

2013 COTTON OVT VARIETY TRIALS

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Introduction

The University of Georgia's 2013 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 UGA research and education centers in Midville, Plains, and Tifton. Dryland trials were conducted on university research and education centers in Athens, Midville, Plains, and Tifton. Performance data in these tables, combined with data from previous years should assist growers with 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 Annual Publication 104-5, January 2014.

Materials and Methods

The University of Georgia conducts Official Cotton Variety (OVT) and Strain (OST) trials across Georgia to provide growers, private industry, Extension specialists, and county agents with performance data to help in selecting high-yielding adapted varieties. Data from the OVT assists the private seed companies in assessing the fit of their products in Georgia. The University of Georgia cotton OVT is conducted by John D. Gassett, program director, Cotton OVT, Griffin, GA, along with J. LaDon Day, Department of Crop and Soil Sciences, Griffin, GA, and Anton Coy, senior agricultural specialist, Tifton, GA. The OVT is split into released 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 strain trials are irrigated and conducted at Midville, Plains, and Tifton. Trials consist of four replicated, 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) due to their placement alongside conventional varieties. A random fiber quality sample was taken on the picker during harvest and ginned to measure lint fraction on all plots including the irrigated early and late maturing trial at Tifton. But the remaining portion of the seed cotton from the early and later maturity plots was bagged and sent to the Micro Gin at Tifton for processing. All fiber samples were submitted to the USDA Classing Office in Macon, GA, for HVI analyses. Trials were picked with a state-of-the-art harvest system composed of an International IH 1822 picker fitted with weigh baskets and suspended from load cells. 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

For the first time since 2009, Georgia producers in 2013 were fortunate to have adequate soil moisture for planting combined with an abundance of rainfall. Prolonged and periodic precipitation events lead to spring plantings being delayed for many farmers in Georgia. Cooler than normal temperatures early in the planting season resulted in low soil temperatures and slowed germination for many crops. Irrigation was not a concern for most of the growing season. Rainfall throughout the season presented problems for ground applications of fungicides, insecticides, and supplemental nutrients. Extremely wet conditions in some areas of the state were detrimental to crops resulting in leaching of nutrients and crop losses due to water logging.

Seasonal rainfall totals received were normal to above normal amounts for much of Georgia during 2013. Areas in southwest Georgia received less than the normal amount of rainfall but were within an inch of achieving so. This was a drastic improvement for the area around Plains over the past four years. Much of the Piedmont and the rest of the Coastal Plain received 14-26 percent more rainfall than normal.

Crop maturity progressed below the five-year average and harvest conditions were hampered due to wet weather conditions in 2013. Cotton producers seeded 1.37 million acres in Georgia, a 6 percent increase from last year and the largest acreage since 2006.

Cotton yield of 831lbs/acre for 2013 was a 24 percent decrease from the 2012 record yield of 1,091 lbs/acre, a total production of 2.32 million bales or 20 percent less than the previous year.

Among varieties in the Dryland Earlier Maturity Trials, PHY 333 WRF, PHY 499 WRF, PX 444413 WRF, PX 444414 WRF, PX 300310 WRF, MON 12R224B2R2, ST 4946GLB2, DG CT13125F, PHY 339 WRF, SSG HQ 210 CT, and NG 1511 B2RF stand out as varieties with high yield and relative yield stability over four locations (Table 1). When summarized over two years and four locations, PHY 499 WRF was the top performer while four other varieties were above average (Table 2).

Among the best performing earlier maturing varieties produced under irrigation, PX 444413 WRF and PHY 499 WRF were the top two highest in yield when averaged over locations (Table 3). Eleven other varieties performed well and were above average in yield (Table 3). PHY 499 WRF was the top yielding variety when averaged over two years and locations in the Irrigated Early Maturity Trials conducted at Bainbridge, Midville, Plains, and Tifton (Table 4). Four other varieties were above average in yield (Table 4).

The top yielding later maturity varieties in the trial conducted without irrigation when averaged over four locations revealed the consistent performance of ST4747GLB2, PX 554010 WRF, PHY 499 WRF, NG 1511 B2RF, MON 13R352B2R2, PX 553840 WRF, ST6448GLB2, MON 12R242B2R2, and PHY 575 WRF (Table 5). Averaged over locations and years, PHY 499 WRF was the front runner along with three other varieties that produced above average lint yields (Table 6).

Under irrigation and averaged over four locations, the top five later maturing varieties were PX 554010 WRF, MON 13R352B2R2, DP 1252 B2RF, CG 3787 B2RF, and PHY 575 WRF (Table 7). Two other varieties, DP 1454NR B2RF and DP 1050 B2RF, were not statistically different from these top five. Averaged over locations and two years, DP 1252 B2RF and PHY 499 WRF were the two front runners, while three other varieties were above average in yield (Table 8).

The Earlier Maturity and Later Maturity Strains Trials (OST) portend improved varieties for crop seasons 2014 and beyond (Tables 9). Varieties from Dow, All-Tex, Georgia, and Monsanto were high-yielding performers among standard earlier and later maturing entries in the strains trial (Table 9).

