker fitted with weigh baskets and suspended from load sells. This system allows one person to harvest yield trials where

the established bag-and-weigh approach required eight people or more. The electronic weigh system allowed for timely harvest of yield trials. Data from all trials and combined analyses over locations and years are reported as soon as fiber data are available from the test lab in Adobe pdf and Excel formats on the UGA Cotton Team Website maintained at www.ugacotton.com. Also, the data is available at the Statewide Variety Testing Website: www.swvt.uga.edu.

## Results and Discussion

2008 row crop season in Georgia can best be described as dry and hot for the third consecutive year. Beginning in April extreme to exceptional drought (a 100 year event) developed over two-thirds of the state. Above normal summer temperatures, especially during the very hot first two weeks of June, and drought conditions took their toll on the dryland crops. However, areas across the southern part of the Coastal Plain received some beneficial tropical storm rainfall. Greater amounts of irrigation were needed to produce what turned out to be a good crop year.

During 2008, cotton producers planted 950,000 acres of cotton. This number of acres planted was a decrease of 8% less than 2007; further, it was the first year since 1994 that Georgia cotton farmers last planted less than a million acres of cotton. The number of acres of harvested cotton was the lowest in 14 years but a surprising 843 pounds per acre lint yield produced 1.65 million bales, only a 1% reduction from 2007.

Among varieties in the Dryland Earlier Maturity Trials, three varieties GA2004230, GA2004303, and DP0935B2RF stand out as varieties with high yield and relative yield stability in the dryland trials (Table 1). There were five other varieties that performed above average (Table 1). When summarized over two years and four locations GA2004303 and ST5327B2RF were the top performers (Table 2).

Among the best performing earlier maturing varieties produced under irrigation, PHY370WR, DP164B2RF, DP0924B2RF, FM1740B2RF, and PHY375WRF were the top five highest averaged over locations (Table 3). Eight other varieties performed well within the top group (Table 3). PHY370WR, ST 4554B2RF, and PHY375WRF when averaged over two years and locations in the Irrigated Early Maturity Trials conducted at Bainbridge, Midville, Plains, and Tifton, were the top yielding group. However, nine other varieties yielded above average (Table 4).

Later maturity trials produced without irrigation and averaged over four locations revealed the consistent performance of DP555BG/RR, GA2004137, DP0935B2RF, DP174RF, GA2004371, GA2004358, DP164B2RF, BCSX0614B2RF, and PHY375RF as significant high yielding (Table 5). Averaged over locations and years, GA2004371 and DP555BG/RR were the front runners (Table 6).

Under irrigation, DP555 BG/RR, BCSX0727B2RF, DP0935B2RF, DP174RF, and PHY375WRF led the standard later maturing trials averaged over locations (Table 7), while 8 other varieties were within the top group in lint yield. Averaged over years and locations, DP555BG/RR was the best performer (Table 8) with two other varieties yielding above average.

The Earlier Maturity and Later Maturity Strains Trials contain improved varieties for crop seasons 2009 and beyond (Tables 9). Varieties from Bayer CropScience, Georgia, and Monsanto DP were high yielding performers among standard earlier and later maturing entries in the strains trial.

Presented in Table 10 is the Tifton, Georgia, 2008, Later Maturity cotton variety performance, irrigated, data comparing 'small gin' seed/lint with samples processed through the Micro-gin (MG) on the Tifton Campus. The seed cotton from the Later Maturity experiment was sub-sampled, ginned and sent to Star Lab in Knoxville, TN for HVI analysis. The remaining seed cotton was sent to the Micro-gin, Tifton Campus for processing and also sent to Star Lab for HVI analysis.

In summary, several new varieties described herein signify higher yield potential and improved fiber quality available to Georgia growers.

