2007 COTTON VARIETY TRIALS

J. LaDon Day[1], and Larry Thompson[2]
[1]Crop & Soil Sciences, University of Georgia, Griffin, GA
[2]Crop & Soil Sciences, University of Georgia, Tifton, GA

Introduction

The 2007 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 714, January 2008.

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

2007 row crop season in Georgia can best be described as dry and hot for the second consecutive year. Beginning in April extreme to exceptional drought(a 100 year event) developed over two-thirds of the state. This area included all of Georgia north of the fall line and the western half of the Coastal Plain region. The only exception was the southeastern one-third of the state which received some beneficial rainfall from tropical storm Berry in early June.

During 2007, Cotton producers planted 1.04 million acres of cotton. This number of acres planted was a decrease of 26% less than 2006. The number of acres of harvested cotton was the lowest in 14 years and coupled with a four percent yield decrease, 1,650,000 bales were produced, a 30% reduction in yield from 2006.

Among varieties in the Dryland Earlier Maturity Trials, four varieties DP444BG/RR, DP455BG/RR, DP445BG/RR, and DynaGro CT07550, stand out as varieties with high yield and relative yield stability in the dryland trials (Table 1). There were 19 other varieties that performed above average(Table 1). When summarized over two years, DP 454 BG/RR, DP 445BG/RR, DP455BG/RR and PHY370WR, were the top performers (Table 2).

Among the best performing earlier maturing varieties produced under irrigation, DP454 BG/RR, ST4554B2RF, DP455BG/RR, ST4664RF, STX4678B2RF, PHY375WRF, PHY370WR, STX4596B2RF, DynaGro CT07550, and ST5327B2RF were the highest averaged over locations (Table 3). Twelve other varieties performed above average(Table 3). DP 454 BG/RR was the highest in yield when averaged over two years and locations in the Irrigated Early Maturity Trials conducted at Bainbridge, Midville, Plains, and Tifton; however, 10 other varieties yielded above average(Table 4).

Later maturity trials produced without irrigation also revealed the consistent performance of AM1550B2RF, DP445BG/RR, GA2004371, ST5599BR, GA2004392, DP455BG/RR, DP515BG/RR, ST5283RF, ST5327B2RF, DP555BG/RR, DP167RF, and STX06351B2RF (Table 5). Three other varieties performed above average(Table5). Averaged over locations and years, DP555BG/RR, DP454BG/RR, DP445BG/RR, DP515BG/RR, and ST5599BR were the front runners. But also yielding above average were three other varieties (Table 6).

Under irrigation, DP555 BG/RR, STX5458B2RF, DP515BG/RR, ST 5599BR, DP445BG/RR, and GA2004371 led the standard later maturing trials averaged over locations (Table 7), while 5 other varieties were above average in lint yield. Averaged

over years and locations, DP555BG/RR was the best performer (Table 8) with another five varieties yielding above average, Stoneville's 5599BR (Table 8), a variety released in 2003, continues to show promise to help growers with root knot nematodes as it possesses some resistance to root knot.

The Earlier Maturity and Later Maturity Strains Trials portend improved varieties for crop seasons 2008 and beyond (Tables 9). Varieties from Bayer Cropscience FiberMax, and Georgia were high yielding performer among standard earlier maturing entries in the strains trial. In the Later Maturity group two lines from Georgia performed well.

Presented in Table 10 is the Tifton, Georgia, 2007 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 portend potentially higher yields and improved fiber packages available to Georgia growers.