For percent lint yield, the total seed cotton from replicated plots of the 2013 Early and Later Maturity irrigated experiments at Tifton were processed through the UGA Micro-Gin, located on the UGA Tifton Campus. Turn-out is presented in Tables 10 and Table 11. To obtain quality fractions, the Micro-ginned samples were sent to the USDA Classing Office in Macon, GA, for HVI analysis processing. Data can be found in Tables 10 and 11.

In summary, several new varieties described herein portend potentially higher yields and improved fiber quality packages available to Georgia growers.

Table 1. Yield Summary of Dryland Earlier Maturity Cotton Varieties, 2013

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Athens	Midville	Plains	Tifton	lb/acre						
PHY 333 WRF	1626 ¹	1994 ⁹	2033 ⁴	1659 ^{9T}	1828 ¹	45.7	84.6	1.19	31.6	4.4	
PHY 499 WRF	1194 ¹¹	2066 ⁵	2113 ²	1826 ²	1800 ²	45.6	83.9	1.15	32.6	4.8	
PX 444413 WRF	1097 ¹⁴	2167 ¹	2240 ¹	1657 ¹⁰	1790 ³	44.9	84.2	1.26	31.9	3.7	
PX 444414 WRF	1450 ³	2104 ²	1908 ¹⁰	1651 ¹¹	1778 ⁴	45.2	83.6	1.18	31.6	4.2	
PX 300310 WRF	1512 ²	2024 ⁷	2078 ³	1484 ²⁴	1774 ⁵	44.1	83.3	1.13	30.5	4.5	
MON 12R224B2R2	1293 ⁶	2007 ⁸	1922 ⁹	1659 ^{9T}	1720 ⁶	43.4	83.4	1.17	30.3	4.2	
ST 4946GLB2	1387 ⁴	2074 ⁴	1746 ²²	1610 ¹⁴	1704 ⁷	43.2	83.3	1.14	31.4	4.7	
DG CT13125F	1234 ⁹	1902 ¹⁵	1896 ¹¹	1692 ⁷	1681 ⁸	44.8	84.0	1.17	30.3	4.3	
PHY339 WRF	1091 ¹⁵	2037 ⁶	1958 ⁵	1600 ¹⁵	1671 ⁹	43.5	84.1	1.19	31.1	4.4	
SSG HQ 210 CT	1214 ¹⁰	1827 ²²	1867 ¹³	1757 ⁴	1666 ¹⁰	41.9	82.6	1.11	30.7	4.6	
NG 1511 B2RF	939 ²¹	1900 ¹⁶	1891 ¹²	1891 ¹	1655 ¹¹	45.1	84.1	1.14	31.2	4.8	
SSG AU 222	1278 ⁷	1850 ¹⁹	1807 ^{16T}	1593 ¹⁶	1632 ¹²	43.4	83.9	1.19	30.7	4.4	
GA2009037	928 ²²	1937 ¹²	1923 ⁸	1701 ⁶	1622 ¹³	42.7	82.5	1.19	31.4	4.6	
PHY 427 WRF	1247 ⁸	1857 ¹⁷	1806 ¹⁷	1561 ²⁰	1618 ¹⁴	42.0	83.5	1.16	31.6	4.2	
GA2010098	1152 ¹²	1990 ¹⁰	1807 ^{16T}	1506 ²²	1614 ¹⁵	43.2	83.6	1.20	32.4	4.2	
DP 1034 B2RF	927 ²³	1853 ¹⁸	1941 ⁶	1732 ⁵	1613 ¹⁶	44.6	84.5	1.19	29.4	4.5	
DP 0912 B2RF	1304 ⁵	1831 ²¹	1787 ¹⁹	1483 ²⁵	1601 ¹⁷	42.2	83.3	1.12	30.8	4.7	
CG 3428 B2RF	573 ²⁷	2091 ³	1936 ⁷	1770 ³	1593 ¹⁸	44.5	84.4	1.19	30.1	4.6	
DP 1321 B2RF	926 ²⁴	1942 ¹¹	1796 ¹⁸	1584 ¹⁸	1562 ¹⁹	44.4	83.9	1.13	30.9	4.9	
AM 1550 B2RF	1027 ¹⁸	1692 ²⁶	1845 ¹⁴	1679 ⁸	1561 ²⁰	43.4	82.5	1.12	28.2	4.5	
GA2008016	976 ¹⁹	1763 ²⁴	1823 ¹⁵	1612 ¹³	1543 ²¹	39.9	83.8	1.18	33.0	4.8	
DG2285 B2RF	1067 ¹⁶	1907 ¹³	1659 ²³	1501 ²³	1533 ²²	42.6	83.6	1.15	29.9	4.4	
SSG CT Linwood	1051 ¹⁷	1719 ²⁵	1757 ²¹	1519 ²¹	1511 ²³	43.5	84.1	1.15	33.9	4.9	
GA2004143	958 ²⁰	1904 ¹⁴	1580 ²⁵	1587 ¹⁷	1507 ^{24T}	44.8	83.6	1.21	34.1	4.4	
GA2009100	834 ²⁵	1839 ²⁰	1777 ²⁰	1578 ¹⁹	1507 ^{24T}	44.0	84.5	1.20	33.5	4.3	
PHY 417 WRF	1132 ¹³	1793 ²³	1564 ²⁶	1191 ²⁶	1420 ²⁵	44.1	83.3	1.15	31.3	4.1	
DG CT12353	724 ²⁶	1689 ²⁷	1617 ²⁴	1617 ¹²	1412 ²⁶	43.1	83.9	1.15	31.8	4.8	
Average	1116	1917	1855	1619	1627	43.7	83.7	1.17	31.3	4.5	
LSD 0.10	209	218	197	215	174	1.4	0.8	0.02	1.1	0.2	
CV %	15.9	9.7	9.0	11.3	10.9	2.4	1.0	2.17	4.2	5.0	

