

ARKANSAS COTTON VARIETY TEST 2005



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SUMMARY

The primary goal of the Arkansas Cotton Variety Test is to provide unbiased data regarding the agronomic performance of cotton varieties and advanced breeding lines in the major cotton-growing areas of Arkansas. This information helps seed companies establish marketing strategies and assists producers in choosing varieties to plant. In this way, this annual test facilitates the inclusion of new, improved genetic material in Arkansas cotton production. Adaptation of varieties is determined by evaluating the lines at four University of Arkansas research sites (near Keiser, Judd Hill, Marianna, and Rohwer) and one off-station site (near Manila). The 2005 main test included 27 entries, all of which had been tested in the 2004 Arkansas Cotton Variety Test. Round-up Ready Flex varieties were evaluated for the first time in 2005. Due to the high number, 1st-year entries were separated into non-Flex varieties (23 entries plus 3 check varieties) and Flex varieties (37 entries plus 5 check varieties). Data reported include yield, lint percentage, stand, plant height, open bolls, yield component variables, fiber properties, leaf pubescence, and bract parameters.

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Arkansas Cotton Variety Test 2005

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Introduction

The purpose of the University of Arkansas Cotton Variety Testing Program is to provide unbiased comparisons of cotton varieties and advanced breeding lines over a range of environments. Data from these tests help to identify the potential adaptability of varieties to particular cotton growing regions of the state. Bourland et al. (2000) documented several unintentional biases, which are inherent to the Arkansas cotton variety testing program. These include management associated with varieties expressing herbicide and insect resistance. The biases tend to cancel each other so that no great advantage is given to any particular variety. Since evaluation of genetic differences among entries is the ultimate goal of the test, all varieties are treated identically within a test site. No specialized production inputs were implemented with respect to genetically enhanced varieties. Roundup Ready® varieties, Liberty Link® varieties, Bt varieties and conventional varieties were all treated equally with respect to weed and insect control.

Cotton varieties that were evaluated in the 2004 Arkansas Cotton Variety Test and were re-submitted in 2005 were entered in the 2005 main variety test. Lines that were tested in the 2004 test were evaluated in the 2005 1st-year variety test. Round-up Ready Flex® varieties were entered into the Arkansas Cotton Variety Test for the first time in 2005. The 2005 1st-year entries were

separated into two tests, one including non-Flex entries and the other including Flex entries.

Materials and Methods

The 2005 main test included 25 entries and three check varieties (Table 1). The 1st-year (non-Flex) test included 24 entries plus two check varieties, while the 1st-year (Flex) test had 37 entries and five check cultivars. Check varieties in each test were chosen at the discretion of the project leader. All test sites included the same entries. Replications of the main and 1st-year (non-Flex) tests were randomized within each field. Due to its size and restrictions on harvested seedcotton, the 1st-year (Flex) test was planted to side of the main and 1st-year (non-Flex) test at each site. PHY 470 WR and PHY 480 WR were mistakenly entered into the 1st-year (Flex) rather than the 1st-year (non-Flex) test.

Test sites included the Northeast Research and Extension Center at Keiser; the Judd Hill Cooperative Research Site at Judd Hill (near Trumann); the Lon Mann Cotton Research Station at Marianna; and the Southeast Branch Experiment Station at Rohwer. An irrigated test was conducted at each site, and a non-irrigated test was conducted at Keiser and Marianna. An on-farm variety test was conducted near Manila in Mississippi County (located in northeast Arkansas) on a soil naturally infested with root-knot nematode. Cultural practices and weather data (heat units and rainfall) associated with the test sites are listed in Table 2 and Table 3, respectively.

Double treated (two fungicides) seed for all entries were obtained from originators. Prior to planting, all seed were treated with imidacloprid (Gaucho®) at a rate of 6oz/100 lb seed. Plots were planted with a constant number of seed (ca. 4 seed/row ft). All varieties were planted in two-row plots ranging in length from 40 to 50 feet. Tests were arranged in a randomized complete block and replicated four times. Although exact inputs varied across locations, cultural inputs at each location were generally based on University of Arkansas Cooperative Extension Service recommendations for cotton production, including COTMAN rules for insecticide termination. All plots were machine-harvested with 2-row cotton pickers modified with load cells for harvesting small plots.

