

2012 COTTON OVT VARIETY TRIALS

J. LaDon Day¹, and Anton E. Coy²
1/ Crop & Soil Sciences, University of Georgia, Griffin, GA
2/ Crop & Soil Sciences, University of Georgia, Tifton, GA

Introduction

The University of Georgia's 2012 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 104-3, January 2013.

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 to assess the fit of their products in Georgia. The University of Georgia cotton OVT is conducted by J. LaDon Day, Program Director, Cotton OVT, Griffin, GA. along with 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 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 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 Starlab, Knoxville, TN. 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

Agricultural producers in Georgia experienced another year of lower than normal rainfall. The state was dry as of March 1, although there was adequate planting moisture in most areas. Planting progressed well ahead of 5-year averages. By early May, only a quarter of the state had adequate moisture. Except for south eastern Georgia, drought conditions continued through June. Irrigation began during early vegetative growth and continued through maturity in much of the state. Irrigation allowed 2/3 to 3/4 of the crop to remain in good condition throughout the season. Summer thunder storms were beneficial to some areas. Insect and disease pressure levels increased as the season progressed. Stink bugs were a concern in some areas.

Seasonal rainfall totals were 6 to 13 inches less than normal in north Georgia, with the most critical areas in the Limestone Valley region and Athens. In the Coastal Plain area rainfall was normal to 8 inches above long term average in the east and central to 17 inches below normal in the southwestern area around Plains. Extremely dry conditions (53% of normal rainfall) persisted for the last three years in Sumter (Plains) county and surrounding areas.

Crop maturity progressed ahead of the 5-year average and harvest conditions during 2012 were excellent. During 2012 Georgia cotton farmers planted 1.3 million acres-- 28% less than 2011.

The state 2012 average yield was 1,091 pounds per acre-- 38 percent higher than 2011 and a new state record yield. This yield level totaled over harvested acres of cotton produced 2.9 million bales—a new record for cotton production in Georgia.

Among varieties in the Dryland Earlier Maturity Trials, PHY 499 WRF, DP 1137 B2RF, GA2009100, DP 1219 B2RF, DP 1028 B2RF, DP 1321 B2RF, and DP1034 B2RF stand out as varieties with high yield and relative yield stability in the dryland trials averaged over four locations (Table 1). There were also eight other varieties above average in yield (Table 1). When summarized over two years and four locations PHY 499 WRF was the top performer, while seven other varieties were above average (Table 2).

Among the best performing earlier maturing varieties produced under irrigation, DP 1137 B2RF and PHY 499 WRF were the top two highest in yield when averaged over locations (Table 3). Fourteen 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). Eight other varieties were above average in yield (Table 4).

The top yielding later maturity variety in the trial conducted without irrigation and averaged over four locations revealed the consistent performance of PHY 499WRF, CG 3787 B2RF, BX1348GLB2, DP 1252 B2RF, DP 1050 B2RF, and DG2610B2RF (Table 5). An additional four varieties were above average in yield (Table 5). Averaged over locations and years, PHY 499 WRF was the front runner along with four other varieties that yielded above average lint (Table 6).

Under irrigation, there were ten varieties, in the top significant group of the standard later maturing trials averaged over locations with DP 1252 B2RF, PHY 499 WRF, DP 1034 B2RF, PX 5322-11WRF, and NGX0012B2RF among the top five yielding varieties (Table 7). One other variety was above average in lint yield (Table 7). Averaged over locations and two years, PHY 499 WRF and DP 1252 B2RF were the two front runners, while five other varieties were above average in yield (Table 8).

The Earlier Maturity and Later Maturity Strains Trials (OST) portend improved varieties for crop seasons 2013 and beyond (Tables 9). Varieties from Dow, All-Tex, Georgia, and Dyna-Gro, were high yielding performer 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 2012 Early and Later Maturity irrigated experiments at Tifton were processed through the Micro-gin, located on the UGA Tifton Campus and turn-out is presented in Table 10 and Table 11. To obtain quality fractions the Micro-ginned samples were sent to Starlab in Knoxville, TN for HVI analysis processing, and can be found in Tables 10 and 11.