Table 1. Yield Summary for Dryland Earlier Maturity Cotton Varieties, 2007

Entry	Lint Yield[a] Athens	Midville	Plains	Tifton	4-Loc. Average	Lint	Unif. Index	Length	Strength	Mic.
	lb/acre					%	%	in	g/tex	units
DP 444 BG/RR	624 [7T]	**841** [2]	**862** [4]	**1675** [2]	**1001** [1]	45.3	81.6	1.08	28.4	3.9
DP 455 BG/RR	677 [2]	683 [8]	721 [15]	**1699** [1]	**945** [2T]	45.2	80.6	1.07	29.5	4.1
DP 445 BG/RR	624 [7T]	**719** [5]	792 [11]	**1644** [3]	**945** [2T]	44.5	82.2	1.09	29.8	4.2
DynaGro CT07550	570 [9]	654 [11]	**866** [3]	**1570** [5]	**915** [3]	44.2	82.1	1.07	29.2	4.3
DP 434 RR	547 [11]	599 [22T]	702 [17]	**1643** [4]	873 [4]	43.7	81.4	1.11	28.0	4.2
DP 454 BG/RR	658 [4]	**844** [1]	797 [9]	1187 [40]	872 [5]	45.8	81.8	1.06	27.6	4.0
FM1600LL	381 [43]	**815** [3]	830 [6]	1439 [17]	866 [6]	41.8	82.1	1.12	31.3	4.1
ST5283RF	674 [3]	**754** [4]	589 [38]	1434 [18T]	863 [7]	44.8	81.7	1.09	30.0	4.2
CG3035RF	651 [5]	648 [15]	779 [13]	1365 [26T]	861 [8]	44.3	81.9	1.07	28.9	4.2
ST5327B2RF	564 [10]	556 [31]	**908** [2]	1403 [21]	858 [9]	44.8	81.9	1.07	29.4	4.2
STX4678B2RF	498 [17]	694 [7]	794 [10]	1445 [16]	857 [10]	42.1	82.9	1.13	29.4	4.4
ST4427B2RF	480 [21]	495 [41]	**1058** [1]	1387 [23]	855 [11]	42.8	81.2	1.09	29.2	4.0
DP 121 RF	442 [31]	675 [9]	818 [8]	1416 [19]	838 [12]	44.6	81.9	1.09	29.4	4.5
CG3520B2RF	625 [6]	500 [40]	674 [25]	**1522** [8]	830 [13]	42.7	82.3	1.11	26.5	4.0
DynaGro 2520B2RF	**824** [1]	483 [42]	464 [45]	**1502** [10]	819 [14]	41.9	81.5	1.12	27.1	3.8
PHY375WRF	463 [26]	597 [23]	643 [30]	**1551** [6]	813 [15]	44.9	81.3	1.09	28.4	4.1
PHY370WR	520 [15]	584 [28]	775 [14]	1365 [26T]	811 [16]	43.9	81.7	1.06	29.2	4.3
ST 5242BR	470 [24]	614 [21]	700 [19]	1450 [15]	808 [17T]	43.9	81.8	1.05	27.6	4.1
STX4596B2RF	573 [8]	583 [29]	701 [18]	1376 [25]	808 [17T]	41.8	82.5	1.14	29.2	4.5
AM1532B2RF	542 [13]	471 [45]	700 [20]	**1515** [9]	807 [18T]	42.5	81.7	1.12	27.0	3.9
GA2004303	462 [27]	618 [20]	785 [12]	1361 [27]	807 [18T]	43.6	81.1	1.07	28.9	4.4
CG 3220B2RF	546 [12]	586 [27]	604 [35]	1458 [13]	798 [19]	41.9	82.1	1.11	28.6	4.2
PHY485WRF	486 [18]	666 [10]	680 [22]	1350 [30]	796 [20]	43.7	82.9	1.10	29.9	4.4
STX4498B2RF	539 [14]	621 [19]	687 [21T]	1334 [32]	795 [21]	43.4	81.9	1.08	30.7	4.1
FM1735LLB2	434 [32]	**718** [6]	580 [40]	1434 [18T]	791 [22T]	41.3	81.8	1.12	31.4	4.1
DP 393	501 [16]	650 [13]	602 [36]	1411 [20]	791 [22T]	43.3	82.2	1.11	29.5	4.3
PHY315RF	405 [39]	596 [24]	**860** [5]	1259 [38T]	780 [23]	45.0	80.9	1.08	28.0	4.1
FM9063B2F	402 [40]	599 [22T]	648 [29]	1454 [14]	776 [24]	42.0	81.4	1.13	30.4	3.9
ST 4554B2RF	423 [36]	641 [16]	653 [28]	1380 [24]	774 [25]	42.9	81.7	1.09	29.4	4.2
ST 4664RF	386 [41]	653 [12]	819 [7]	1236 [39]	773 [26]	43.1	81.6	1.07	29.7	4.2
PHY310R	461 [28]	591 [28]	668 [27]	1357 [28]	769 [27]	44.9	81.1	1.05	29.3	4.5
AM1504B2RF	354 [44]	507 [38]	716 [16]	1482 [11]	765 [28]	40.6	81.9	1.07	27.2	3.5
PHY425RF	473 [23T]	628 [18]	687 [21T]	1265 [37]	763 [29]	43.3	82.3	1.08	29.4	4.5
DP 432 RR	426 [33]	587 [29]	620 [32]	1399 [22]	758 [30]	43.3	82.2	1.07	29.0	4.2
FM955LLB2	384 [42]	638 [17]	435 [46]	**1537** [7]	749 [31]	40.2	81.7	1.14	29.3	4.4
ST 4357B2RF	474 [22]	479 [44]	557 [41]	1468 [12]	745 [32]	41.8	81.3	1.12	27.4	4.0
DP174RF	421 [37]	533 [33]	676 [24]	1276 [36]	727 [33]	46.2	81.5	1.10	28.1	4.6
DynaGro 2490B2RF	456 [29]	448 [46]	639 [31]	1356 [29]	725 [34]	40.0	81.3	1.06	27.3	3.3
PHY480WR	425 [34]	522 [35]	606 [34]	1327 [33]	720 [35]	42.7	82.5	1.10	29.5	4.4
CG3020B2RF	473 [23T]	480 [43]	542 [43]	1348 [31]	711 [36]	40.8	81.6	1.06	26.8	3.6

Table 1. (Continued) Yield Summary for Dryland Earlier Maturity Cotton Varieties, 2007

	Lint Yield[a]									
Entry	Athens	Midville	Plains	Tifton	4-Loc. Average	Lint	Unif. Index	Length	Strength	Mic.
	lb/acre					%	%	in	g/tex	units
DP161B2RF	481 [20]	510 [37]	553 [42]	1297 [34]	710 [37]	41.0	81.8	1.15	29.7	4.3
DP141B2RF	409 [38]	502 [39]	610 [33]	1291 [35]	703 [38]	42.3	80.6	1.12	29.7	4.2
DP 147 RF	465 [25]	649 [14]	595 [37]	1079 [43]	697 [39]	42.8	81.8	1.14	28.9	3.9
CG4020B2RF	424 [35]	517 [36]	584 [39]	1259 [38T]	696 [40]	42.0	80.9	1.10	26.5	3.9
DP 117 B2RF	444 [30]	545 [32]	679 [23]	1059 [44]	682 [41]	43.0	81.7	1.10	31.1	4.3
GA2004232	341 [45]	562 [30]	672 [26]	1104 [41]	670 [42]	45.2	81.7	1.13	30.7	4.3
DP 143 B2RF	484 [19]	527 [34]	532 [44]	1091 [42]	659 [43]	41.0	81.2	1.15	28.4	3.9
Average	497	604	691	1389	795	43.1	81.7	1.10	28.9	4.1
LSD 0.10	125	143	202	200	122	1.2	0.8	0.02	1.0	0.3
CV %	21.5	20.2	25.0	12.3	18.4	2.2	0.9	2.40	3.9	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 2. Two-Year Summary for Dryland Earlier Maturity Cotton Varieties at Four Locations[a], 2006-2007