Data Collected

Data Collected at Single Location:

Leaf Pubescence: Leaf pubescence was visually rated on a scale of 1 (smooth leaf) to 7 (very hairy) in the irrigated tests at Keiser using system described by Bourland et al. (2003). A full-sized leaf, ca. 5-6 nodes from plant apex, was rated for 6 plants per plot for all 4 replications.

Bract variables: After cutout, a bract from a mid-plant, 1st-position boll was randomly sampled from six plants/plot (4 replications) in the Keiser-irrigated test after cutout. Each bract was examined for marginal trichome density (no. of trichome/cm), circumference (cm), and maximum length (cm). Means for the six bracts were evaluated as plot means.

Data Collected at All Locations:

Stand: After final emergence, number of plants per row foot was determined after counting the number of surviving plants in a random 5-foot section of each of the two rows. Since seed were obtained from different sources, stand counts simply demonstrate the adequacy of final stands rather than the genetic ability of entries to produce stand.

Plant Height: Plant height measurements were collected from each variety prior to harvest. Average plant

heights for varieties were determined by measuring from the soil surface to the terminal of one averaged sized plant in each of the two rows. Plot means (average of the two measurements) were evaluated.

% Open bolls: Immediately before or after first application of defoliant, percentage of open bolls was estimated from the front and back of each plot (4 replications), then averaged for each plot.

Lint Percentage and Fiber Data: Prior to mechanical harvest, hand-harvested samples of 50 open bolls were obtained from two replications at each location. In each test, the samples were obtained by picking all open bolls from consecutive plants. Within each row of two-row plots, a site having average or above plant density was chosen and 25 consecutive bolls were harvested and bulked to form a 50-boll sample. The 50-boll samples were ginned (lab gin without the use of lint cleaners) to determine lint fraction (the percentage of lint weight to seedcotton weight). Fiber properties were determined using HVI classification.

Seed index: Two sets of 50 fuzzy seed from the ginned seed of each 50-boll sample were counted and weighed. If the two weights varied greatly, a third sample was taken. Two consistent weights of 50 seed were added to obtain fuzzy seed index (weight of 100 seed).

Seed per acre: For each plot, an estimate of number of seed per acre was determined by multiplying seedcotton yield (lb/a converted to g/a) times average seed percentage (the percentage of seed weight to seedcotton weight in ginned sample, averaged by entry and location over reps), then divided by average seed weight (average seed index by entry over reps divided by 100).

Lint index: Lint index (weight of lint on 100 seed) was determined from 50-boll sample data by dividing lint weight from ginned sample by the number of seed per sample (estimated using average seed weight) then multiplying by 100.

Lint Yield: Seedcotton yield per plot (determined by 2-row cotton picker) was converted to seedcotton yield per

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acre then multiplied by average lint percentage (determined by variety and location) to estimate lint per acre.

Yield Comparisons

Uncontrolled variation is inherent to collection of variety performance data (particularly yield data). In addition to their genetic ability, variation among varieties may be due to slight differences in soil, pest, or climatic conditions within a field, various interactions with specific management, or experimental error. Statistics allow users to define the degree of uncontrolled variation and to interpret data. The statistical tool used to compare means in these tests was Fisher's Protected Least Significant Difference (LSD). An LSD was calculated when the F value from ANOVA was significant. Varietal yields are considered significantly different if the difference between the mean yields of two varieties is greater than the LSD value. Differences smaller than the LSD may have occurred by chance, or due to uncontrolled variation and are therefore considered not significant.

Additional estimates of variation are provided by measures of R squared and coefficient of variation (CV). R squared (times 100) indicates the percentage of variation that is explained by defined sources of variation (e.g. replication and variety effects within a location). Confidence in data increases as R squared increases. Generally, the meaningfulness of difference among means is questionable when data have R squared values of less than 50%. Also, confidence in data becomes greater as CV declines. Since CV is a function of the mean of a parameter, R squared is a better tool for comparing the precision of different experiments.