**Table 1.** Yield summary for dryland earlier maturity cotton varieties, 2008.

| Entry | Lint Yield[a] Athens | Midville | Plains | Tifton | 4-Loc. Average | Lint | Unif. Index | Length | Strength | Mic. |
|---|---|---|---|---|---|---|---|---|---|---|
| | lb/acre | | | | | % | % | in | g/tex | units |
| GA2004230 | 953 [20] | **1475** [2] | **1100** [3] | **979** [1] | **1127** [1] | 43.6 | 84.5 | 1.25 | 33.2 | 4.7 |
| GA2004303 | 981 [16] | **1559** [1] | **1002** [5] | **963** [2] | **1126** [2] | 45.1 | 82.5 | 1.14 | 33.6 | 5.0 |
| DP 0935 B2RF | **1024** [9] | **1425** [4] | 951 [9] | **933** [4] | **1083** [3] | 43.7 | 82.6 | 1.14 | 30.7 | 4.7 |
| DP 555 BG/RR | 985 [15] | **1440** [3] | **1120** [2] | **753** [14] | **1074** [4] | 43.8 | 81.5 | 1.14 | 32.5 | 4.7 |
| DP141B2RF | 932 [22T] | 1331 [10] | **983** [6] | **904** [5] | **1037** [5T] | 43.4 | 82.9 | 1.22 | 33.0 | 4.7 |
| GA2004143 | **1039** [5] | 1321 [11] | **1146** [1] | 642 [23] | **1037** [5T] | 46.7 | 83.0 | 1.20 | 35.0 | 4.9 |
| DP 143 B2RF | **1022** [10] | 1368 [7] | 961 [8] | **749** [15] | **1025** [6] | 42.4 | 82.6 | 1.23 | 31.7 | 4.6 |
| DP161B2RF | **1041** [4] | 1220 [20] | 842 [15] | **953** [3] | **1014** [7] | 40.6 | 83.3 | 1.20 | 33.5 | 4.8 |
| FM1740B2RF | **1123** [2] | 1248 [17] | 772 [22T] | **888** [6] | **1008** [8] | 44.4 | 83.3 | 1.15 | 31.5 | 4.9 |
| NG3331B2RF | 954 [19] | 1363 [8] | 932 [11] | 696 [20] | 986 [9] | 43.3 | 83.9 | 1.13 | 34.2 | 5.4 |
| PHY370WR | 883 [26] | 1399 [5] | 817 [17] | **787** [10] | 972 [10] | 44.5 | 82.6 | 1.10 | 31.0 | 4.9 |
| PHY315RF | 925 [24] | 1356 [9] | **970** [7] | 611 [29] | 965 [11] | 44.2 | 82.4 | 1.14 | 30.3 | 4.7 |
| NG4370B2RF | 932 [22T] | 1313 [12] | 937 [10] | 647 [22] | 958 [12] | 42.2 | 82.9 | 1.14 | 31.4 | 4.9 |
| ST5327B2RF | **1034** [7] | 1245 [18] | 917 [12] | 628 [26] | 956 [13] | 43.6 | 82.7 | 1.14 | 32.3 | 4.7 |
| ST 4554B2RF | 955 [18] | 1179 [24] | 772 [22T] | **864** [7] | 943 [14] | 43.2 | 82.0 | 1.13 | 31.7 | 5.0 |
| PHY440W | **1145** [1] | 1072 [34] | 887 [13] | 616 [28] | 930 [15] | 43.2 | 83.6 | 1.16 | 32.3 | 5.0 |
| DP 0924 B2RF | 822 [31] | 1377 [6] | 738 [24] | **740** [16] | 919 [16T] | 43.7 | 82.5 | 1.14 | 31.3 | 5.1 |
| NG4377B2RF | 880 [27] | 1203 [21] | 733 [25] | **860** [8] | 919 [16T] | 43.1 | 82.4 | 1.12 | 30.2 | 5.0 |
| ST4427B2RF | 974 [17] | 1065 [35] | **1081** [4] | 543 [34] | 916 [17] | 42.7 | 82.7 | 1.14 | 31.3 | 4.6 |
| BCSX0187LLB2 | 991 [12] | 1283 [15] | 796 [19] | 571 [32] | 910 [18T] | 42.7 | 82.2 | 1.15 | 33.2 | 4.8 |
| PHY375WRF | 866 [28] | 1286 [14] | 681 [29] | **805** [9] | 910 [18T] | 46.1 | 82.3 | 1.14 | 30.3 | 4.8 |
| FM1735LLB2 | 986 [14] | 1180 [23] | 698 [28] | **772** [13] | 909 [19] | 40.6 | 82.8 | 1.14 | 35.5 | 4.8 |
| STX4498B2RF | **1038** [6] | 1235 [19] | 773 [21] | 551 [33] | 899 [20] | 41.9 | 82.5 | 1.14 | 33.2 | 4.8 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DP 164 B2RF | 933 | 21 | 1158 | 27 | 709 | 27 | **779** | 11 | 895 | 21 | 40.6 | 82.9 | 1.19 | 33.2 | 4.9 |
| BCSX0888LLB2 | **1056** | 3 | 1277 | 16 | 775 | 20 | 467 | 36 | 894 | 22 | 42.7 | 83.3 | 1.17 | 34.2 | 5.3 |
| CG4020B2RF | **1020** | 11 | 1094 | 32 | 770 | 23 | 677 | 21 | 890 | 23T | 43.1 | 82.5 | 1.17 | 28.9 | 4.5 |
| PHY485WRF | 846 | 30 | 1167 | 26 | 772 | 22T | **775** | 12 | 890 | 23T | 41.8 | 83.0 | 1.16 | 33.3 | 5.0 |
| AM1550B2RF | 782 | 34 | 1134 | 30 | 880 | 14 | 737 | 17 | 883 | 24 | 43.8 | 81.9 | 1.14 | 29.2 | 5.0 |
| CG 3220B2RF | 927 | 23 | 1183 | 22 | 772 | 22T | 593 | 31 | 869 | 25T | 43.1 | 82.2 | 1.15 | 29.9 | 5.0 |
| CG3035RF | **1028** | 8 | 1142 | 29 | 668 | 31 | 639 | 24 | 869 | 25T | 43.9 | 82.9 | 1.15 | 30.2 | 4.8 |
| AM1532B2RF | 909 | 25 | 1104 | 31 | 832 | 16 | 594 | 30 | 860 | 26 | 41.8 | 82.7 | 1.17 | 28.6 | 4.6 |
| PHY425RF | 805 | 33 | 1300 | 13 | 671 | 30 | 632 | 25 | 852 | 27 | 42.5 | 83.3 | 1.15 | 31.6 | 5.1 |
| CG3520B2RF | 989 | 13 | 1143 | 28 | 713 | 26 | 504 | 35 | 837 | 28 | 42.0 | 83.5 | 1.17 | 28.5 | 4.5 |
| PHY480WR | 740 | 35 | 1090 | 33 | 811 | 18 | 702 | 19 | 836 | 29 | 41.8 | 83.0 | 1.16 | 32.4 | 5.1 |
| DP 121 RF | 862 | 29 | 1173 | 25 | 654 | 33 | 617 | 27 | 827 | 30 | 44.3 | 83.2 | 1.14 | 32.3 | 5.0 |
| CG3020B2RF | 818 | 32 | 994 | 36 | 660 | 32 | 706 | 18 | 794 | 31 | 40.6 | 82.4 | 1.13 | 28.2 | 4.2 |
| Average | 950 | | 1247 | | 842 | | 719 | | 939 | | 43.1 | 82.8 | 1.16 | 31.8 | 4.8 |
| LSD 0.10 | 146 | | 148 | | 182 | | 239 | | 127 | | 1.2 | 0.8 | 0.02 | 1.3 | 0.2 |
| CV % | 13.1 | | 10.1 | | 18.5 | | 28.3 | | 16.6 | | 2.8 | 1.0 | 2.11 | 4.2 | 5.4 |