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

Table 1. Yield Summary of Dryland Earlier Maturity Cotton Varieties, 2012

Variety	Lint Yield ^a					Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Athens	Midville	Plains	Tifton	4-Loc. Average					
	-----lb/acre-----									
PHY 499 WRF	1439 ¹	2118 ¹	523 ²⁶	1465 ⁴	1386 ¹	46.3	84.4	1.14	30.4	5.2
DP 1137 B2RF	1168 ^{4T}	2024 ²	491 ²⁸	1561 ²	1311 ²	45.3	84.0	1.14	27.7	4.8
GA2009100	1330 ²	1921 ³	556 ^{17T}	1342 ¹⁵	1287 ³	45.5	83.4	1.16	31.3	4.9
DP 1219 B2RF	1150 ⁷	1866 ⁵	554 ¹⁸	1572 ¹	1285 ⁴	44.8	83.5	1.18	30.8	4.8
DP 1028 B2RF	1143 ⁸	1829 ⁸	648 ⁴	1452 ⁷	1268 ⁵	45.3	84.2	1.14	28.8	4.7
DP 1321B2RF	1089 ¹²	1891 ⁴	605 ¹⁰	1464 ⁵	1262 ⁶	45.1	83.5	1.13	29.1	5.0
DP 1034 B2RF	1167 ⁵	1841 ⁷	575 ¹⁵	1456 ⁶	1260 ⁷	46.0	84.2	1.17	28.2	4.7
PX 4339-06 WRF	1105 ¹⁰	1757 ¹⁴	747 ¹	1402 ⁹	1253 ⁸	44.9	84.5	1.17	29.9	4.8
PX-4339-CB WRF	1151 ⁶	1812 ⁹	616 ⁸	1337 ¹⁷	1229 ⁹	44.4	83.7	1.15	29.2	4.8
BRS293	993 ^{21T}	1680 ²⁰	619 ⁷	1478 ³	1192 ¹⁰	42.6	84.1	1.17	31.6	5.0
All-Tex LA122	1099 ¹¹	1844 ⁶	562 ¹⁶	1252 ¹⁹	1189 ¹¹	44.9	84.6	1.16	29.3	4.7
DP 1311B2RF	1039 ¹⁷	1806 ¹⁰	540 ²²	1366 ¹²	1188 ¹²	44.8	83.4	1.17	28.0	4.9
FM1944 GLB2	865 ²⁸	1781 ¹²	689 ²	1391 ¹⁰	1181 ¹³	43.4	83.8	1.19	31.5	5.0
DP 0912 B2RF	1026 ¹⁹	1746 ¹⁶	601 ¹²	1343 ¹⁴	1179 ¹⁴	43.6	83.5	1.12	29.1	5.3
GA2004143	997 ²⁰	1715 ¹⁷	603 ¹¹	1388 ¹¹	1176 ¹⁵	44.6	85.0	1.20	32.5	4.8
GA2006106	961 ²⁵	1762 ¹³	535 ^{23T}	1340 ¹⁶	1150 ¹⁶	43.3	83.7	1.17	30.9	4.7
BX1346GLB2	1179 ³	1681 ¹⁹	606 ⁹	1120 ²⁸	1146 ¹⁷	44.9	83.4	1.14	29.2	4.9
Dyna-Gro 2570B2RF	1042 ¹⁶	1561 ²⁶	556 ^{17T}	1421 ⁸	1145 ¹⁸	44.0	83.6	1.14	29.2	5.0
NG 1511 B2RF	1048 ¹⁵	1750 ¹⁵	621 ⁶	1139 ²⁵	1140 ¹⁹	46.6	83.4	1.13	29.6	5.0
SSG CT Linwood	984 ²³	1797 ¹¹	634 ⁵	1129 ²⁷	1136 ²⁰	43.3	83.9	1.12	30.8	4.9
PHY 375 WRF	1168 ^{4T}	1644 ²³	585 ¹³	1134 ²⁶	1133 ²¹	44.6	83.5	1.14	29.0	4.6
DG2595 B2RF	1033 ¹⁸	1660 ²¹	576 ¹⁴	1245 ²⁰	1128 ²²	44.5	83.2	1.15	29.3	5.1
All-Tex Nitro 44 B2RF	973 ²⁴	1698 ¹⁸	527 ²⁴	1269 ¹⁸	1117 ²³	43.4	84.3	1.19	31.5	4.3
BRS286	993 ^{21T}	1610 ²⁴	672 ³	1184 ²³	1115 ²⁴	43.1	83.8	1.14	30.8	4.8
All-Tex 7A21	960 ²⁶	1596 ²⁵	546 ²¹	1350 ¹³	1113 ²⁵	43.9	84.0	1.16	29.8	4.8
PHY 367 WRF	1128 ⁹	1484 ^{28T}	547 ²⁰	1187 ²²	1086 ²⁶	43.0	84.1	1.16	30.2	4.7
AM 1550 B2RF	1056 ¹⁴	1484 ^{28T}	553 ¹⁹	1161 ²⁴	1064 ²⁷	43.1	83.2	1.12	28.0	4.8
SSG HQ 210 CT	1067 ¹³	1379 ²⁹	510 ²⁷	1239 ²¹	1049 ²⁸	42.4	83.0	1.13	30.6	4.8
SSG AU 222	992 ²²	1650 ²²	524 ²⁵	988 ³⁰	1039 ²⁹	43	83.0	1.15	28.5	4.8
GA2008057	888 ²⁷	1547 ²⁷	535 ^{23T}	1048 ²⁹	1004 ³⁰	42.1	84.3	1.19	31.7	4.5
Average	1074	1731	582	1307	1174	44.2	83.8	1.15	29.9	4.8
LSD 0.10	137	184	N.S. ¹	179	12.6	1.5	0.8	0.03	1.4	0.3
CV %	10.8	9.0	23.5	11.7	11.9	2.7	1.2	0.03	5.1	4.8

^a Superscripts indicate ranking at that location.

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).