Results

Other than the lack of rainfall, growing conditions associated with the 2005 tests were near optimal. Substantial rainfall occurred through the spring, and each site was planted in soils with ample moisture during the first week of May. Record dry and relatively warm conditions occurred during the month of May in northeast Arkansas (Table 3). Consequently, excellent stands and seedling vigor were achieved. Even with wetter and cooler than normal early-season conditions, good stands were also achieved at southwest Arkansas locations.

Although dry, temperatures were relatively mild throughout most of the summer. After some rains associated with hurricanes, harvest weather was excellent. Other observations associated with each test site include:

Manila. Symptoms of root-knot nematode injury were not extensive in 2005. However, obvious "hot spots" (wilting of plants) were scattered throughout the field. The hot spots were likely due to the combined effects of root-knot nematode and drought on particular soils within areas of the field.

Keiser. Excellent seedling vigor and timely rains at critical times in the season resulted in little difference between irrigated and non-irrigated tests. Although plant height was reduced, plant roots apparently grew with declining moisture through the season. As usually found, uncontrolled variation (experimental error) in the non-irrigated test was higher than in the irrigated test.

Judd Hill. The 2005 test was the first time that the Arkansas Cotton Variety Test was conducted on the Judd Hill Plantation near Trumann (Poinsett County), replacing the site at Clarkedale. The Judd Hill site is located ca. 30 miles northwest of Clarkedale and ca. 30 miles west of Keiser. The soil at Judd Hill is similar to that at Clarkedale, with both being favorable for *Verticillium* wilt. In 2005, symptoms of *Verticillium* wilt were found throughout the test. Although *Verticillium* wilt did not appear to greatly reduce yield, it likely contributed to experimental error in the tests.

Marianna. The non-irrigated tests were not planted at Marianna due to limited field space and increased test size associated with the Flex entries. Droughty conditions required frequent irrigations.

Rohwer. Although Hurricane Rita caused loss of some cotton on the ground, excellent yields were harvested from all of the tests at Rohwer in 2005.

Environmental conditions varied across the state (Table 3). Temperatures in the 2005 production season tended to be below the historical average (1960 - 1998). The only significant rainfall occurring at most sites was

the direct to indirect results of hurricanes Katrina and Rita. Harvest was completed with few interruptions.

Table 1. Entries and participants in the main test and 1st-year (non-Flex and Flex) tests are listed in Table 1.

Table 2. Cultural inputs and production information for variety trials at Manila, Keiser (irrigated and non-irrigated), Judd Hill, Marianna, and Rohwer are reported in Table 2.

Table 3. Table 3 reports weather information for north, central, and south Arkansas locations during the 2005 production season.

Tables 4–10. These tables provide results of the main test of 2005 Arkansas Cotton Variety Test. Varieties listed in these tables were tested the previous year in Arkansas. Table 4 provides results over locations, and Tables 5-10 provide results for each of six locations.

Tables 11-12. Tables 11 and Table 12 are two- and three-year means for entries in the main test, respectively.

Tables 13–19. These tables provide results of the 1st-year (non-Flex) Arkansas Cotton Variety Test. Varieties tested in the 1st-year test were not entered in the 2004 Arkansas Cotton Variety Test. Table 12 provides results over locations, and Tables 13-19 provide results for each of six locations.

Tables 20-26. These tables provide results of the 1st-year (Flex) Arkansas Cotton Variety Test. Table 20 provides results over locations, and Tables 21-26 provide results for each of six locations.

Tables 27-28. Leaf pubescence ratings and bract measurements from samples taken from irrigated test at Keiser for main and 1st-year (non-Flex) test (Table 27) and the 1st-year (Flex) test (Table 28).

Appendix tables. Results of replicated on-farm variety demonstration tests conducted by Cooperative Extension Service.