^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 of Dryland Earlier Maturity
Cotton Varieties at Four Locations^a, 2012-2013**

Variety	Lint Yield lb/acre	Lint %	Uniformity		Strength g/tex	Micronaire units
			Index %	Length inches		
PHY 499 WRF	1593	46.0	84.1	1.15	31.5	5.0
DP 1034 B2RF	1436	45.3	84.4	1.18	28.8	4.6
DP 1321 B2RF	1412	44.8	83.7	1.13	30.0	5.0
NG 1511 B2RF	1398	45.8	83.8	1.13	30.4	4.9
GA2009100	1397	44.8	83.9	1.18	32.4	4.6
DP 0912 B2RF	1390	42.9	83.4	1.12	30.0	5.0
SSG HQ 210 CT	1357	42.1	82.8	1.12	30.6	4.7
GA2004143	1341	44.7	84.3	1.20	33.3	4.6
SSG AU 222	1335	43.2	83.4	1.17	29.6	4.6
SSG CT Linwood	1324	43.4	84.0	1.13	32.3	4.9
AM 1550 B2RF	1312	43.3	82.8	1.12	28.1	4.6
Average	1391	44.2	83.7	1.15	30.6	4.8
LSD 0.10	60	0.5	0.5	0.02	0.7	0.1
CV%	10.5	2.7	1.1	2.37	4.1	4.7

^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 of Earlier Maturity Cotton Varieties, 2013, Irrigated

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Bainbridge	Midville	Plains	Tifton	----- lb/acre						
PX 444413 WRF	1532 ²	2097 ²	2146 ¹	1802 ⁵	1894 ¹	43.2	83.9	1.25	31.4	3.9	
PHY 499 WRF	1741 ¹	1988 ⁵	2015 ⁵	1829 ³	1893 ²	43.9	83.5	1.17	31.3	4.9	
PX 300310 WRF	1428 ⁶	2142 ¹	2079 ³	1870 ²	1880 ³	42.1	82.6	1.14	29.7	4.6	
PX 444414 WRF	1466 ³	2005 ⁴	1982 ⁷	1903 ¹	1839 ⁴	42.2	83.8	1.19	31.3	4.3	
PHY 333 WRF	1390 ⁷	2006 ³	2131 ²	1650 ¹⁵	1794 ⁵	42.8	84.0	1.20	31.0	4.5	
NG 1511 B2RF	1453 ⁵	1894 ¹⁰	1883 ¹³	1769 ⁷	1750 ⁶	45.0	84.3	1.17	31.9	5.0	
DP 1034 B2RF	1289 ¹⁵	1741 ²⁰	2062 ⁴	1799 ⁶	1723 ⁷	43.0	83.9	1.20	29.8	4.6	
SSG HQ 210 CT	1383 ⁸	1875 ¹²	1800 ¹⁹	1811 ⁴	1717 ⁸	41.0	82.6	1.13	31.0	4.9	
GA2009037	1245 ²⁰	1879 ^{11T}	1980 ⁸	1679 ¹²	1696 ⁹	40.8	82.8	1.20	31.1	4.6	
DP 1321 B2RF	1363 ¹⁰	1937 ⁷	1824 ¹⁷	1655 ^{13T}	1695 ¹⁰	41.9	83.7	1.17	30.3	4.8	
SSG AU 222	1345 ¹²	1802 ^{17T}	1903 ¹¹	1701 ⁹	1688 ^{11T}	41.8	83.9	1.21	30.7	4.6	
PHY339 WRF	1366 ^{9T}	1922 ⁸	1836 ¹⁵	1629 ¹⁸	1688 ^{11T}	41.7	83.7	1.20	30.2	4.3	
DP 0912 B2RF	1455 ⁴	1866 ¹³	1829 ¹⁶	1565 ²¹	1679 ¹²	40.7	83.6	1.14	30.4	5.1	
GA2009100	1234 ²¹	1856 ¹⁵	1914 ¹⁰	1705 ⁸	1677 ¹³	41.9	84.0	1.22	33.5	4.3	
AM 1550 B2RF	1366 ^{9T}	1620 ²⁴	2004 ⁶	1694 ¹⁰	1671 ¹⁴	41.2	83.0	1.14	28.5	4.6	
GA2004143	1270 ¹⁷	1938 ⁶	1789 ²⁰	1651 ¹⁴	1662 ¹⁵	42.5	84.4	1.24	33.2	4.5	
MON 12R224B2R2	1352 ¹¹	1902 ⁹	1725 ²³	1612 ¹⁹	1648 ¹⁶	40.2	84.2	1.20	30.5	4.3	
DG2285 B2RF	1313 ¹³	1727 ^{22T}	1742 ²²	1632 ¹⁷	1603 ¹⁷	41.3	83.0	1.17	28.7	4.6	
ST 4946GLB2	1308 ¹⁴	1807 ¹⁶	1599 ²⁶	1689 ¹¹	1601 ¹⁸	41.1	83.6	1.16	31.2	4.9	
DG CT13125F	1051 ²⁶	1879 ^{11T}	1975 ⁹	1491 ²⁴	1599 ¹⁹	41.9	83.7	1.21	30.5	4.2	
PHY 427 WRF	1272 ¹⁶	1747 ¹⁹	1714 ²⁴	1655 ^{13T}	1597 ²⁰	40.7	83.0	1.15	30.3	4.3	
GA2008016	1268 ¹⁹	1771 ¹⁸	1756 ²¹	1506 ²³	1575 ²¹	38.4	84.0	1.19	32.7	4.8	
DG CT12353	1170 ²³	1802 ^{17T}	1666 ²⁵	1640 ¹⁶	1570 ²²	41.8	83.4	1.16	31.4	5.0	
CG 3428 B2RF	1126 ²⁴	1727 ^{22T}	1816 ¹⁸	1607 ²⁰	1569 ²³	42.8	83.8	1.21	29.9	4.8	
GA2010098	1211 ²²	1730 ²¹	1896 ¹²	1408 ²⁵	1561 ²⁴	41.5	83.9	1.23	32.7	4.4	
SSG CT Linwood	1066 ²⁵	1859 ¹⁴	1850 ¹⁴	1181 ²⁶	1489 ²⁵	41.1	83.4	1.15	32.4	5.0	
PHY 417 WRF	1269 ¹⁸	1692 ²³	1467 ³⁷	1523 ²²	1488 ²⁶	41.7	82.8	1.16	30.2	4.2	
Average	1323	1860	1866	1654	1676	41.8	83.6	1.18	31.0	4.6	
LSD 0.10	180	156	148	168	126	1.2	0.6	0.02	1.1	0.2	
CV %	11.5	7.1	6.8	8.6	8.3	2.7	1.2	2.28	3.7	4.3	