[a] Superscripts indicate ranking at that location.
**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 2.** Two-year summary for dryland earlier maturity cotton varieties at four locations[a], 2007-2008.

| Variety | Lint Yield | Lint | Uniformity Index | Length | Strength | Micronaire |
|---|---|---|---|---|---|---|
| | lb/acre | % | % | inches | g/tex | units |
| GA2004303 | **966** | 44.3 | 81.8 | 1.10 | 31.2 | 4.7 |
| ST5327B2RF | **907** | 44.2 | 82.3 | 1.11 | 30.8 | 4.5 |
| PHY370WR | 891 | 44.2 | 82.2 | 1.08 | 30.1 | 4.6 |
| ST4427B2RF | 885 | 42.7 | 81.9 | 1.11 | 30.3 | 4.3 |
| PHY315RF | 873 | 44.6 | 81.7 | 1.11 | 29.1 | 4.4 |
| DP141B2RF | 870 | 42.8 | 81.7 | 1.17 | 31.3 | 4.4 |
| CG3035RF | 865 | 44.1 | 82.4 | 1.11 | 29.6 | 4.5 |
| DP161B2RF | 862 | 40.8 | 82.5 | 1.17 | 31.6 | 4.5 |
| PHY375WRF | 861 | 45.5 | 81.8 | 1.12 | 29.4 | 4.5 |
| ST 4554B2RF | 858 | 43.1 | 81.8 | 1.11 | 30.5 | 4.6 |
| FM1735LLB2 | 850 | 40.9 | 82.3 | 1.13 | 33.5 | 4.4 |
| STX4498B2RF | 847 | 42.6 | 82.2 | 1.11 | 32.0 | 4.5 |
| PHY485WRF | 843 | 42.8 | 83.0 | 1.13 | 31.6 | 4.7 |
| DP 143 B2RF | 842 | 41.7 | 81.9 | 1.19 | 30.0 | 4.2 |
| CG3520B2RF | 834 | 42.4 | 82.9 | 1.14 | 27.5 | 4.3 |
| AM1532B2RF | 833 | 42.1 | 82.2 | 1.15 | 27.8 | 4.2 |
| CG 3220B2RF | 833 | 42.5 | 82.1 | 1.13 | 29.3 | 4.6 |
| DP 121 RF | 832 | 44.4 | 82.6 | 1.12 | 30.9 | 4.8 |
| PHY425RF | 808 | 42.9 | 82.8 | 1.12 | 30.5 | 4.8 |
| CG4020B2RF | 793 | 42.6 | 81.7 | 1.14 | 27.7 | 4.2 |
| PHY480WR | 778 | 42.2 | 82.7 | 1.13 | 30.9 | 4.8 |
| CG3020B2RF | 753 | 40.7 | 82.0 | 1.10 | 27.5 | 3.9 |
| Average | 849 | 42.9 | 82.2 | 1.13 | 30.1 | 4.5 |
| LSD 0.10 | 61 | 0.5 | 0.5 | 0.02 | 0.7 | 0.1 |
| CV % | 17.4 | 2.7 | 0.9 | 2.28 | 4.0 | 5.6 |

[a] Athens, Midville, Plains, and Tifton.

**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 3.** Yield summary for earlier maturity cotton varieties, 2008 irrigated.