Variety	Lint Yield	Lint	Uniformity Index	Length	Strength	Micronaire
	lb/acre	%	%	inches	g/tex	units
DP 454 BG/RR	**1095**	45.9	82.2	1.05	28.4	4.2
DP 445 BG/RR	**1062**	43.6	82.7	1.10	29.5	4.3
DP 455 BG/RR	**1062**	44.2	81.3	1.07	30.1	4.2
PHY370WR	**1041**	43.8	82.4	1.06	29.7	4.5
DP 444 BG/RR	1021	44.1	82.1	1.07	28.6	4.0
PHY485WRF	983	43.4	83.0	1.10	30.3	4.6
ST 5242BR	981	43.6	82.4	1.06	27.9	4.3
PHY310R	979	44.3	81.8	1.05	29.7	4.6
PHY480WR	977	42.1	83.1	1.11	30.1	4.6
PHY425RF	968	43.1	82.7	1.09	29.9	4.7
ST4427B2RF	961	42.3	81.9	1.09	29.7	4.3
DP 121 RF	948	43.9	82.4	1.09	29.8	4.7
DP 434 RR	942	42.9	81.9	1.11	28.1	4.5
FM9063B2F	937	41.8	82.3	1.15	31.0	4.1
DP 432 RR	932	42.3	82.6	1.07	29.0	4.4
DynaGro 2520B2	932	41.4	82.0	1.11	27.4	4.1
CG3520B2RF	928	42.1	82.4	1.10	26.4	4.2
DP 393	925	42.6	82.6	1.09	29.9	4.5
DP 117 B2RF	924	42.7	82.2	1.11	31.4	4.5
DP 143 B2RF	919	40.9	81.6	1.16	28.7	4.1
ST 4554B2RF	913	42.4	82.0	1.09	29.8	4.4
ST 4664RF	897	42.4	82.2	1.08	29.5	4.4
ST 4357B2RF	891	41.4	82.1	1.12	27.6	4.2
DP 147 RF	877	42.4	82.3	1.15	29.5	4.2
CG4020B2RF	855	41.5	81.6	1.10	27.0	4.2
CG3020B2RF	787	40.0	81.9	1.07	27.2	3.9
Average	951	42.7	82.2	1.09	29.1	4.3
LSD 0.10	68	0.4	0.4	0.02	0.8	0.2
CV %	17.3	2.3	0.9	2.40	4.4	5.9