^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 of Earlier Maturity Cotton Varieties
at Four Locations^a, 2012-2013, Irrigated**

Variety	Lint Yield lb/acre	Lint %	Uniformity		Strength g/tex	Micronaire units
			Index %	Length inches		
PHY 499 WRF	2020	43.7	84.1	1.17	30.4	4.7
DP 1034 B2RF	1883	43.4	84.3	1.19	28.3	4.4
NG 1511 B2RF	1816	44.0	84.2	1.15	29.6	4.6
GA2009100	1809	42.2	84.3	1.21	31.8	4.1
GA2004143	1798	42.8	84.4	1.23	32.3	4.4
SSG AU 222	1764	41.6	84	1.21	29.2	4.4
DP 0912 B2RF	1758	40.6	83.5	1.13	29.4	4.8
DP 1321 B2RF	1727	41.9	83.8	1.16	29.1	4.5
AM 1550 B2RF	1685	40.7	83.1	1.14	27.7	4.3
SSG HQ 210 CT	1659	40.6	83.2	1.15	30.2	4.6
SSG CT Linwood	1628	41.5	83.8	1.13	31.0	4.9
Average	1777	42.1	83.9	1.17	29.9	4.5
LSD 0.10	61	0.5	0.6	0.01	0.8	0.1
CV %	8.3	2.9	1.1	2.09	4.4	4.5

^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 of Dryland Later Maturity Cotton Varieties, 2013