| Entry | Lint Yield[a] Bainbridge | | Midville | | Plains | | Tifton | | 4-Loc. Average | | Lint | Unif. Index | Length | Strength | Mic. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ---------- lb/acre ---------- | | | | | | | | | | % | % | in | g/tex | units |
| PHY370WR | **1684** | 2 | **2380** | 1 | **1502** | 6T | 1472 | 15 | **1759** | 1 | 44.3 | 82.7 | 1.12 | 30.9 | 4.5 |
| DP 555 BG/RR | 1400 | 30 | 2177 | 7 | **1605** | 2 | **1807** | 1 | **1747** | 2 | 44.3 | 82.3 | 1.16 | 31.8 | 4.3 |
| DP 164 B2RF | **1634** | 3 | 2063 | 24 | 1368 | 16 | **1779** | 2 | **1711** | 3 | 43.4 | 83.6 | 1.21 | 33.2 | 4.3 |
| DP 0924 B2RF | **1613** | 5 | 2197 | 6 | 1351 | 20 | **1648** | 5 | **1702** | 4 | 43.7 | 82.8 | 1.15 | 30.7 | 4.6 |
| FM1740B2RF | 1362 | 36 | **2253** | 4 | **1615** | 1 | 1534 | 9 | **1691** | 5 | 43.7 | 83.3 | 1.16 | 31.5 | 4.3 |
| PHY375WRF | 1510 | 15 | **2349** | 2 | 1362 | 17 | 1452 | 16 | **1668** | 6 | 44.2 | 82.8 | 1.15 | 29.8 | 4.1 |
| DP141B2RF | 1433 | 25 | **2286** | 3 | 1346 | 21 | 1596 | 6 | **1665** | 7 | 42.2 | 83.1 | 1.22 | 31.7 | 4.0 |
| DP 143 B2RF | **1576** | 8 | 2163 | 9 | **1519** | 3 | 1397 | 19 | **1664** | 8 | 42.4 | 83.1 | 1.25 | 32.3 | 3.9 |
| ST5327B2RF | 1534 | 12 | 2095 | 19 | **1433** | 10 | 1542 | 8 | **1651** | 9 | 43.2 | 83.2 | 1.16 | 32.1 | 4.3 |
| ST4427B2RF | **1616** | 4 | 2081 | 21 | **1416** | 11 | 1479 | 14 | **1648** | 10 | 43.6 | 82.7 | 1.16 | 31.5 | 4.3 |
| PHY480WR | 1520 | 13 | 2113 | 15 | **1415** | 12 | 1508 | 11 | **1639** | 11 | 42.3 | 83.8 | 1.18 | 32.7 | 4.5 |
| GA2004143 | 1381 | 33 | 2143 | 11 | **1515** | 4 | 1506 | 12 | **1636** | 12 | 45.4 | 83.5 | 1.22 | 34.1 | 4.5 |
| DP 0935 B2RF | 1474 | 22 | 2164 | 8 | 1098 | 35 | **1750** | 3 | **1622** | 13 | 43.8 | 82.7 | 1.15 | 30.0 | 4.4 |
| STX4498B2RF | 1493 | 17 | 2111 | 16 | 1360 | 18 | 1492 | 13 | **1614** | 14 | 43.1 | 83.4 | 1.15 | 32.1 | 4.3 |
| DP161B2RF | 1430 | 26 | 2127 | 13 | 1200 | 31 | **1680** | 4 | 1609 | 15 | 42.3 | 84.0 | 1.24 | 33.7 | 4.3 |
| NG3331B2RF | 1541 | 11 | 2156 | 10 | 1320 | 23 | 1417 | 17 | 1608 | 16 | 43.2 | 83.6 | 1.14 | 32.2 | 4.7 |
| CG 3220B2RF | **1686** | 1 | 1991 | 27 | 1381 | 15 | 1351 | 25 | 1602 | 17 | 43.4 | 82.8 | 1.17 | 30.2 | 4.4 |
| GA2004230 | 1453 | 24 | 1887 | 33 | **1462** | 7 | 1593 | 7 | 1599 | 18 | 43.2 | 84.0 | 1.27 | 32.6 | 4.2 |
| ST 4554B2RF | 1464 | 23 | 2107 | 17 | 1312 | 24 | 1510 | 10 | 1598 | 19 | 43.0 | 82.5 | 1.15 | 31.6 | 4.5 |
| GA2004303 | 1404 | 29 | **2221** | 5 | 1308 | 25 | 1393 | 21 | 1581 | 20 | 43.8 | 82.5 | 1.15 | 32.9 | 4.6 |
| AM1550B2RF | **1608** | 6 | 2078 | 22 | **1459** | 8 | 1174 | 34 | 1579 | 21 | 43.2 | 82.9 | 1.14 | 28.6 | 4.2 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BCSX0187LLB2 | 1548 | 10 | 1946 | 30 | 1409 | 13 | 1407 | 18 | 1577 | 22 | 42.3 | 82.7 | 1.14 | 33.7 | 4.5 |
| CG4020B2RF | 1406 | 28 | 2036 | 25 | **1508** | 5 | 1293 | 27 | 1561 | 23 | 42.4 | 82.6 | 1.20 | 29.1 | 4.2 |
| PHY440W | 1373 | 35 | 2125 | 14 | **1502** | 6T | 1239 | 29 | 1560 | 24 | 42.8 | 83.5 | 1.17 | 30.9 | 4.3 |
| NG4370B2RF | 1507 | 16 | 1989 | 28 | 1333 | 22 | 1390 | 22 | 1555 | 25 | 43.1 | 83.2 | 1.17 | 31.7 | 4.5 |
| PHY315RF | **1568** | 9 | 2072 | 23 | 1180 | 32 | 1358 | 23 | 1545 | 26 | 45.1 | 82.9 | 1.17 | 30.3 | 4.1 |
| CG3520B2RF | **1595** | 7 | 1920 | 31 | **1452** | 9 | 1163 | 35 | 1532 | 27 | 42.7 | 83.4 | 1.19 | 27.5 | 4.1 |
| PHY485WRF | 1419 | 27 | 2129 | 12 | 1165 | 34 | 1324 | 26 | 1509 | 28 | 42.2 | 83.5 | 1.17 | 31.7 | 4.6 |
| NG4377B2RF | 1491 | 18 | 1861 | 35 | 1273 | 28 | 1394 | 20 | 1505 | 29 | 42.9 | 84.0 | 1.17 | 31.7 | 4.4 |
| DP 121 RF | 1385 | 32 | 2091 | 20 | 1174 | 33 | 1353 | 24 | 1501 | 30T | 43.9 | 83.0 | 1.15 | 31.5 | 4.7 |
| CG3035RF | 1483 | 21 | 2012 | 26 | 1277 | 27 | 1232 | 31 | 1501 | 30T | 43.6 | 83.0 | 1.16 | 30.8 | 4.5 |
| FM1735LLB2 | 1484 | 20 | 2103 | 18 | 1209 | 30 | 1181 | 33 | 1494 | 31 | 40.6 | 83.1 | 1.16 | 34.1 | 4.2 |
| BCSX0888LLB2 | 1376 | 34 | 1954 | 29 | 1356 | 19 | 1271 | 28 | 1489 | 32 | 41.4 | 82.9 | 1.17 | 32.7 | 4.7 |
| CG3020B2RF | 1513 | 14 | 1853 | 36 | 1383 | 14 | 1162 | 36 | 1478 | 33 | 42.1 | 83.2 | 1.16 | 27.7 | 4.0 |
| AM1532B2RF | 1486 | 19 | 1903 | 32 | 1298 | 26 | 1206 | 32 | 1473 | 34 | 41.4 | 82.8 | 1.21 | 28.7 | 3.9 |
| PHY425RF | 1390 | 31 | 1880 | 34 | 1218 | 29 | 1237 | 30 | 1431 | 35 | 42.2 | 84.0 | 1.17 | 31.5 | 4.8 |
| Average | 1495 | | 2084 | | 1363 | | 1425 | | 1592 | | 43.1 | 83.1 | 1.17 | 31.4 | 4.3 |
| LSD 0.10 | 134 | | 173 | | 203 | | 179 | | 145 | | 1.7 | 0.6 | 0.02 | 1.3 | 0.2 |
| CV % | 7.6 | | 7.1 | | 12.7 | | 10.7 | | 9.3 | | 2.5 | 1.0 | 1.59 | 5.1 | 5.7 |