[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, 2007, 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 454 BG/RR	**2399** [1]	1298 [31T]	**1840** [2]	**1947** [10]	**1871** [1]	45.5	82.4	1.11	29.6	4.2
ST 4554B2RF	2054 [15]	**1496** [3]	**1700** [3]	**2058** [3]	**1827** [2]	43.5	83.2	1.16	29.2	4.6
DP 455 BG/RR	2062 [14]	**1405** [17]	**1658** [5]	**2169** [1]	**1824** [3]	45.2	82.3	1.14	30.5	4.2
ST 4664RF	1845 [31]	**1430** [11]	**1845** [1]	**1991** [6]	**1778** [4]	44.1	82.6	1.13	29.9	4.5
STX4678B2RF	2095 [12]	**1421** [14T]	**1607** [7]	1926 [13]	**1762** [5]	41.5	83.7	1.18	29.8	4.6
PHY375WRF	2096 [11]	**1426** [12]	1325 [35]	**2168** [2]	**1754** [6]	45.2	83.3	1.17	30.0	4.3
PHY370WR	**2270** [2]	**1491** [4]	1385 [28]	1841 [22]	**1747** [7]	44.5	83.1	1.13	30.4	4.6
STX4596B2RF	2034 [17]	**1533** [1]	**1660** [4]	1656 [43]	**1721** [8]	41.6	83.6	1.21	30.2	4.6
DynaGro CT07550	**2228** [3]	**1391** [19]	1364 [30]	1895 [16]	**1720** [9]	44.0	83.5	1.16	28.9	4.7
ST5327B2RF	1884 [27]	**1436** [9]	**1600** [8]	1904 [15]	**1706** [10]	44.1	83.4	1.16	30.0	4.4
GA2004303	1968 [20]	1368 [24]	1523 [12]	1928 [11]	1697 [11]	44.0	82.9	1.14	31.2	4.7
DP161B2RF	2011 [18]	**1421** [14T]	1504 [15]	1840 [23]	1694 [12]	41.7	84.2	1.23	31.3	4.3
STX4498B2RF	1935 [22T]	**1481** [7]	1552 [11]	1792 [32]	1690 [13]	42.3	83.4	1.15	30.6	4.3
PHY315RF	1976 [19]	1358 [25]	1561 [10]	1862 [20]	1689 [14]	44.6	83.0	1.15	28.8	4.3
ST4427B2RF	1804 [35]	1371 [23]	**1609** [6]	**1959** [8]	1686 [15]	42.4	82.9	1.15	30.4	4.0
PHY425RF	**2225** [4]	**1390** [20]	1389 [26]	1714 [39]	1679 [16]	42.1	84.1	1.18	30.8	4.8
DP 434 RR	2094 [13]	1251 [36]	1454 [17]	1911 [14]	1677 [17]	43.1	83.2	1.19	28.3	4.4
DP174RF	2135 [7]	**1501** [2]	1509 [14]	1541 [46]	1672 [18]	46.3	83.6	1.18	28.7	4.6
FM1735LLB2	1841 [32]	**1453** [8]	1363 [31T]	**2010** [5]	1667 [19]	41.2	83.1	1.15	31.8	4.5
DP 445 BG/RR	1735 [42]	**1423** [13]	1386 [27]	**2042** [4]	1647 [20]	43.6	83.6	1.15	30.4	4.5
PHY485WRF	2127 [9]	1294 [32]	1398 [25]	1759 [37]	1645 [21]	42.5	83.9	1.17	30.6	4.7
PHY310R	1963 [21]	**1488** [6]	1231 [39]	1881 [17]	1641 [22]	45.7	83.3	1.12	30.0	4.6
DP 117 B2RF	2102 [10]	**1408** [16]	1402 [23T]	1617 [44]	1632 [23]	42.9	83.1	1.18	31.7	4.3
GA2004232	1847 [30]	**1385** [21]	1583 [9]	1676 [41]	1623 [24]	47.0	83.5	1.20	31.1	4.5
DP 444 BG/RR	1935 [22T]	1336 [28]	1402 [23T]	1809 [29]	1621 [25T]	44.2	83.4	1.15	29.4	4.3
PHY480WR	**2215** [5]	1181 [42]	1431 [19]	1658 [42]	1621 [25T]	41.5	84.1	1.17	30.4	4.6
DP 143 B2RF	2132 [8]	1304 [30]	1263 [38]	1776 [35]	1619 [26]	41.8	82.7	1.23	29.7	4.2
DP 121 RF	2048 [16]	1266 [34]	1357 [32]	1795 [31]	1616 [27]	44.0	83.6	1.16	30.1	4.7
DP141B2RF	2145 [6]	**1489** [5]	1065 [43]	1724 [38]	1606 [28]	41.6	82.9	1.23	30.2	4.3
ST5283RF	1740 [41]	**1417** [15]	1402 [23T]	1823 [27]	1596 [29]	44.1	83.3	1.16	31.0	4.4
FM1600LL	1848 [29]	**1432** [10]	1110 [42]	**1950** [9]	1585 [30]	41.9	83.5	1.17	32.5	4.5
DynaGro 2520B2RF	1920 [23]	1136 [45]	1427 [20]	1854 [21]	1584 [31]	41.9	83.3	1.19	27.7	4.3
AM1532B2RF	1905 [25]	1247 [37]	1363 [31T]	1816 [28]	1583 [32]	41.9	83.3	1.18	28.0	4.3
ST 5242BR	1910 [24]	**1392** [18]	1194 [40]	1825 [26]	1580 [33]	42.9	83.1	1.11	28.3	4.7
CG3520B2RF	1814 [33]	1184 [41]	1462 [16T]	1837 [24]	1574 [34]	42.4	83.3	1.18	27.2	4.2
AM1504B2RF	1680 [43]	1287 [33]	1445 [18]	1872 [18]	1571 [35]	41.4	83.4	1.13	28.4	4.1
CG3035RF	1806 [34]	1199 [40]	1347 [33]	1927 [12]	1570 [36]	43.2	83.4	1.15	29.5	4.4
ST 4357B2RF	1767 [39]	1255 [35]	1416 [22]	1834 [25]	1568 [37]	42.6	83.2	1.19	28.3	4.1
DP 432 RR	1890 [26]	1238 [38]	1344 [34]	1787 [33]	1565 [38]	42.6	83.8	1.15	29.8	4.5
DP 147 RF	1775 [37]	1309 [29]	1375 [29]	1782 [34]	1560 [39]	42.9	83.2	1.23	30.5	4.2

Table 3. (Continued) Yield Summary for Earlier Maturity Cotton Varieties, 2007, Irrigated.

Entry	Lint Yield[a] Bainbridge	Midville	Plains	Tifton	4-Loc.	Lint	Unif.	Length	Strength	Mic.
	---------- lb/acre ----------					%	%	in	g/tex	units
DynaGro 2490B2RF	1775 [38]	1168 [43]	1400 [24]	1808 [30]	1538 [40]	40.8	82.9	1.13	28.3	3.7
CG4020B2RF	1802 [36]	1160 [44]	1462 [16T]	1709 [40]	1533 [41]	42.2	83.1	1.19	27.7	4.1
DP 393	1750 [40]	1223 [39]	1285 [36]	1866 [19]	1531 [42]	42.7	84.3	1.19	30.5	4.7
CG 3220B2RF	1867 [28]	1298 [31T]	1423 [21]	1498 [47]	1522 [43]	41.9	83.7	1.18	29.1	4.6
FM9063B2F	1654 [44]	1354 [26]	1274 [37]	1768 [36]	1513 [44]	41.3	83.2	1.21	31.1	4.2
FM955LLB2	1418 [46]	**1379** [22]	1176 [41]	**1974** [7]	1487 [45]	39.7	83.5	1.21	30.7	4.6
CG3020B2RF	1440 [45]	1347 [27]	1511 [13]	1572 [45]	1467 [46]	40.4	83.4	1.14	27.9	4.0
Average	1935	1351	1434	1837	1639	42.9	83.3	1.17	29.8	4.4
LSD 0.10	228	157	255	230	173	1.1	0.6	0.02	0.7	0.2
CV %	10.1	9.9	15.2	10.7	11.5	2.2	0.8	1.59	2.8	4.9