Table 2. Two-Year Summary of Dryland Earlier Maturity Cotton Varieties at Four Locations^a, 2011-2012

Variety	Lint Yield	Lint	Uniformity	Length	Strength	Micronaire
	lb/acre	%	Index	inches	g/tex	units
			%			
PHY 499 WRF	1397	46.3	84.1	1.12	30.8	4.8
DP 1028 B2RF	1288	46.3	84.1	1.14	28.4	4.6
NG 1511 B2RF	1257	46.0	83.6	1.11	30	4.8
DP 0912 B2RF	1253	43.5	83.7	1.12	29.5	5.0
Dyna-Gro 2570B2RF	1182	43.3	83.6	1.12	29.4	4.7
All-Tex 7A21	1171	44.0	83.9	1.15	30.0	4.7
BRS293	1169	42.0	83.6	1.13	32.3	4.9
AM 1550 B2RF	1156	43.4	83.5	1.11	27.4	4.6
All-Tex LA122	1143	44.6	84.0	1.14	28.5	4.5
PHY 375 WRF	1142	44.4	83.4	1.11	28.6	4.3
GA2004143	1131	44.9	84.4	1.18	32.2	4.6
BRS286	1116	42.0	83.4	1.11	30.6	4.6
All-Tex Nitro 44 B2RF	1099	42.4	84.5	1.20	31.9	4.0
PHY 367 WRF	1086	43.5	83.8	1.14	29.9	4.4
GA2006106	1078	42.6	83.7	1.16	31.4	4.5
SSG HQ 210 CT	1064	41.9	82.8	1.12	30.6	4.7
SSG CT Linwood	1007	43.4	83.4	1.10	31.4	4.9
GA2008057	932	41.6	84.3	1.17	32.2	4.4
Average	1148	43.7	83.8	1.13	30.3	4.6
LSD 0.10	72	0.4	0.5	0.02	0.9	0.1
CV %	15.3	2.5	2.5	1.01	5.1	5.0

^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, 2012, Irrigated

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Bainbridge	Midville	Plains	Tifton							
	----- lb/acre -----										
DP 1137 B2RF	1915 ²	2384 ²	2316 ¹	2091 ²	2177 ¹		44.0	84.2	1.15	26.6	4.3
PHY 499 WRF	1922 ¹	2535 ¹	2065 ⁷	2067 ³	2147 ²		43.6	84.7	1.17	29.5	4.4
DP 1034 B2RF	1911 ³	2056 ¹⁸	2171 ²	2030 ⁵	2042 ³		43.9	84.7	1.17	26.9	4.3
DP 1028 B2RF	1762 ⁷	2249 ⁵	2144 ³	1913 ⁷	2017 ⁴		43.8	84.5	1.17	26.8	4.2
FM1944 GLB2	1824 ⁵	2296 ⁴	1909 ¹⁶	2036 ⁴	2016 ⁵		40.2	84.4	1.23	31.0	4.0
DP 1219 B2RF	1658 ¹⁴	2103 ¹⁰	2036 ⁸	2143 ¹	1985 ⁶		42.0	84.0	1.21	30.9	4.1
PX 4339-06 WRF	1661 ¹³	2357 ³	2011 ¹⁰	1816 ¹⁷	1961 ⁷		42.2	84	1.19	27.9	4.0
PX-4339-CB WRF	1796 ⁶	2145 ⁸	2024 ⁹	1823 ¹⁶	1947 ⁸		41.8	84.5	1.21	27.6	4.1
GA2009100	1841 ⁴	2126 ⁹	1781 ²¹	2017 ⁶	1941 ⁹		42.6	84.6	1.20	30.1	4.0
GA2004143	1757 ⁸	2099 ¹¹	2079 ⁶	1798 ¹⁸	1933 ¹⁰		43.1	84.5	1.22	31.3	4.3
DP 1311B2RF	1691 ¹⁰	2153 ⁷	1955 ¹¹	1895 ⁸	1924 ¹¹		43.8	83.9	1.17	26.8	4.0
All-Tex Nitro 44 B2RF	1734 ⁹	2058 ¹⁷	1894 ¹⁸	1885 ⁹	1893 ¹²		41.2	85.0	1.24	31.2	3.8
DG2595 B2RF	1550 ²⁰	2204 ⁶	1908 ¹⁷	1882 ¹⁰	1886 ¹³		40.8	83.5	1.17	28.2	4.4
NG 1511 B2RF	1536 ²²	2060 ¹⁶	2105 ⁴	1825 ¹⁵	1881 ¹⁴		43.0	84.1	1.14	27.3	4.3
BX1346GLB2	1645 ¹⁵	2073 ¹³	1947 ¹³	1833 ¹³	1874 ¹⁵		41.6	83.9	1.15	28.8	4.0
All-Tex LA122	1565 ¹⁹	1920 ²⁵	2100 ⁵	1872 ¹¹	1864 ¹⁶		43.0	84.3	1.17	27.1	4.0
All-Tex 7A21	1627 ¹⁶	2045 ²¹	1942 ¹⁴	1759 ²¹	1843 ¹⁷		41.7	84.9	1.22	28.4	4.1
SSG AU 222	1544 ²¹	2046 ²⁰	1939 ¹⁵	1831 ¹⁴	1840 ¹⁸		41.4	84.2	1.21	27.8	4.2
GA2006106	1669 ¹²	2017 ²³	1832 ¹⁹	1836 ¹²	1838 ¹⁹		39.7	84.6	1.22	30.1	4.1
DP 0912 B2RF	1567 ¹⁸	2086 ¹²	1951 ¹²	1743 ²³	1837 ²⁰		40.6	83.4	1.12	28.4	4.6
PHY 375 WRF	1514 ²⁵	2061 ¹⁵	1746 ²³	1796 ¹⁹	1779 ²¹		42.0	83.3	1.15	27.7	3.9
BRS293	1679 ¹¹	1985 ²⁴	1696 ²⁶	1752 ²²	1778 ²²		39.8	84.2	1.18	29.9	4.5
SSG CT Linwood	1527 ²³	2047 ^{19T}	1717 ²⁴	1774 ²⁰	1766 ²³		41.8	84.2	1.12	29.5	4.7
DP 1321B2RF	1516 ²⁴	2063 ¹⁴	1791 ²⁰	1668 ²⁶	1760 ²⁴		41.8	84.0	1.15	28.0	4.3
Dyna-Gro 2570B2RF	1477 ²⁶	2026 ²²	1655 ²⁸	1698 ²⁴	1714 ²⁵		39.4	84.1	1.16	28.9	4.4
AM 1550 B2RF	1609 ¹⁷	1809 ²⁷	1776 ²²	1604 ²⁷	1700 ²⁶		40.2	83.3	1.13	26.8	4.1
GA2008057	1419 ²⁷	2047 ^{19T}	1638 ²⁹	1582 ²⁹	1671 ²⁷		40.1	85.0	1.23	30.7	4.0
BRS286	1410 ²⁸	1749 ²⁹	1595 ³⁰	1683 ²⁵	1609 ²⁸		39.4	84.0	1.16	30.3	4.3
SSG HQ 210 CT	1325 ³⁰	1829 ²⁶	1660 ²⁷	1587 ²⁸	1600 ²⁹		40.2	83.8	1.17	29.4	4.2
PHY 367 WRF	1360 ²⁹	1781 ²⁸	1710 ²⁵	1539 ³⁰	1598 ³⁰		39.9	83.4	1.16	28.2	4.0
Average	1634	2080	1903	1826	1861		41.6	84.2	1.18	28.7	4.2
LSD 0.10	184	223	184	160	110		1.1	0.7	0.02	1.1	0.2
CV %	9.6	9.2	8.2	7.4	8.5		2.6	1.1	1.99	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 4. Two-Year Summary of Earlier Maturity Cotton Varieties at Four Locations^a, 2011-2012, Irrigated