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Athens	Midville	Plains	Tifton	lb/acre						
ST4747GLB2	1534 ¹	1832 ¹⁴	1872 ²	1807 ³	1761 ¹	44.6	83.3	1.21	31.3	4.5	
PX 554010 WRF	1491 ²	2035 ³	1683 ¹⁰	1628 ¹⁰	1709 ²	46.0	84.4	1.16	31.0	4.3	
PHY 499 WRF	1358 ⁴	1850 ¹¹	1652 ¹²	1811 ²	1668 ³	45.5	84.4	1.15	32.1	4.8	
NG 1511 B2RF	1237 ⁶	2091 ¹	1500 ¹⁸	1827 ¹	1664 ⁴	45.4	83.9	1.16	31.0	4.8	
MON 13R352B2R2	903 ¹⁴	2077 ²	1875 ¹	1777 ⁵	1658 ⁵	45.8	84.3	1.21	32.4	4.5	
PX 553840 WRF	1434 ³	1835 ¹³	1519 ¹⁷	1724 ⁷	1628 ⁶	43.2	84.4	1.18	32.5	4.3	
ST 6448GLB2	966 ¹⁰	1863 ⁸	1868 ³	1744 ⁶	1610 ⁷	43.2	83.6	1.21	31.2	4.5	
MON 12R242B2R2	1130 ⁹	1843 ¹²	1775 ⁵	1660 ⁸	1602 ⁸	44.4	83.9	1.16	29.0	4.9	
PHY575 WRF	1179 ⁷	1888 ⁷	1773 ⁶	1525 ¹⁷	1591 ⁹	43.6	83.9	1.22	30.3	4.2	
CG 3787 B2RF	868 ¹⁶	1851 ¹⁰	1747 ⁸	1804 ⁴	1567 ¹⁰	45.7	84.8	1.18	30.3	4.7	
DP 1137 B2RF	893 ¹⁵	1856 ⁹	1689 ⁹	1654 ⁹	1523 ¹¹	45.1	84.0	1.15	29.6	4.7	
DP 1050 B2RF	909 ¹³	2020 ⁴	1637 ¹³	1518 ¹⁸	1521 ¹²	45.8	83.8	1.18	29.7	4.7	
FM1944 GLB2	1277 ⁵	1710 ¹⁶	1522 ¹⁶	1553 ¹⁴	1516 ¹³	41.2	83.5	1.21	33.3	4.7	
DP 1252 B2RF	736 ²⁰	1979 ⁵	1760 ⁷	1578 ¹²	1513 ¹⁴	44.8	83.5	1.15	28.9	4.9	
DP 1454NR B2RF	927 ¹²	1913 ⁶	1477 ²⁰	1598 ¹¹	1479 ¹⁵	45.0	83.2	1.15	31.3	4.9	
GA2007095	1156 ⁸	1674 ¹⁹	1498 ¹⁹	1544 ¹⁵	1468 ¹⁶	43.0	83.4	1.15	31.6	4.8	
NG 5315 B2RF	757 ¹⁹	1800 ¹⁵	1666 ¹¹	1539 ¹⁶	1440 ¹⁷	45.4	84.3	1.17	29.2	4.7	
PHY 599 WRF	827 ¹⁷	1643 ²⁰	1794 ⁴	1403 ¹⁹	1417 ¹⁸	44.6	83.6	1.19	32.1	4.4	
GA 230	963 ¹¹	1708 ¹⁷	1569 ¹⁴	1339 ²⁰	1395 ¹⁹	43.0	83.6	1.23	31.9	4.4	
DG2610 B2RF	769 ¹⁸	1699 ¹⁸	1539 ¹⁵	1554 ¹³	1390 ²⁰	44.3	84.0	1.18	29.9	4.5	
Average	1066	1858	1671	1629	1556	44.5	83.9	1.18	30.9	4.6	
LSD 0.10	145	152	216	219	185	1.3	0.7	0.02	0.9	0.2	
CV %	11.5	6.9	10.9	11.4	10.1	2.2	0.9	1.82	4.1	4.5	

^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 6. Two-Year Summary of Dryland Later Maturity
Cotton Varieties at Four Locations^a, 2012-2013**

Variety	Lint Yield lb/acre	Lint %	Uniformity		Strength g/tex	Micronaire units
			Index %	Length inches		
PHY 499 WRF	1502	45.5	84.0	1.15	31.1	4.9
CG 3787 B2RF	1402	46.1	84.5	1.17	29.2	4.8
DP 1050 B2RF	1363	45.8	83.6	1.16	29.2	4.8
DP 1252 B2RF	1362	45.9	84.0	1.16	28.2	4.9
DP 1137 B2RF	1343	45.8	83.7	1.15	28.7	4.9
NG 1511 B2RF	1336	45.4	83.7	1.15	30.6	4.8
DG2610 B2RF	1297	45.1	83.9	1.17	29.4	4.6
GA2007095	1281	43.2	83.4	1.17	30.7	4.7
GA 230	1267	43.2	83.9	1.22	31.3	4.6
Average	1350	45.1	83.8	1.17	29.8	4.8
LSD 0.10	63	0.5	0.5	0.01	0.7	0.1
CV%	11.3	2.6	1.0	1.88	4.1	5.2

^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 of Later Maturity Cotton Varieties, 2013, Irrigated