[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], 2006-2007, Irrigated

Variety	Lint Yield	Lint	Uniformity Index	Length	Strength	Micronaire
	lb/acre	%	%	inches	g/tex	units
DP 454 BG/RR	**1840**	45.3	83.0	1.12	29.5	4.2
PHY370WR	1696	43.7	83.4	1.12	30.4	4.7
DP 455 BG/RR	1695	44.4	82.3	1.13	30.8	4.3
ST4427B2RF	1671	42.0	83.1	1.14	30.2	4.3
PHY425RF	1635	42.0	84.4	1.17	31.1	4.8
ST 4554B2RF	1635	42.3	83.3	1.14	29.2	4.7
PHY485WRF	1616	42.4	84.1	1.16	30.5	4.8
PHY480WR	1607	41.7	84.3	1.17	30.4	4.7
ST 4664RF	1596	43.1	82.8	1.12	29.5	4.7
PHY310R	1576	44.7	83.4	1.11	30.2	4.7
DP 117 B2RF	1567	42.5	83.6	1.17	32.2	4.4
DP 143 B2RF	1558	41.4	82.8	1.22	28.9	4.2
DP 434 RR	1538	42.4	83.6	1.17	27.7	4.4
DP 444 BG/RR	1535	43.4	83.4	1.13	29.3	4.3
DP 393	1521	42.1	84.2	1.17	30.4	4.7
DynaGro 2520B2RF	1521	41.2	83.4	1.17	27.9	4.4
ST 5242BR	1503	43.1	83.3	1.11	28.0	4.5
DP 147 RF	1501	42.0	83.4	1.22	31.0	4.2
DP 445 BG/RR	1501	43.0	83.7	1.14	29.9	4.6
DP 121 RF	1485	43.6	84.0	1.15	30.0	4.7
CG4020B2RF	1484	41.6	83.5	1.18	27.6	4.3
ST 4357B2RF	1480	41.6	83.5	1.17	28.0	4.3
CG3520B2RF	1475	41.4	83.5	1.16	26.7	4.4
FM9063B2F	1470	40.8	83.7	1.22	31.3	4.2
DP 432 RR	1465	42.7	83.8	1.14	29.7	4.7
CG3020B2RF	1382	39.5	83.4	1.12	27.6	4.2
Average	1560	42.5	83.5	1.16	29.5	4.5
LSD 0.10	79	0.4	0.4	0.01	0.5	0.2
CV %	12.3	2.2	0.8	1.64	3.0	5.3

[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, 2007

	Lint Yield[a]									
Entry	Athens	Midville	Plains	Tifton	4-Loc. Average	Lint	Unif. Index	Length	Strength	Mic.
	lb/acre					%	%	in	g/tex	units
AM1550B2RF	**559** [1]	**559** [8]	**659** [12T]	**1841** [1]	**904** [1]	43.9	81.1	1.06	26.4	4.2
DP 445 BG/RR	**494** [12]	**612** [4T]	**695** [9]	**1807** [2]	**902** [2]	44.5	82.3	1.11	29.6	4.1
GA2004371	**531** [3]	**601** [5]	**718** [6]	**1739** [3]	**897** [3]	46.0	82.3	1.08	29.3	4.8
ST 5599BR	**549** [2]	**623** [2]	**696** [8]	1676 [4]	**886** [4]	43.2	80.9	1.06	29.0	4.3
GA2004392	**500** [7]	**640** [1]	**854** [1]	1434 [16]	**857** [5]	43.1	82.0	1.07	30.9	4.9
DP 455 BG/RR	**496** [11T]	**577** [7]	**637** [15]	1668 [5]	**844** [6]	45.1	80.5	1.07	28.8	3.9
DP 515 BG/RR	**496** [11T]	469 [21]	**815** [2]	1518 [10]	**824** [7]	44.1	81.0	1.06	28.7	4.4
ST5283RF	**499** [8]	471 [20]	**795** [3]	1473 [14]	**810** [8]	45.2	81.9	1.07	29.7	4.1
ST5327B2RF	**506** [6]	517 [14]	**673** [11]	1541 [8]	**809** [9]	44.9	82.2	1.08	29.7	4.2
DP 555 BG/RR	**497** [10]	518 [13]	**698** [7]	1503 [11]	**804** [10]	44.3	80.4	1.07	28.5	4.4
DP 167 RF	434 [14]	**537** [11]	**658** [13]	1579 [7]	**802** [11]	41.8	81.0	1.11	29.1	4.2
STX06351B2RF	**515** [4]	**621** [3]	545 [19]	1524 [9]	**801** [12]	40.5	81.5	1.11	27.9	4.0
DP 493	366 [21]	519 [12]	**652** [14]	1597 [6]	783 [13]	44.9	81.2	1.08	30.7	4.7
DP 454 BG/RR	**498** [9]	**612** [4T]	**693** [10]	1320 [22]	781 [14]	44.6	81.4	1.06	28.1	3.7
STX5458B2RF	**496** [11T]	504 [17]	**659** [12T]	1442 [15]	775 [15]	43.1	81.0	1.08	29.0	4.4
GA2004356	418 [16]	**594** [6]	**626** [16]	1425 [17]	766 [16]	44.5	82.3	1.11	30.4	4.4
DP 147 RF	412 [18]	**540** [10]	**720** [5]	1304 [25]	744 [17]	42.5	80.9	1.13	29.4	3.9
DP 164 B2RF	**507** [5]	512 [15]	440 [23]	1502 [12]	740 [18]	41.6	81.2	1.12	28.5	4.3
DP161B2RF	446 [13]	**543** [9]	452 [21]	1484 [13]	731 [19]	41.8	81.5	1.14	29.9	4.3
DP174RF	358 [23]	511 [16]	570 [18]	1419 [18]	715 [20]	45.9	81.3	1.11	27.8	4.3
DP 143 B2RF	417 [17]	493 [18]	**600** [17]	1331 [20]	710 [21]	41.3	81.3	1.15	28.3	3.9
PHY745WRF	432 [15]	388 [24]	**775** [4]	1142 [26]	684 [22]	43.0	81.5	1.08	30.1	3.8
ST 6622RF	406 [19]	479 [19]	527 [20]	1318 [23]	683 [23]	41.1	81.9	1.11	30.7	4.2
ST 6611B2RF	345 [24]	401 [23]	438 [24]	1364 [19]	637 [24]	40.1	81.5	1.08	29.7	4.1
FM1880B2F	363 [22]	373 [25]	448 [22]	1314 [24]	625 [25]	41.0	80.8	1.10	30.3	3.8
DP141B2RF	388 [20]	451 [22]	305 [25]	1328 [21]	618 [26]	42.0	81.0	1.12	29.1	4.2
Average	459	526	629	1484	774	43.2	81.4	1.09	29.2	4.2
LSD 0.10	70	112	275	141	112	1.1	0.7	0.02	1.0	0.2
CV %	12.9	18.1	18.2	8.1	15.9	2.0	1.1	1.98	3.6	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 6. Two-Year Summary for Dryland Later Maturity Cotton Varieties at Four Locations[a], 2006-2007