Variety	Lint Yield lb/acre	Lint %	Uniformity Index %	Length inches	Strength g/tex	Micronaire units
PHY 499 WRF	2143	45.0	84.8	1.16	30.9	4.5
DP 1028 B2RF	2046	45.0	84.8	1.16	27.7	4.5
NG 1511 B2RF	1998	44.4	84.2	1.15	28.6	4.5
DP 0912 B2RF	1996	42.1	83.7	1.13	29.0	4.6
GA2004143	1920	43.6	84.9	1.22	32.6	4.3
All-Tex 7A21	1870	43.0	84.8	1.20	29.7	4.3
All-Tex Nitro 44 B2RF	1866	41.6	85.0	1.24	31.7	3.8
PHY 375 WRF	1865	43.1	83.8	1.15	28.4	4.1
All-Tex LA122	1845	43.6	84.5	1.17	28.1	4.2
GA2006106	1827	40.9	84.7	1.22	31.7	4.3
Dyna-Gro 2570B2RF	1816	40.9	84.4	1.16	29.6	4.4
BRS293	1781	40.8	84.1	1.17	32.0	4.5
AM 1550 B2RF	1779	41.2	83.8	1.14	27.5	4.3
PHY 367 WRF	1758	41.5	84.0	1.17	29.0	4.2
SSG CT Linwood	1690	42.2	84.5	1.12	31.6	4.9
SSG HQ 210 CT	1678	40.4	83.6	1.16	30.5	4.4
BRS286	1677	40.4	83.7	1.15	31.0	4.4
GA2008057	1586	40.6	85.1	1.22	32.1	4.1
Average	1841	42.2	84.4	1.17	30.1	4.3
LSD 0.10	72	0.4	0.5	0.01	0.8	0.1
CV %	9.5	2.5	1.0	1.96	4.6	5.4