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Bainbridge	Midville	Plains	Tifton	----- lb/acre -----						
PX 554010 WRF	1452 ⁶	2152 ¹	2014 ^{5T}	1827 ²	1861 ¹	45.0	84.0	1.16	30.7	4.3	
MON 13R352B2R2	1310 ¹²	2112 ²	2139 ¹	1871 ¹	1858 ²	43.5	83.9	1.22	32.4	4.4	
DP 1252 B2RF	1613 ¹	1924 ¹²	2045 ³	1668 ⁵	1813 ³	44.4	84.4	1.16	29.1	5.0	
CG 3787 B2RF	1523 ³	1994 ⁷	1939 ⁸	1784 ³	1810 ⁴	44.2	84.1	1.17	29.7	4.8	
PHY575 WRF	1435 ⁸	1870 ¹⁷	2014 ^{5T}	1690 ⁴	1752 ⁵	40.3	84.3	1.25	30.9	4.3	
DP 1454NR B2RF	1439 ⁷	1879 ¹⁵	2030 ⁴	1638 ⁷	1746 ⁶	42.4	83.3	1.16	30.7	4.9	
DP 1050 B2RF	1461 ⁵	1933 ^{11T}	1984 ⁶	1599 ¹⁰	1744 ⁷	44.3	84.4	1.19	28.3	4.7	
PHY 499 WRF	1529 ²²	1951 ¹⁰	1890 ⁹	1565 ¹²	1734 ⁸	43.3	84.7	1.17	31.9	4.9	
ST4747GLB2	1290 ¹⁶	2070 ⁴	2049 ²	1518 ¹⁴	1732 ⁹	42.0	83.4	1.22	30.7	4.5	
DP 1137 B2RF	1345 ¹¹	1933 ^{11T}	1976 ⁷	1659 ⁶	1728 ¹⁰	43.0	83.9	1.17	29.9	4.7	
NG 1511 B2RF	1425 ⁹	2106 ³	1855 ¹³	1506 ¹⁵	1723 ¹¹	44.0	83.7	1.16	30.9	4.9	
ST 6448GLB2	1292 ¹⁵	1997 ⁶	1867 ¹²	1610 ⁹	1692 ¹²	40.3	84.1	1.23	30.8	4.6	
PX 553840 WRF	1502 ⁴	2013 ⁵	1763 ^{16T}	1354 ¹⁷	1658 ¹³	41.2	84.5	1.17	31.6	4.5	
MON 12R242B2R2	1174 ²⁰	1921 ¹³	1878 ¹⁰	1627 ⁸	1650 ¹⁴	42.4	84.1	1.18	29.1	4.9	
NG 5315 B2RF	1307 ¹³	1975 ⁹	1769 ^{15T}	1532 ¹³	1646 ¹⁵	43.7	84.5	1.19	29.5	4.7	
DG2610 B2RF	1223 ¹⁹	1907 ¹⁴	1769 ^{15T}	1571 ¹¹	1617 ¹⁶	43.7	84.4	1.19	29.7	4.7	
FM1944 GLB2	1248 ¹⁸	1990 ⁸	1876 ¹¹	1255 ²⁰	1592 ¹⁷	39.6	83.6	1.21	33.0	4.6	
GA 230	1295 ¹⁴	1765 ¹⁸	1763 ^{16T}	1459 ¹⁶	1570 ¹⁸	39.8	83.5	1.25	30.9	4.3	
GA2007095	1266 ¹⁷	1871 ¹⁶	1784 ¹⁴	1336 ¹⁹	1564 ¹⁹	40.5	83.6	1.16	31.9	4.6	
PHY 599 WRF	1353 ¹⁰	1729 ¹⁹	1636 ¹⁷	1345 ¹⁸	1515 ²⁰	42.3	84.5	1.23	31.9	4.5	
Average	1374	1955	1902	1571	1700	42.5	84.0	1.19	30.7	4.6	
LSD 0.10	164	151	157	200	121	1.2	0.7	0.02	0.9	0.2	
CV %	10.1	6.5	7.0	10.8	8.4	2.8	0.9	1.98	4.0	4.1	

^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 of Later Maturity Cotton Varieties
at Four Locations^a, 2012-2013, Irrigated**

Variety	Lint Yield lb/acre	Lint %	Uniformity		Length inches	Strength g/tex	Micronaire units
			Index %				
DP 1252 B2RF	1948	44.9	84.4		1.16	27.8	4.6
PHY 499 WRF	1909	43.4	84.8		1.18	30.3	4.6
CG 3787 B2RF	1906	44.2	84.3		1.17	28.2	4.5
DP 1050 B2RF	1889	44.1	84.2		1.18	27.5	4.4
DP 1137 B2RF	1878	43.5	84.1		1.16	28.3	4.4
DG2610 B2RF	1818	43.8	84.4		1.19	28.4	4.4
NG 1511 B2RF	1740	43.5	83.9		1.15	29.6	4.5
GA 230	1679	40.1	84.3		1.26	30.2	4.0
GA2007095	1645	40.7	84.1		1.18	30.4	4.3
Average	1824	43.1	84.3		1.18	28.9	4.4
LSD 0.10	66	0.3	0.5		0.02	0.7	0.1
CV %	8.8	1.6	1.0		2.22	4.2	4.5

^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 of Cotton Strains, 2013, Irrigated