Variety	Lint Yield	Lint	Uniformity Index	Length	Strength	Micronaire
	lb/acre	%	%	inches	g/tex	units
DP 555 BG/RR	**1029**	44.3	81.5	1.09	29.0	4.6
DP 454 BG/RR	**1026**	45.0	82.0	1.06	28.7	3.9
DP 445 BG/RR	**1007**	43.8	82.8	1.10	29.4	4.3
DP 515 BG/RR	**1004**	43.3	81.8	1.09	29.5	4.5
ST 5599BR	**978**	43.4	81.7	1.08	30.3	4.6
DP 493	971	44.4	81.9	1.10	30.6	4.7
DP 455 BG/RR	959	44.7	81.2	1.07	29.3	4.1
DP 167 RF	940	40.8	82.1	1.12	29.2	4.3
DP 147 RF	902	42.5	81.8	1.14	29.5	4.1
DP 143 B2RF	886	41.2	81.8	1.16	28.4	4.1
DP 164 B2RF	872	41.0	81.9	1.12	29.1	4.4
ST 6622RF	853	40.6	82.1	1.10	31.0	4.3
PHY745WRF	838	42.6	82.5	1.10	30.8	4.1
ST 6611B2RF	799	39.0	81.9	1.08	30.0	4.3
Average	933	42.6	81.9	1.10	29.6	4.3
LSD 0.10	57	0.4	0.5	0.02	0.7	0.2
CV %	14.8	2.0	1.0	2.24	4.1	5.9

[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, 2007, Irrigated

Entry	Lint Yield[a] Bainbridge	Midville	Plains	Tifton	4-Loc. Average	Lint	Unif. Index	Length	Strength	Mic.
	lb/acre					%	%	in	g/tex	units
DP 555 BG/RR	**2250** 1	**1400** 5	**1625** 2	**2026** 4	**1825** 1	44.5	82.7	1.16	29.8	4.6
STX5458B2RF	**2080** 3	**1532** 1	**1531** 5	**1955** 5	**1775** 2	43.3	83.1	1.18	31.2	4.7
DP 515 BG/RR	**2074** 4	1277 14	**1710** 1	**1920** 6	**1745** 3	43.6	83.0	1.15	30.1	4.6
ST 5599BR	**2098** 2	**1529** 2	1414 8	1821 10	**1715** 4	42.9	82.3	1.13	30.9	4.8
DP 445 BG/RR	1765 16	1342 10	**1622** 3	**2063** 3	**1698** 5	43.7	84.0	1.17	30.3	4.5
GA2004371	2044 5	**1480** 3	1371 10	1825 9	**1680** 6	45.6	83.6	1.15	30.6	4.8
DP 454 BG/RR	2038 6	1165 24	1386 9	**2093** 1	1670 7	46.9	82.8	1.13	29.8	4.0
GA2004392	1914 9	**1391** 6	**1543** 4	1752 15	1650 8	41.5	84.6	1.18	31.5	5.0
DP 455 BG/RR	1839 12	1308 13	1278 13	**2083** 2	1627 9	45.4	82.2	1.15	31.5	4.1
DP174RF	1903 10	**1377** 7	**1446** 7	1778 13	1626 10	46.3	83.5	1.19	28.5	4.6
DP161B2RF	1951 7	1268 16	1351 11	**1910** 7	1620 11	41.3	84.2	1.23	31.1	4.4
GA2004356	1880 11	1347 9	1180 17	1764 14	1543 12	44.2	84.0	1.18	31.8	4.8
ST 6611B2RF	1920 8	1273 15	1048 23	**1881** 8	1530 13	40.1	82.7	1.14	31.4	4.5
AM1550B2RF	1620 21	1111 25	**1514** 6	1806 12	1513 14	42.4	82.7	1.15	28.0	4.3
ST5327B2RF	1745 18	1211 20	1327 12	1687 18	1492 15	43.8	83.1	1.14	30.6	4.4
DP 143 B2RF	1796 14	1251 17	1232 14	1679 19	1490 16	41.1	82.4	1.23	28.7	4.0
DP 164 B2RF	1790 15	1223 19	1053 22	1814 11	1470 17	40.8	82.8	1.20	30.0	4.3
DP 147 RF	1688 19	1355 8	1218 15	1568 25	1457 18	42.3	83.4	1.23	30.5	4.2
DP 493	1761 17	1322 11	1022 24	1650 21	1439 19	45.0	82.8	1.16	31.2	4.8
DP 167 RF	1553 24	**1407** 4	1195 16	1581 24	1434 20	41.3	83.2	1.20	29.9	4.4
DP141B2RF	1834 13	1176 23	962 25	1720 16	1423 21T	40.9	83.6	1.24	30.4	4.1
STX06351B2RF	1663 20	1318 12	1082 21	1628 22	1423 21T	40.7	83.2	1.19	29.7	4.4
ST5283RF	1612 22	1240 18	1116 20	1709 17	1419 22	43.3	83.5	1.16	30.4	4.4
ST 6622RF	1600 23	1198 21	1163 18	1601 23	1391 23	42.1	83.5	1.17	31.6	4.5
FM1880B2F	1459 25	1188 22	1138 19	1651 20	1359 24	41.0	82.9	1.19	30.3	3.9
PHY745WRF	1096 26	1010 26	951 26	1352 26	1102 25	42.7	83.8	1.19	31.0	4.1
Average	1807	1296	1288	1781	1543	42.9	83.2	1.18	30.4	4.4
LSD 0.10	192	168	275	213	154	1.3	0.7	0.02	0.7	0.2
CV %	9.0	11.0	18.2	10.1	11.9	2.7	0.9	2.01	2.8	5.2