[a] Superscripts indicate ranking at that location.
**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 4.** Two-year summary for earlier maturity cotton varieties at four locations[a], 2007-2008, irrigated.

| Variety | Lint Yield | Lint | Uniformity Index | Length | Strength | Micronaire |
|---|---|---|---|---|---|---|
| | lb/acre | % | % | inches | g/tex | units |
| PHY370WR | **1753** | 44.4 | 82.9 | 1.1 | 30.6 | 4.5 |
| ST 4554B2RF | **1713** | 43.3 | 82.8 | 1.2 | 30.4 | 4.5 |
| PHY375WRF | **1711** | 44.7 | 83.0 | 1.2 | 29.9 | 4.2 |
| ST5327B2RF | 1678 | 43.6 | 83.3 | 1.2 | 31.0 | 4.4 |
| ST4427B2RF | 1667 | 43.0 | 82.8 | 1.2 | 31.0 | 4.1 |
| DP161B2RF | 1652 | 42.0 | 84.1 | 1.2 | 32.5 | 4.3 |
| STX4498B2RF | 1652 | 42.7 | 83.4 | 1.2 | 31.4 | 4.3 |
| DP 143 B2RF | 1641 | 42.1 | 82.9 | 1.2 | 31.0 | 4.0 |
| GA2004303 | 1639 | 43.9 | 82.7 | 1.1 | 32.0 | 4.6 |
| DP141B2RF | 1636 | 41.9 | 83.0 | 1.2 | 31.0 | 4.2 |
| PHY480WR | 1630 | 41.9 | 84.0 | 1.2 | 31.5 | 4.5 |
| PHY315RF | 1617 | 44.8 | 83.0 | 1.2 | 29.5 | 4.2 |
| FM1735LLB2 | 1580 | 40.9 | 83.1 | 1.2 | 32.9 | 4.4 |
| PHY485WRF | 1577 | 42.3 | 83.7 | 1.2 | 31.1 | 4.7 |
| CG 3220B2RF | 1562 | 42.7 | 83.2 | 1.2 | 29.6 | 4.5 |
| DP 121 RF | 1559 | 44.0 | 83.3 | 1.2 | 30.8 | 4.7 |
| PHY425RF | 1555 | 42.1 | 84.0 | 1.2 | 31.2 | 4.8 |
| CG3520B2RF | 1553 | 42.6 | 83.3 | 1.2 | 27.3 | 4.1 |
| CG4020B2RF | 1547 | 42.3 | 82.8 | 1.2 | 28.4 | 4.1 |
| CG3035RF | 1535 | 43.4 | 83.2 | 1.2 | 30.1 | 4.5 |
| AM1532B2RF | 1528 | 41.7 | 83.1 | 1.2 | 28.4 | 4.1 |
| CG3020B2RF | 1473 | 41.2 | 83.3 | 1.2 | 27.8 | 4.0 |
| Average | 1612 | 42.8 | 83.2 | 1.2 | 30.4 | 4.4 |
| LSD 0.10 | 72 | 0.4 | 0.5 | 0.01 | 0.7 | 0.1 |
| CV % | 10.8 | 2.4 | 1.0 | 1.56 | 4.0 | 5.6 |

[a] Bainbridge, Midville, Plains, and Tifton.