^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, 2012

Variety	Lint Yield ^a					4-Loc. Average	Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Athens	Midville	Plains	Tifton	lb/acre						
PHY 499 WRF	1270 ²	2325 ¹	516 ¹⁴	1235 ²	1337 ¹	45.6	83.6	1.14	30.1	5.0	
CG 3787 B2RF	1218 ⁴	1961 ¹⁰	488 ¹⁹	1279 ¹	1236 ²	46.6	84.3	1.16	28.1	4.8	
BX1348GLB2	1156 ¹¹	2011 ⁷	519 ¹³	1178 ³	1216 ³	43.5	83.5	1.20	29.6	4.8	
DP 1252 B2RF	1135 ¹³	2103 ³	705 ¹	899 ¹²	1210 ⁴	46.9	84.5	1.16	27.5	4.9	
DP 1050 B2RF	1216 ⁵	2012 ⁶	549 ⁸	1043 ⁶	1205 ⁵	45.8	83.3	1.15	28.8	4.9	
DG2610 B2RF	1287 ¹	1995 ⁹	589 ⁴	943 ¹¹	1204 ⁶	45.8	83.7	1.16	28.9	4.8	
PX 5322-11 WRF	1186 ⁸	2061 ⁴	484 ^{21T}	1001 ⁷	1183 ⁷	42.9	84.1	1.20	28.9	4.6	
NGX0012B2RF	1157 ¹⁰	2027 ⁵	532 ¹²	958 ⁹	1168 ⁸	45.4	84.2	1.16	27.7	4.9	
DP 1137 B2RF	1206 ⁶	2105 ²	508 ¹⁶	835 ¹⁸	1163 ⁹	46.4	83.4	1.14	27.9	5.1	
GA2004230	1164 ⁹	2010 ⁸	484 ^{21T}	896 ¹³	1139 ¹⁰	43.4	84.2	1.21	30.8	4.7	
DP 1048 B2RF	1154 ¹²	1927 ¹¹	482 ²²	889 ¹⁵	1113 ¹¹	46.0	84.1	1.17	28.8	4.9	
PHY 565 WRF	935 ²³	1789 ¹³	563 ⁶	1107 ⁴	1099 ¹²	43.6	83.3	1.15	30.5	5.0	
GA2007095	1246 ³	1704 ¹⁸	534 ¹¹	893 ¹⁴	1094 ¹³	43.3	83.3	1.19	29.8	4.7	
MON 11R136B2R2	1012 ¹⁷	1753 ¹⁵	539 ¹⁰	988 ⁸	1073 ¹⁴	43.7	84.5	1.22	32.1	4.7	
DP 1359 B2RF	1014 ¹⁶	1680 ¹⁹	486 ²⁰	1078 ⁵	1064 ¹⁵	44.9	82.7	1.15	31.8	4.9	
DP 1034 B2RF	1200 ⁷	1585 ²¹	622 ³	803 ¹⁹	1053 ¹⁶	46.2	84.0	1.14	28.1	4.9	
PHY 375 WRF	1011 ¹⁸	1751 ¹⁶	556 ⁷	860 ¹⁷	1044 ¹⁷	44.9	83.2	1.14	28.8	4.7	
MON 11R154B2R2	1016 ¹⁵	1847 ¹²	506 ¹⁷	790 ²⁰	1040 ¹⁸	43.3	83.8	1.18	31.9	4.8	
PHY 440 W	994 ¹⁹	1711 ¹⁷	637 ²	728 ²¹	1018 ¹⁹	43.9	83.7	1.12	30.6	4.8	
NG 1511 B2RF	1070 ¹⁴	1786 ¹⁴	502 ¹⁸	674 ²²	1008 ²⁰	45.4	83.5	1.15	30.3	4.9	
GA2008083	936 ²²	1603 ²⁰	514 ¹⁵	951 ¹⁰	1001 ²¹	43.8	83.1	1.13	30.9	4.9	
All-Tex Nitro 44 B2RF	940 ²⁰	1493 ²²	584 ⁵	610 ²³	907 ²²	44.2	84.3	1.20	30.9	4.6	
SSG CT310 HQ	938 ²¹	1241 ²³	547 ⁹	869 ¹⁶	899 ²³	41.3	83.7	1.14	31.9	4.9	
Average	1107	1847	541	935	1108	44.6	83.7	1.16	29.8	4.8	
LSD 0.10	222	188	225	171	152	0.8	0.7	0.02	0.8	0.2	
CV %	11.5	7.8	10.9	7.6	9.4	1.7	1.2	1.93	3.9	4.8	

^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 6. Two-Year Summary of Dryland Later Maturity Cotton Varieties at Four Locations^a, 2011-2012

Variety	Lint Yield lb/acre	Lint %	Uniformity Index %	Length inches	Strength g/tex	Micronaire units
PHY 499 WRF	1360	46.1	83.6	1.12	30.7	4.7
DP 1050 B2RF	1224	45.7	83.3	1.13	27.9	4.7
DP 1137 B2RF	1211	45.8	83.7	1.13	28.2	4.9
DP 1252 B2RF	1190	46.7	84.1	1.14	27.8	4.7
DP 1048 B2RF	1171	45.7	83.8	1.14	28.4	4.6
NG 1511 B2RF	1134	45.4	83.5	1.12	30.1	4.7
DP 1034 B2RF	1120	45.6	83.7	1.13	27.7	4.6
GA2004230	1104	42.7	83.8	1.19	30.4	4.5
PHY 565 WRF	1081	42.6	83.3	1.13	30.3	4.5
GA2007095	1073	42.5	83.3	1.16	29.8	4.5
PHY 375 WRF	1056	44.5	83.0	1.12	28.3	4.4
PHY 440 W	1029	43.0	83.7	1.11	30.8	4.5
GA2008083	955	44.7	82.8	1.11	31.3	4.7
Average	1131	44.7	83.5	1.13	29.4	4.6
LSD 0.10	62	0.4	0.5	0.02	0.7	0.1
CV %	13.3	2.3	1.1	2.37	4.3	5.0