[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], 2006-2007, Irrigated

Variety	Lint Yield	Lint	Uniformity Index	Length	Strength	Micronaire
	lb/acre	%	%	inches	g/tex	units
DP 555 BG/RR	**1965**	44.0	82.9	1.16	29.8	4.6
DP 515 BG/RR	1831	43.1	83.0	1.15	30.1	4.6
DP 454 BG/RR	1776	45.7	83.1	1.12	29.3	4.1
ST 5599BR	1683	43.0	82.7	1.14	30.8	4.8
DP 493	1674	45.4	83.2	1.16	30.6	4.7
DP 455 BG/RR	1638	44.6	82.3	1.14	30.8	4.2
DP 143 B2RF	1584	40.8	82.6	1.23	28.4	4.1
ST 6611B2RF	1557	39.2	82.8	1.14	31.2	4.6
DP 445 BG/RR	1538	42.6	83.7	1.15	29.4	4.6
DP 164 B2RF	1533	40.4	83.2	1.19	29.5	4.5
DP 147 RF	1493	42.2	83.4	1.22	30.0	4.2
DP 167 RF	1452	40.4	83.6	1.18	30.0	4.4
ST 6622RF	1422	41.2	83.7	1.15	30.9	4.5
PHY745WRF	1247	42.2	83.8	1.18	30.9	4.2
Average	1600	42.5	83.1	1.16	30.1	4.4
LSD 0.10	80	0.5	0.4	0.01	0.5	0.2
CV %	12.2	2.7	0.9	2.02	3.1	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 9. Yield Summary for Cotton Strains, 2007, Irrigated

Variety	Lint Yield[a] Midville	Plains	Tifton	3-Loc. Average	Lint	Unif. Index	Length	Strength	Mic.
	---------- lb/acre ----------				%	%	inches	g/tex	units
Earlier Maturity									
FMX4366B2F	**1498** [4]	**1165** [4]	**1977** [3]	**1547** [3]	44.5	84.0	1.18	31.3	4.2
GA2004143	**1571** [2]	**1210** [3]	1857 [6]	**1546** [4]	48.8	83.8	1.19	31.4	4.7
GA2004230	**1459** [9]	**1216** [2]	1896 [5]	**1523** [5]	43.9	84.4	1.25	31.1	4.7
FMX4327B2F	**1388** [8]	978 [8]	1914 [4]	1427 [6]	44.3	82.7	1.18	32.3	4.4
GA2004089	**1436** [7]	951 [9]	1755 [7]	1380 [7]	46.3	84.7	1.23	30.7	4.6
FMX4330B2F	**1543** [3]	984 [7]	1477 [9]	1335 [8]	46.1	83.7	1.17	33.4	4.3
Average	*1482*	*1084*	*1813*	*1460*	*45.5*	*83.9*	*1.20*	*31.7*	*4.5*
Later Maturity									
GA2004137	**1637** [1]	**1245** [1]	**2007** [2]	**1630** [1]	46.8	83.5	1.18	31.1	4.8
GA2004358	**1470** [5]	**1117** [5]	**2188** [1]	**1592** [2]	46.0	83.0	1.16	30.5	4.8
GA2004236	**1191** [9]	**1077** [6]	1504 [8]	1258 [9]	46.0	83.0	1.17	29.0	4.7
Average	*1433*	*1146*	*1900*	*1493*	*46.3*	*83.2*	*1.17*	*30.2*	*4.8*
Overall summary averages and statistics:									
Average	1466	1105	1842	1471	45.8	83.6	1.19	31.2	4.6
LSD 0.10	N.S.[b]	177	224	187	1.4	0.8	0.02	1.1	0.2
CV %	13.7	13.2	10.0	12.1	1.6	1.1	1.93	2.3	4.0