Variety	Lint Yield ^a				Lint %	Unif. Index %	Length inches	Strength g/tex	Mic. units
	Midville	Plains	Tifton	3-Loc. Average					
	----- lb/acre -----								
DGX 11W351 B2RF	2119 ²	2359 ¹	2225 ³	2234 ¹	45.7	83.2	1.17	30.9	4.5
GA 2010102	2066 ⁵	2167 ²	2144 ⁶	2126 ²	44.6	84.6	1.20	31.6	4.9
DP 1050 B2RF	2071 ³	1894 ⁹	2248 ¹	2071 ³	45.4	84.2	1.18	27.6	4.5
PHY 499 WRF	1979 ⁶	1915 ⁸	2232 ²	2042 ⁴	45.3	84.3	1.16	31.0	4.8
GA 2010074	2068 ⁴	1970 ⁷	2065 ⁷	2034 ⁵	44.0	83.9	1.21	31.6	4.5
DP 1454NR B2RF	1820 ¹⁹	1870 ^{10T}	2203 ⁴	1964 ⁶	44.2	83.4	1.15	32.4	5.0
MON 13R341B2R2	1929 ¹⁰	1870 ^{10T}	2047 ⁸	1949 ⁷	45.2	84.4	1.19	33.0	4.9
NB502-55T	1836 ¹⁶	2081 ³	1877 ¹⁴	1931 ⁸	43.2	84.5	1.19	31.7	4.6
GA 2011004	2194 ¹	2057 ⁴	1487 ¹⁹	1912 ⁹	45.9	84.1	1.18	29.6	4.8
NB502-18R	1824 ¹⁸	1744 ¹⁵	2150 ⁵	1906 ¹⁰	44.2	83.7	1.18	30.0	4.2
CT13414	1964 ⁸	1766 ¹⁴	1964 ¹³	1898 ¹¹	45.5	84.4	1.15	28.1	4.8
DP 0912 B2RF	1880 ¹³	1794 ¹²	2004 ¹¹	1893 ¹²	41.7	82.8	1.11	28.9	4.8
NB502-47T	1965 ⁷	1684 ¹⁷	2024 ¹⁰	1891 ¹³	43.4	82.9	1.19	28.9	4.2
GA 2011191	1945 ⁹	1828 ¹¹	1860 ¹⁵	1878 ¹⁴	43.6	84.0	1.17	30.3	4.6
PHY339 WRF	1915 ¹¹	1651 ¹⁸	2043 ⁹	1870 ¹⁵	42.6	83.5	1.18	29.4	4.1
GA 2010019	1874 ¹⁴	2002 ⁹	1640 ¹⁸	1839 ¹⁶	42.4	83.9	1.21	33.4	4.6
GA 2010076	1841 ¹⁵	2007 ⁸	1652 ¹⁷	1833 ¹⁷	43.0	83.5	1.23	32.5	4.2
NB502-68R	1890 ¹²	1784 ¹³	1801 ¹⁶	1825 ¹⁸	43.9	84.8	1.21	31.2	4.3
DG CT13324 B2RF	1835 ¹⁷	1623 ¹⁹	1969 ¹²	1809 ¹⁹	43.4	84.1	1.19	30.5	4.6
NB502-54T	1803 ²⁰	1730 ¹⁶	1475 ²⁰	1669 ²⁰	43.7	83.3	1.19	29.4	4.4
Average	1941	1890	1956	1929	44.1	83.9	1.18	30.6	4.6
LSD 0.10	175	178	246	232	1.5	0.8	0.03	1.6	0.2
CV %	7.6	8.0	10.6	8.9	2.2	0.8	1.83	3.7	4.4

^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 10. Earlier Maturity Cotton Variety Performance, 2013, Irrigated, Tifton, Georgia

Variety	Lint Yield lb/acre	Lint* %	Uniformity		Strength* g/tex	Micronaire* units
			Index* %	Length* inches		
PX 444414 WRF	1903	40.1	83.5	1.15	29.5	4.3
PX 300310 WRF	1870	39.4	81.9	1.14	28.7	4.6
PHY 499 WRF	1829	41.9	81.6	1.13	29.7	5.0
SSG HQ 210 CT	1811	39.9	82.2	1.11	28.2	5.0
PX 444413 WRF	1802	41.7	83.1	1.25	32.3	3.8
DP 1034 B2RF	1799	41.4	83.1	1.18	28.2	4.6
NG 1511 B2RF	1769	40.1	83.6	1.13	29.8	4.8
GA2009100	1705	39.8	83.6	1.23	30.9	4.1
SSG AU 222	1701	39.9	83.0	1.19	29.8	4.7
AM 1550 B2RF	1694	40.0	82.0	1.13	27.8	4.7
ST 4946GLB2	1689	40.7	82.4	1.10	29.8	5.0
GA2009037	1679	39.5	82.1	1.22	31.7	4.6
DP 1321 B2RF	1655	39.5	83.4	1.15	29.2	5.0
PHY 427 WRF	1655	39.6	81.7	1.12	28.9	4.4
GA2004143	1651	40.8	83.9	1.24	32.7	4.5
PHY 333 WRF	1650	41.4	83.4	1.17	30.4	4.5
DG CT12353	1640	40.8	82.7	1.14	30.1	5.0
DG2285 B2RF	1632	39.7	82.7	1.13	26.5	4.8
PHY339 WRF	1629	39.4	82.8	1.20	29.1	4.3
MON 12R224B2R2	1612	38.8	83.1	1.19	29.8	4.2
CG 3428 B2RF	1607	41.4	83.4	1.21	29.3	4.9
DP 0912 B2RF	1565	38.5	82.7	1.10	28.9	5.0
PHY 417 WRF	1523	40.2	82.4	1.14	28.5	4.1
GA2008016	1506	37.5	83.6	1.18	31.8	4.9
DG CT13125F	1491	40.7	82.4	1.18	29	4.4
GA2010098	1408	38.6	83.5	1.23	32.7	4.4
SSG CT Linwood	1181	39.1	82.8	1.12	31.6	5.1
Average	1654	40	82.8	1.16	29.8	4.6
LSD 0.10	168	0.7	N.S. ¹	0.04	1.6	0.2
CV%	8.6	1.5	0.9	2.06	3.2	2.7