^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, 2011, Irrigated

Variety	Lint Yield ^a							Lint %	Unif. Index %	Length in	Strength g/tex	Mic. units
	Bainbridge	Midville	Plains	Tifton	4-Loc. Average	lb/acre						
DP 1252 B2RF	1600 ¹¹	2411 ²	2142 ¹	2183 ¹	2084 ^{1T}			45.4	84.4	1.16	26.6	4.2
PHY 499 WRF	1718 ⁸	2476 ¹	2111 ³	2033 ⁵	2084 ^{1T}			43.6	84.9	1.19	28.6	4.3
DP 1034 B2RF	1995 ²	2204 ⁸	2027 ⁵	2021 ⁶	2062 ²			44.5	84.3	1.18	26.3	4.1
PX 5322-11 WRF	1794 ⁵	2303 ⁴	1954 ⁸	2120 ²	2043 ⁶			41.2	84.4	1.24	27.2	3.8
NGX0012B2RF	1795 ⁴	2298 ⁵	1945 ⁹	2105 ^{3T}	2036 ⁴			44.4	84.4	1.18	26.0	4.1
DP 1050 B2RF	2025 ¹	2107 ¹²	1897 ¹⁰	2105 ^{3T}	2033 ⁵			43.9	83.9	1.18	26.6	4.0
DP 1137 B2RF	1792 ⁶	2403 ³	2054 ⁴	1858 ¹²	2027 ⁶			44.0	84.4	1.15	26.6	4.2
DG2610 B2RF	1689 ⁹	2165 ¹⁰	2137 ²	2081 ⁴	2018 ^{7T}			43.8	84.5	1.19	27.1	4.1
DP 1048 B2RF	1825 ³	2238 ⁷	1992 ⁶	2017 ⁷	2018 ^{7T}			43.6	84.3	1.19	26.0	4.2
CG 3787 B2RF	1765 ⁷	2280 ⁶	1962 ⁷	2005 ⁸	2003 ⁸			44.3	84.6	1.17	26.7	4.2
BX1348GLB2	1588 ¹²	2193 ⁹	1606 ¹⁷	2001 ⁹	1847 ⁹			40.7	84.7	1.25	29.2	4.0
GA2004230	1510 ¹⁵	2114 ¹¹	1702 ¹³	1822 ¹⁶	1787 ¹⁰			40.5	85.1	1.27	29.4	3.8
All-Tex Nitro 44 B2RF	1613 ¹⁰	1986 ¹⁷	1665 ¹⁴	1839 ^{13T}	1776 ¹¹			40.6	85.0	1.26	30.6	3.6
NG 1511 B2RF	1577 ¹³	1972 ¹⁹	1650 ¹⁶	1830 ¹⁵	1757 ¹²			43.0	84.0	1.15	28.3	4.1
MON 11R136B2R2	1490 ¹⁶	1988 ¹⁶	1652 ¹⁵	1839 ^{13T}	1742 ¹³			41.0	86.0	1.26	30.2	3.9
GA2007095	1485 ¹⁷	2065 ¹³	1521 ¹⁹	1835 ¹⁴	1727 ¹⁴			40.9	84.7	1.20	28.9	4.0
DP 1359 B2RF	1538 ¹⁴	1985 ¹⁸	1459 ²¹	1905 ¹¹	1722 ¹⁵			42.9	83.4	1.20	29.9	4.0
PHY 565 WRF	1367 ¹⁸	1892 ²¹	1769 ¹¹	1762 ¹⁷	1697 ¹⁶			41.1	84.2	1.20	29.4	3.9
PHY 440 W	1318 ²¹	1911 ²⁰	1721 ¹²	1637 ²⁰	1647 ¹⁷			40.2	84.4	1.17	28.9	4.1
PHY 375 WRF	1357 ¹⁹	2016 ¹⁵	1472 ²⁰	1638 ¹⁹	1621 ¹⁸			41.5	83.7	1.15	27.5	3.7
MON 11R154B2R2	1161 ²³	1727 ²²	1582 ¹⁸	1908 ¹⁰	1594 ¹⁹			42.4	83.2	1.20	31.0	3.9
GA2008083	1221 ²²	2062 ¹⁴	1271 ²²	1720 ¹⁸	1568 ²⁰			42.0	83.7	1.19	29.9	4.0
SSG CT310 HQ	1321 ²⁰	1693 ²³	914 ²³	1352 ²¹	1320 ²¹			37.7	83.7	1.15	32.1	4.0
Average	1589	2108	1748	1896	1835			42.3	84.3	1.19	28.4	4.0
LSD 0.10	222	188	225	171	152			0.8	0.7	0.02	0.8	0.2
CV %	11.5	7.8	10.9	7.6	9.4			1.7	1.2	1.93	3.9	4.8

^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 of Later Maturity Cotton Varieties at Four Locations^a, 2011-2012, Irrigated

Variety	Lint Yield	Lint	Uniformity Index	Length	Strength	Micronaire
	lb/acre	%	%	inches	g/tex	units
PHY 499 WRF	2132	44.1	84.9	1.17	30.5	4.4
DP 1252 B2RF	2090	45.8	84.7	1.17	27.9	4.3
DP 1050 B2RF	2058	45.0	84.5	1.18	27.5	4.3
DP 1137 B2RF	2033	44.5	84.7	1.16	27.5	4.4
DP 1048 B2RF	2019	44.0	84.6	1.19	27.3	4.3
DP 1034 B2RF	2015	45.1	84.7	1.18	27.0	4.4
NG 1511 B2RF	1931	43.9	84.4	1.15	29.2	4.4
GA2004230	1823	41.2	84.9	1.25	30.4	4.1
GA2007095	1803	41.4	84.6	1.19	30.1	4.3
PHY 375 WRF	1757	42.6	84.0	1.16	28.4	4.0
PHY 565 WRF	1744	41.6	84.6	1.19	30.7	4.1
GA2008083	1692	43.2	84.1	1.18	30.6	4.3
PHY 440 W	1654	40.7	84.6	1.17	29.8	4.2
Average	1904	43.3	84.6	1.18	29.0	4.3
LSD 0.10	68	0.4	N.S. ¹	0.01	1.6	0.1
CV %	8.7	2.0	0.9	2.04	3.7	5.3

^a Bainbridge, Midville, Plains, and Tifton.