[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 10. Later Maturity Cotton Variety Performance including Micro-Gin[a] Quality Data, 2007, Irrigated, Tifton, Georgia

Variety	Lint Yield	MG[a] Lint Yield	Lint	MG[a] Lint	Unif. Index[b]	MG[a] Unif.	Length[b]	MG[a] Length	Strength[b]	MG[a] Strength	Mic.[b]	MG[a] Mic.
	lb/acre	lb/acre	%	%	%	%	inches	inches	g/tex	g/tex	units	units
AM1550B2RF	1806	1609	46.3	41.9	81.2	80.7	1.10	1.07	26.6	22.7	4.5	4.7
DP 143 B2RF	1679	1429	44.0	38.2	81.7	79.5	1.21	1.16	27.6	25.2	4.0	4.1
DP 147 RF	1568	1336	45.8	40.0	83.0	80.0	1.20	1.15	28.7	25.9	4.0	4.1
DP 164 B2RF	1814	1627	42.9	39.2	82.4	81.0	1.19	1.15	28.7	27.3	4.2	4.7
DP 167 RF	1581	1410	43.3	39.4	82.5	81.1	1.16	1.15	29.8	27.2	4.2	4.5
DP 445 BG/RR	**2063**	**1748**	46.3	40.3	84.6	81.4	1.17	1.12	29.3	26.0	4.2	4.5
DP 454 BG/RR	**2093**	1522	55.2	41.0	82.6	80.6	1.12	1.05	29.4	26.4	3.9	4.0
DP 455 BG/RR	**2083**	**1721**	49.5	42.1	81.7	80.1	1.13	1.10	29.3	28.7	4.0	4.1
DP 493	1650	1453	47.7	42.3	82.1	80.4	1.13	1.05	30.6	28.3	4.7	4.8
DP 515 BG/RR	**1920**	**1664**	46.1	40.6	82.8	80.5	1.13	1.10	29.1	26.7	4.3	4.5
DP 555 BG/RR	**2026**	**1806**	46.8	42.1	82.1	80.2	1.14	1.10 1.15	28.5	27.3	4.5	4.5
DP141B2RF	1720	1450	44.5	38.1	82.8	79.9	1.19	1.18	28.9	27.3	4.2	4.3
DP161B2RF	**1910**	1442	42.9	38.5	84.6	81.7	1.22	1.12	30.1	29.0	4.1	4.5
DP174RF	1778	1550	48.3	42.7	83.5	80.5	1.17	1.14	26.8	23.4	4.4	4.5
FM1880B2F	1651	1438	43.5	38.4	82.2	80.0	1.19	1.10	29.0	28.4	3.7	3.9
GA2004356	1764	1572	46.6	42.0	83.5	81.2	1.16	1.13 1.08	31.3	29.0	4.5	4.6
GA2004371	1825	1634	48.1	43.6	83.2	81.0	1.11	1.10	29.7	26.6	5.0	5.0
GA2004392	1752	1531	43.6	38.8	83.8	82.0	1.18	1.11	31.6	28.6	4.6	5.0
PHY745WRF	1352	1136	45.2	38.2	83.1	81.3	1.14	1.08	29.5	29.5	3.9	4.2
ST 5599BR	1821	**1654**	44.3	41.0	81.8	80.1	1.12	1.10	29.4	27.5	4.6	4.7
ST 6611B2RF	**1881**	1574	44.0	37.8	81.8	80.7	1.12	1.12	30.3	28.0	4.5	4.6
ST 6622RF	1601	1361	44.8	39.4	83.1	81.3	1.15	1.12	29.9	29.6	4.4	4.5
ST5283RF	1709	1449	46.3	40.4	83.8	81.1	1.16	1.10	29.1	27.9	4.1	4.4
ST5327B2RF	1687	1427	46.6	40.5	84.1	81.5	1.14	1.09	29.6	28.4	4.3	4.6
STX06351B2RF	1628	1411	42.4	37.8	83.7	80.8	1.19	1.12	28.2	26.6	3.9	4.3
STX5458B2RF	**1955**	**1735**	44.7	40.2	82.7	80.2	1.16	1.09	30.7	27.7	4.4	5.0
Average	1781	1526	45.8	40.2	82.8	80.7	1.15	1.11	29.3	27.3	4.3	4.5
LSD 0.10	213	168	2.2	0.9	1.3	0.5	0.04	0.02	2.0	1.3	0.3	0.2
CV %	10.1	9.3	4.1	2.0	0.9	0.5	1.91	1.44	4.1	3.9	4.7	3.3

a. Micro-Gin quality samples are from total seed cotton harvested from each plot.
b. A random quality sample was taken on the picker during cotton harvest.
Bolding indicates entries not significantly different from highest yielding entry based on Fisher's protected LSD (P = 0.10).

Planted: April 23, 2007.
Harvested: September 19, 2006.
Soil Type: Tifton sandy loam.
Fertilization: 78 lb N, 54 lb P_2O_5, and 168 lb K_2O/acre.
Management: Temik 15G applied 5 lb/acre and Telone II applied 3 gal/acre.

	May	June	July	Aug.	Sept.
Irrigation (in):	2.25	1.80	2.10	2.00	0.0

Trials conducted by Larry Thompson.