**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 5.** Yield summary for dryland later maturity cotton varieties, 2008.

| Entry | Lint Yield[a] Athens | | Midville | | Plains | | Tifton | | 4-Loc. Average | | Lint | Unif. Index | Length | Strength | Mic. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | lb/acre | | | | | | | | | | % | % | in | g/tex | units |
| DP 555 BG/RR | **944** | 15 | **1427** | 8 | **1109** | 1 | **1289** | 1 | **1192** | 1 | 43.6 | 82.9 | 1.15 | 33.1 | 4.6 |
| GA2004137 | **1121** | 3 | **1429** | 7 | 908 | 4 | **1286** | 2 | **1186** | 2 | 44.1 | 83.5 | 1.18 | 34.2 | 5.0 |
| DP 0935 B2RF | **1173** | 2 | **1533** | 3 | 912 | 3 | 1022 | 8 | **1160** | 3 | 43.9 | 82.3 | 1.14 | 29.8 | 5.0 |
| DP174RF | **991** | 12 | **1534** | 2 | 845 | 9 | **1242** | 4 | **1153** | 4 | 46.9 | 82.6 | 1.18 | 30.0 | 4.9 |
| GA2004371 | **965** | 14 | **1404** | 11 | 880 | 5 | **1241** | 5 | **1122** | 5 | 44.7 | 83.8 | 1.17 | 33.1 | 5.2 |
| GA2004358 | **1008** | 8 | 1212 | 18 | **963** | 2 | **1261** | 3 | **1111** | 6 | 44.0 | 83.2 | 1.18 | 32.8 | 5.0 |
| DP 164 B2RF | **1002** | 9 | **1471** | 6 | 730 | 13 | **1158** | 6 | **1090** | 7 | 40.8 | 83.3 | 1.19 | 33.0 | 4.7 |
| BCSX0614B2RF | **1191** | 1 | 1334 | 14 | 836 | 10 | 982 | 9 | **1086** | 8 | 40.4 | 83.6 | 1.20 | 33.4 | 4.8 |
| PHY375WRF | **1077** | 5 | **1489** | 5 | 850 | 7 | 912 | 14 | **1082** | 9 | 45.5 | 82.0 | 1.13 | 29.6 | 4.9 |
| BCSX0727B2RF | **996** | 10 | **1610** | 1 | 851 | 6 | 781 | 16 | **1059** | 10 | 44.2 | 82.4 | 1.15 | 29.8 | 5.1 |
| BCSX0102LLB2 | **1011** | 7 | **1418** | 10 | 849 | 8 | 909 | 15 | 1047 | 11 | 42.5 | 83.8 | 1.22 | 34.3 | 5.0 |
| DP161B2RF | **1103** | 4 | 1351 | 13 | 717 | 14 | 981 | 10 | 1038 | 12 | 41.0 | 83.2 | 1.20 | 33.8 | 5.1 |
| PHY425RF | **869** | 18 | **1510** | 4 | 682 | 17 | **1059** | 7 | 1030 | 13 | 42.6 | 83.3 | 1.15 | 31.9 | 5.2 |
| GA2004392 | **1013** | 6 | 1332 | 15 | 707 | 16 | 919 | 12 | 993 | 14T | 42.0 | 83.9 | 1.16 | 33.4 | 5.2 |
| PHY480WR | **993** | 11 | **1424** | 9 | 645 | 18 | 913 | 13T | 993 | 14T | 42.2 | 82.9 | 1.17 | 31.5 | 5.0 |
| PHY485WRF | **918** | 17 | 1231 | 17 | 805 | 11 | 913 | 13T | 967 | 15 | 42.3 | 83.1 | 1.15 | 32.1 | 5.2 |
| PHY440W | **989** | 13 | 1369 | 12 | 741 | 12 | 736 | 17 | 959 | 16 | 43.5 | 82.3 | 1.14 | 32.2 | 5.1 |
| BCSX0721B2RF | **920** | 16 | 1244 | 16 | 713 | 15 | 930 | 11 | 952 | 17 | 44.4 | 82.6 | 1.17 | 30.2 | 5.0 |
| Average | 1016 | | 1407 | | 819 | | 1030 | | 1068 | | 43.3 | 83.0 | 1.17 | 32.1 | 5 |
| LSD 0.10 | N.S.[b] | | 222 | | 160 | | 266 | | 137 | | 1.2 | 0.8 | 0.02 | 1.4 | 0.3 |
| CV % | 16.2 | | 13.3 | | 16.5 | | 21.6 | | 16.9 | | 2.8 | 1.0 | 1.96 | 4.7 | 5.1 |

[a] Superscripts indicate ranking at that location.

[b] The F-test indicated no statistical differences at the alpha = .10 probability level; therefore a LSD value was not calculated.