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).

Table 9. Yield Summary of Cotton Strains, 2012, Irrigated

Variety	Lint Yield ^a				Lint %	Unif. Index %	Length inches	Strength g/tex	Mic. units
	Midville	Plains	Tifton	3-Loc. Average					
	----- lb/acre -----								
PX 5403-05WRF	2327 ¹	1796 ¹	2438 ¹	2187 ¹	43.0	85.1	1.23	30.9	3.9
PX 3122-40 WRF	2299 ²	1536 ³	2376 ²	2070 ²	44.9	85.3	1.20	30.1	4.0
All-Tex 9C253 B2RF	2144 ³	1623 ²	1985 ⁷	1918 ³	43.0	84.0	1.15	29.9	4.5
GA2010098	2056 ⁵	1470 ⁴	2185 ³	1904 ⁴	41.6	84.5	1.23	29.7	4.0
GA2009037	2140 ⁴	1415 ⁷	2073 ⁶	1876 ⁵	42.5	84.2	1.20	29.5	4.6
DG CT12214	2017 ⁸	1340 ⁸	2108 ⁵	1822 ⁶	41.3	84.4	1.18	27.3	4.0
GA2008016	2042 ⁶	1173 ⁹	2152 ⁴	1789 ⁷	40.6	85.1	1.22	33.1	4.5
All-Tex CR103233 B2RF	2003 ⁹	1427 ⁶	1684 ¹¹	1705 ⁸	43.3	83.1	1.20	26.7	4.0
All-Tex 981221501 B2RF	1688 ¹³	1439 ⁵	1885 ⁹	1671 ⁹	41.4	85.8	1.23	31.6	4.1
GA2009180	2020 ⁷	1165 ¹⁰	1729 ¹⁰	1638 ¹⁰	43.3	85.6	1.24	31.5	4.3
GA2009148	1877 ¹¹	1146 ¹¹	1886 ⁸	1636 ¹¹	42.8	84.4	1.19	31.2	4.6
GA2009147	1988 ¹⁰	1075 ¹³	1650 ¹²	1571 ¹²	40.6	83.9	1.20	32.2	4.0
All-Tex CR106466 B2RF	1755 ¹²	1133 ¹²	1556 ¹³	1481 ¹³	38.1	82.7	1.17	27.8	3.5
Average	2027	1365	1978	1790	42.0	84.5	1.20	30.1	4.1
LSD 0.10	199	226	318	188	1.6	0.9	0.20	1.3	0.2
CV %	8.2	13.8	13.5	11.8	2.6	1.1	2.28	3.9	6.1

^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 10. Tifton, Georgia: Earlier Maturity Cotton Variety Performance Micro-Gin Quality Data, 2012, Irrigated

Variety	Lint Yield lb/acre	Lint* %	Uniformity Index* %	Length* inches	Strength* g/tex	Micronaire*
DP 1219 B2RF	2143	40.0	82.9	1.20	31.1	4.4
DP 1137 B2RF	2091	41.4	84.4	1.16	25.9	4.7
PHY 499 WRF	2067	41.0	83.5	1.16	29.3	4.8
FM1944 GLB2	2036	38.0	83.8	1.22	30.1	4.5
DP 1034 B2RF	2030	41.2	84.0	1.16	27.4	4.7
GA2009100	2017	39.8	84.3	1.22	31.0	4.1
DP 1028 B2RF	1913	39.1	83.5	1.16	26.6	4.4
DP 1311 B2RF	1895	41.7	83.4	1.18	26.6	4.3
All-Tex Nitro 44 B2RF	1885	37.8	84.7	1.25	32.1	3.9
DG2595 B2RF	1882	38.1	83.8	1.18	29.6	4.9
All-Tex LA122	1872	39.4	84.2	1.18	26.8	4.1
GA2006106	1836	37.4	84.0	1.22	29.9	4.3
BX1346GLB2	1833	38.3	83.5	1.14	27.5	4.4
SSG AU 222	1831	37.8	83.4	1.19	27.6	4.3
NG 1511 B2RF	1825	39.1	83.2	1.11	27.8	4.8
PX-4339-CB WRF	1823	39.1	83.9	1.21	27.3	4.5
PX 4339-06 WRF	1816	39.0	83.4	1.18	28.7	4.3
GA2004143	1798	41.2	84.6	1.20	29.9	4.8
PHY 375 WRF	1796	39.9	83.0	1.16	27.8	4.4
SSG CT Linwood	1774	39.0	83.7	1.15	30.3	4.8
All-Tex 7A21	1759	39.0	83.8	1.20	28.6	4.2
BRS293	1752	37.5	83.2	1.16	30.7	4.6
DP 0912 B2RF	1743	37.4	82.4	1.13	27.9	5.0
Dyna-Gro 2570B2RF	1698	38.4	83.0	1.14	29.0	4.8
BRS286	1683	37.2	83.5	1.17	29.9	4.6
DP 1321 B2RF	1668	39.1	83.1	1.14	27.4	4.9
AM 1550 B2RF	1604	37.8	82.9	1.14	25.8	4.7
SSG HQ 210 CT	1587	36.4	82.4	1.16	27.8	4.5
GA2008057	1582	36.5	83.9	1.23	29.8	4.3
PHY 367 WRF	1539	37.7	83.0	1.16	28.1	4.2
Average	1826	38.9	83.5	1.17	28.6	4.5
LSD 0.10	160	0.8	1.0	0.03	1.6	0.3
CV %	7.4	1.8	0.7	1.35	3.2	3.9