* To determine percent lint fractions and quality parameters plot seed cotton was processed through the MicroGin located on the UGA Tifton Campus.

1. The F-test indicated no statistical differences at the alpha = 0.10 probability level; therefore an LSD value was not calculated.

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

Planted: April 30, 2013.

Harvested: October 10, 2013.

Seeding Rate: 4 seeds/foot in 36" rows.

Soil Type: Tifton sandy loam.

Soil Test: P = Medium, K = Medium, and pH = 6.8.

Fertilization: 25 lb N, 88 lb P₂O₅, and 100 lb K₂O/acre. Sidedress: 70 lb N and 25 lb K₂O/acre.

Previous Crop: Peanuts.

Management: Disked, subsoiled and bedded; Reflex, Cotoran, and Prowl used for weed control; Orthene and Bidrin used for insect control; Pix used for PGR.

	May	June	July	Aug.	Sept.	Oct.
Irrigation (in):	0	1.75	0	1.00	0.75	0
Rainfall (in):	2.26	6.86	8.67	7.41	0	0

Trials conducted by A. Coy, S. Willis, R. Brooke, D. Dunn, and B. McCranie.

Table 11. Later Maturity Cotton Variety Performance, 2013, Irrigated, Tifton, Georgia

Variety	Lint Yield lb/acre	Lint* %	Uniformity		Strength* g/tex	Micronaire* units
			Index* %	Length* inches		
MON 13R352B2R2	1871	42.2	82.7	1.18	31.6	4.7
PX 554010 WRF	1827	46.5	83.2	1.13	29.9	4.4
CG 3787 B2RF	1784	42.3	83.6	1.12	28.9	4.8
PHY575 WRF	1690	38.6	83.3	1.21	29.7	4.2
DP 1252 B2RF	1668	43.3	83.0	1.11	27.8	5.2
DP 1137 B2RF	1659	41.5	83.5	1.13	28.6	4.9
DP 1454NR B2RF	1638	39.4	82.9	1.14	30.1	5.1
MON 12R242B2R2	1627	40.5	83.3	1.15	27.5	5.0
ST 6448GLB2	1610	37.8	82.8	1.19	30.8	4.6
DP 1050 B2RF	1599	42.6	82.4	1.13	28.0	4.9
DG2610 B2RF	1571	41.4	83.6	1.14	29.2	4.8
PHY 499 WRF	1565	41.7	84.0	1.14	30.7	5.0
NG 5315 B2RF	1532	42.1	83.4	1.17	28.6	4.9
ST4747GLB2	1518	39.0	82.4	1.19	30.4	4.6
NG 1511 B2RF	1506	41.0	82.8	1.12	29.5	5.0
GA 230	1459	39.2	83.4	1.22	30.7	4.4
PX 553840 WRF	1354	38.7	83.8	1.15	32.0	4.5
PHY 599 WRF	1345	39.8	83.3	1.20	30.4	4.5
GA2007095	1336	38.2	82.5	1.12	29.7	4.7
FM1944 GLB2	1255	38.3	82.1	1.17	32.6	4.7
Average	1571	40.7	83.1	1.15	29.8	4.7
LSD 0.10	200	2.3	0.8	0.04	1.8	0.3
CV %	10.8	4.6	0.5	2.04	3.6	3.4

* To determine percent lint fractions and quality parameters plot seed cotton was processed through the MicroGin located on the UGA Tifton Campus.

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

Planted: April 30, 2013.

Harvested: October 10, 2013.

Seeding Rate: 4 seeds/foot in 36" rows.

Soil Type: Tifton sandy loam.

Soil Test: P = Medium, K = Medium, and pH = 6.8.

Fertilization: 25 lb N, 88 lb P₂O₅, and 100 lb K₂O/acre. Sidedress: 70 lb N and 25 lb K₂O/acre.

Previous Crop: Peanuts.

Management: Disked, subsoiled and bedded; Reflex, Cotoran, and Prowl used for weed control; Orthene and Bidrin used for insect control; Pix used for PGR.

	May	June	July	Aug.	Sept.	Oct.
Irrigation (in):	0	1.75	0	1.00	0.75	0
Rainfall (in):	2.26	6.86	8.67	7.41	0	0

Trials conducted by A. Coy, S. Willis, R. Brooke, D. Dunn, and B. McCranie.