**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 6.** Two-year summary for dryland later maturity cotton varieties at four locations[a], 2007-2008, irrigated.

| Variety | Lint Yield | Lint | Uniformity Index | Length | Strength | Micronaire |
|---|---|---|---|---|---|---|
| | lb/acre | % | % | inches | g/tex | units |
| GA2004371 | **1010** | 45.4 | 83.0 | 1.12 | 31.2 | 5.0 |
| DP 555 BG/RR | **998** | 43.9 | 81.7 | 1.11 | 30.8 | 4.5 |
| DP174RF | 934 | 46.4 | 82.0 | 1.14 | 28.9 | 4.6 |
| GA2004392 | 925 | 42.5 | 82.9 | 1.12 | 32.1 | 5.0 |
| DP 164 B2RF | 915 | 41.2 | 82.3 | 1.16 | 30.8 | 4.5 |
| DP161B2RF | 885 | 41.4 | 82.3 | 1.17 | 31.9 | 4.7 |
| Average | 944 | 43.5 | 82.4 | 1.14 | 31.0 | 4.7 |
| LSD 0.10 | 67 | 0.5 | 0.5 | 0.01 | 0.9 | 0.2 |
| CV % | 17.0 | 2.7 | 1.0 | 1.99 | 4.9 | 6.1 |

[a] Athens, Midville, Plains, and Tifton.
**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 7.** Yield summary for later maturity cotton varieties, 2008, irrigated.

| | Lint Yield[a] | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Entry | Bainbridge | | Midville | | Plains | | Tifton | | 4-Loc. Average | | Lint | Unif. Index | Length | Strength | Mic. |
| | ---------- lb/acre ---------- | | | | | | | | | | % | % | in | g/tex | units |
| DP 555 BG/RR | 1521 | 8 | **2255** | 2 | 1551 | 7 | **1926** | 3 | **1813** | 1 | 44.6 | 82.0 | 1.16 | 31.8 | 4.2 |
| BCSX0727B2RF | **1727** | 2 | **2136** | 6 | **1677** | 2 | 1608 | 11 | **1787** | 2T | 43.9 | 82.4 | 1.16 | 30.4 | 4.5 |
| DP 0935 B2RF | **1655** | 3 | **2228** | 3 | 1327 | 17 | **1937** | 1 | **1787** | 2T | 44.1 | 82.5 | 1.14 | 29.7 | 4.3 |
| DP174RF | 1589 | 4 | **2120** | 7 | 1580 | 4 | 1626 | 10 | **1729** | 3 | 46.8 | 83.6 | 1.20 | 29.9 | 4.3 |
| PHY375WRF | **1762** | 1 | 2010 | 8 | 1532 | 8 | 1568 | 14 | **1718** | 4 | 44.1 | 82.7 | 1.16 | 30.1 | 3.9 |
| DP161B2RF | 1508 | 10 | **2187** | 4 | 1401 | 14 | 1730 | 8 | **1707** | 5 | 42.3 | 84.1 | 1.23 | 34.7 | 4.1 |
| PHY480WR | 1492 | 11 | **2291** | 1 | 1442 | 13 | 1555 | 15 | **1695** | 6 | 42.1 | 84.1 | 1.18 | 31.9 | 4.5 |
| GA2004358 | 1523 | 7 | 1934 | 11 | 1526 | 9 | 1734 | 7 | **1679** | 7 | 43.7 | 83.0 | 1.19 | 33.5 | 4.4 |
| BCSX0102LLB2 | 1536 | 6 | 2006 | 9 | 1552 | 6 | 1577 | 13 | **1668** | 8 | 41.7 | 84.2 | 1.24 | 33.8 | 4.2 |
| PHY485WRF | 1560 | 5 | 1987 | 10 | 1584 | 3 | 1529 | 16 | **1665** | 9 | 43.0 | 83.4 | 1.17 | 31.9 | 4.5 |
| BCSX0721B2RF | 1472 | 12 | 1621 | 17 | **1773** | 1 | 1785 | 6 | **1663** | 10 | 45.4 | 83.6 | 1.20 | 29.7 | 4.3 |
| GA2004137 | 1428 | 15 | 1740 | 15 | 1559 | 5 | **1906** | 4 | **1659** | 11 | 44.9 | 83.5 | 1.19 | 33.8 | 4.6 |
| GA2004392 | 1407 | 16 | 1897 | 12 | 1509 | 10 | 1693 | 9 | **1626** | 12 | 42.1 | 83.7 | 1.17 | 33.1 | 4.8 |
| GA2004371 | 1511 | 9 | 1570 | 18 | 1372 | 15 | **1932** | 2 | 1596 | 13 | 45.4 | 84.1 | 1.18 | 31.4 | 4.7 |
| PHY440W | 1451 | 13 | **2161** | 5 | 1482 | 11 | 1288 | 18 | 1595 | 14 | 42.3 | 82.9 | 1.17 | 31.6 | 4.2 |
| BCSX0614B2RF | 1306 | 17 | 1872 | 13 | 1370 | 16 | 1605 | 12 | 1538 | 15 | 40.2 | 83.2 | 1.20 | 30.9 | 4.1 |
| DP 164 B2RF | 1264 | 18 | 1706 | 16 | 1304 | 18 | **1823** | 5 | 1524 | 16 | 43.2 | 82.8 | 1.20 | 32.9 | 4.1 |
| PHY425RF | 1444 | 14 | 1794 | 14 | 1449 | 12 | 1401 | 17 | 1522 | 17 | 41.5 | 84.1 | 1.18 | 31.8 | 4.6 |
| Average | 1509 | | 1973 | | 1499 | | 1679 | | 1665 | | 43.4 | 83.3 | 1.18 | 31.8 | 4.4 |
| LSD 0.10 | 166 | | 230 | | 164 | | 151 | | 198 | | 1.2 | 0.7 | 0.02 | 1.4 | 0.3 |
| CV % | 9.3 | | 9.8 | | 9.2 | | 7.6 | | 9.1 | | 1.9 | 1.0 | 1.63 | 4.4 | 5.8 |

[a] Superscripts indicate ranking at that location.