* To determine percent lint fractions and quality parameters plot seed cotton was processed through the Micro-Gin 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, 2012.

Harvested: September 28, 2012.

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

Soil Type: Tifton loam.

Soil Test: P = Medium, K = Medium, and pH = 5.9.

Fertilization: 18 lb N, 54 lb P₂O₅, and 108 lb K₂O/acre. Sidedress: 80 lb N and 60 lb K₂O/acre.

Previous Crop: Peanuts.

Management: Disked, ripped, and bedded; Prowl, Cotoran, and Reflex used for weed control; Bidrin and Tracer used for insect control; Temik applied 5 lb/acre.

	April	May	June	July	Aug.	Sept.	Oct.
Irrigation (in):	0.80	0.50	0.80	3.00	0	0	0
Rainfall (in):	1.13	3.20	4.61	3.20	9.95	2.21	2.48

Trials conducted by A. Coy, R. Brooke, D. Dunn, S. Willis and L. Thompson.

**Table 11. Tifton, Georgia: Later Maturity Cotton Variety Performance
Micro-Gin Quality Data, 2012, Irrigated**

Variety	Lint Yield lb/acre	Lint* %	Uniformity Index* %	Length* inches	Strength* g/tex	Micronaire*
DP 1252 B2RF	2183	43.2	84.1	1.17	26.9	4.3
PX 5322-11 WRF	2120	38.4	84.3	1.25	27.0	4.0
NGX0012B2RF	2105	42.0	84.4	1.20	26.2	4.4
DP 1050 B2RF	2105	41.8	84.1	1.19	26.5	4.3
DG2610 B2RF	2081	41.5	84.6	1.19	26.9	4.3
PHY 499 WRF	2033	41.4	84.1	1.17	28.8	4.5
DP 1034 B2RF	2021	42.1	83.8	1.20	26.2	4.4
DP 1048 B2RF	2017	41.5	84.3	1.20	25.7	4.3
CG 3787 B2RF	2005	42.1	84.9	1.20	27.2	4.4
BX1348GLB2	2001	38.7	83.8	1.25	29.1	4.3
MON 11R154B2R2	1908	40.8	84.1	1.21	30.5	4.5
DP 1359 B2RF	1905	40.1	83.0	1.20	30.5	4.4
DP 1137 B2RF	1858	41.5	84.5	1.18	28.0	4.5
All-Tex Nitro 44 B2RF	1839	37.8	85.2	1.27	31.3	3.8
MON 11R136B2R2	1839	38.9	85.7	1.27	31.3	4.1
GA2007095	1835	38.2	83.7	1.19	29.5	4.3
NG 1511 B2RF	1830	39.5	82.9	1.16	28.7	4.4
GA2004230	1822	38.5	84.2	1.26	30.1	3.9
PHY 565 WRF	1762	38.6	84.3	1.20	29.9	4.1
GA2008083	1720	39.6	84.1	1.17	30.8	4.3
PHY 375 WRF	1638	38.8	83.6	1.15	27.9	4.2
PHY 440 W	1637	37.5	84.4	1.18	29.3	4.2
SSG CT310 HQ	1352	34.5	83.4	1.16	33.1	4.2
Average	1896	39.9	84.1	1.20	28.7	4.2
LSD 0.10	171	0.4	N.S. ¹	0.03	1.8	0.2
CV %	7.6	0.9	0.8	1.42	3.6	3.3

* To determine percent lint fractions and quality parameters plot seed cotton was processed through the Micro-Gin 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, 2012.

Harvested: September 28, 2012.

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

Soil Type: Tifton loam.

Soil Test: P = Medium, K = Medium, and pH = 5.9.

Fertilization: 18 lb N, 54 lb P₂O₅, and 108 lb K₂O/acre. Sidedress: 80 lb N and 60 lb K₂O/acre.

Previous Crop: Peanuts.

Management: Disked, ripped and bedded; Prowl, Cotoran and Reflex used for weed control; Bidrin and Tracer used for insect control; Temik applied 5 lb/acre.

	April	May	June	July	Aug.	Sept.	Oct.
Irrigation (in):	0.80	0.50	0.80	3.00	0	0	0
Rainfall (in):	1.13	3.20	4.61	3.20	9.95	2.21	2.48

Trials conducted by A. Coy, R. Brooke, D. Dunn, S. Willis and L. Thompson.