**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table. 8.** Two-year summary for later maturity cotton varieties at four locations[a], 2007-2008, irrigated.

| Variety | Lint Yield | Lint | Uniformity Index | Length | Strength | Micronaire |
|---|---|---|---|---|---|---|
| | lb/acre | % | % | inches | g/tex | units |
| DP 555 BG/RR | **1819** | 44.5 | 82.4 | 1.2 | 30.8 | 4.4 |
| DP174RF | 1677 | 46.5 | 83.5 | 1.2 | 29.2 | 4.4 |
| DP161B2RF | 1663 | 41.8 | 84.2 | 1.2 | 32.9 | 4.2 |
| GA2004371 | 1638 | 45.5 | 83.8 | 1.2 | 31.0 | 4.8 |
| GA2004392 | 1638 | 41.8 | 84.1 | 1.2 | 32.3 | 4.9 |
| DP 164 B2RF | 1497 | 42.0 | 82.8 | 1.2 | 31.5 | 4.2 |
| Average | 1656 | 43.7 | 83.5 | 1.2 | 31.3 | 4.5 |
| LSD 0.10 | 79 | 0.3 | 0.5 | 0.01 | 0.7 | 0.2 |
| CV % | 11.6 | 1.6 | 1.1 | 2.02 | 4.0 | 5.9 |

[a] Bainbridge, Midville, Plains, and Tifton.
**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

**Table 9.** Yield summary for cotton strains, 2008, irrigated.

| Variety | Lint Yield[a] Midville | Plains | Tifton | 3-Loc. Average | Lint | Unif. Index | Length | Strength | Mic. |
|---|---|---|---|---|---|---|---|---|---|
| | lb/acre | | | | % | % | inches | g/tex | units |
| 07W505DF | **2279** 3 | **1841** 1 | **1504** 6 | **1875** 1 | 44.5 | 82.8 | 1.14 | 30.5 | 4.8 |
| DP 555 BG/RR | **2153** 6 | **1663** 2 | **1459** 8 | **1758** 2 | 44.6 | 82.4 | 1.16 | 32.1 | 4.2 |
| GA2006053 | 2079 7 | 1536 5 1 | **1644** 2 | **1753** 3 | 42.6 | 84.0 | 1.20 | 30.6 | 4.5 |
| DP 0935 B2RF | **2196** 4 | 1349 0 | **1699** 1 | **1748** 4 | 44.7 | 83.1 | 1.16 | 29.7 | 4.5 |
| BCSX0217 | 1990 8 | 1644 3 | **1495** 7 | **1710** 5 | 42.1 | 82.5 | 1.17 | 32.6 | 4.2 |
| BCSX0805LL | 1972 9 1 | 1575 4 | **1565** 4 | **1704** 6 | 41.9 | 81.8 | 1.14 | 29.9 | 4.1 |
| DP 0924 B2RF | 1963 0 5 | 1515 7 9 1 | **1591** 3 9 1 | **1690** 7 8 | 43.0 | 83.1 | 1.15 | 31.0 | 4.6 |
| GA2006127 | **2173** 5 | 1374 9 1 | **1451** 9 1 | **1666** 8 | 44.9 | 83.3 | 1.19 | 30.8 | 4.4 |
| 07X440DF | **2330** 1 | 1157 3 1 | **1429** 0 1 | **1639** 9 1 | 48.6 | 83.0 | 1.14 | 26.2 | 4.3 |
| GA2006168 | **2285** 2 | 1239 2 | **1378** 1 | **1634** 0 | 44.1 | 83.1 | 1.17 | 33.6 | 4.8 |
| GA2006128 | 1938 1 1 1 | 1529 6 1 | **1308** 1 3 | **1591** 1 1 1 | 43.4 | 84.2 | 1.22 | 32.5 | 4.6 |
| GA2006106 | 1800 3 1 | 1290 1 | **1518** 5 1 | **1536** 2 1 | 44.1 | 83.7 | 1.20 | 35.2 | 4.5 |
| GA2006109 | 1862 2 | 1396 8 | **1314** 2 | **1524** 3 | 44.1 | 83.6 | 1.23 | 33.7 | 4.2 |
| Average | 2078 | 1470 | 1489 | 1679 | 44.0 | 83.1 | 1.17 | 31.4 | 4.4 |
| LSD 0.10 | 233 | 188 | N.S.[b] | N.S. | 0.8 | 0.8 | 0.03 | 1.8 | 0.3 |
| CV % | 9.4 | 10.7 | 12.7 | 10.8 | 2.2 | 1.1 | 1.84 | 5.6 | 5.8 |

[a] Superscripts indicate ranking at that location.

[b] The F-test indicated no statistical differences at the alpha = .10 probability level; therefore a LSD value was not calculated.

**Bolding** indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).