Literature Cited

- Bourland, F.M., N.R. Benson, and W.C. Robertson. 2000. Inherent biases in the Arkansas cotton variety testing program. pp. 547-549. In Proc. Beltwide Cotton Prod. Res. Conf., San Antonio, Texas. 4-8 Jan. 2000. National Cotton Council, Memphis, Tenn.
- Bourland, F. M., J. M. Hornbeck, A. B. McFall, and S. D. Calhoun. 2003. A rating system for leaf pubescence of cotton. J. Cotton Sci. 7:8-15.

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Cultural Inputs and Production Information

Table 1. Participants and entries in the 2005 Arkansas Cotton Variety Test.

Institution/Contact person	Main Test	1st year (non-Flex)	1st year (Flex)
Bayer Crop Science/ Jane Dever	FM 958 LL FM 960 RR FM 960 B2R FM 966 LL FM 960 BR	FM 960 BR, ck FMx0052LLB2 FMx0222B2LL	FM 960 BR, ck.
Beltwide Cotton Genetics / Betsy Mullins			BW-1004B2F BW-4575B2F BW-1505RF BW-4630B2F BW-3255B2F BW-8391B2F BW-4021B2F BW-9124B2F
Calif. Planting Cotton Seed Dist./ Gene Lytle	CS 37 CS 38	CES 21 CS 41 CES 25 CS 42 CES 33 CS 43 CS 44	
Croplan Genetics Jaime Yanes			CG 3020 B2RF CG 3520 B2RF CG 4020 B2RF
Delta & Pine Land Company / David Albers	DP 393, ck. DP 444 BG/RR DP 424 BGII/RR DP 445 BG/RR DP 432 RR DP 455 BG/RR DP 434 RR DP 543 BGII/RR PM 1218 BR, ck	DPLX 03X179R DP 444 BG/RR, ck DPLX 04Y170BR DP 454 BG/RR DPLX 05X648DR	DP 108 RF DP 152 RF DP 110 RF DP 156 B2RF DP 113 B2RF DP 164 B2RF DP 117 B2RF DP 167 RF DP 143 B2RF DP 444 BG/RR,ck. DP 147 RF
PhytoGen Seed Co., LLC. / Bobby Haygood	PHY 310 R PHY 410 R	PHY 370 WR PHY 440 W	PHY 410 R, ck. PHY 470 WR ¹ PHY 415 RF PHY 480 WR ¹ PHY 425 RF
Stoneville Pedigreed Seed Co./ Andy White	ST 4575 BR ST 5303 R ST 4686 R ST 5599 BR ST 4892 BR, ck ST 6636 BR ST 5242 BR ST 6848 R	STX416B2R ST 5599BR, ck	ST 4554 B2RF STX0509B2F ST 4664 RF STX0510B2F ST 6611 B2RF STX5885B2RF ST 6622 RF ST 5242 BR, ck. STX0414B2RF ST 5599 BR, ck.
Syngenta Seeds, Inc. / Charles Cook	DX 25105N	DX 24101-20 DX 241203-16	
United Agri Products / Larry Stauber			Dyna-Gro 2100 B2RF Dyna-Gro 2242 B2RF Dyna-Gro 2215 B2RF Dyna-Gro 2520 B2RF
University of Arkansas / Fred Bourland		Ark 9304-39-02 Ark 9308-17-04 Ark 9304-39-15 Ark 9409-40-08	
Univ. New Mexico /Jinfa Zhang		NM03012	

¹ PHY 470 WR and PHY 480 WR were mistakenly entered into the 1st-year (Flex) rather than the 1st-year (non-Flex) test.

Table 2. Cultural practices for locations of the 2005 Arkansas Cotton Variety Test.

Location	Soil type	Irrigation	Fertilizer N, P, K	Planting date	Irrigation dates	Defoliation date	Harvest date
Manila	Routon-Dundee-Crevasse complex	Pivot	100,20,60	5/6	5/31; 6/8,24,30; 7/23,27; 8/1,6,11	1/9	10/4
Keiser	Sharkey clay	Furrow	100,0,0	5/7	6/7,28; 7/26; 8/3	9/9	9/22
Keiser	Sharkey clay	none	100,0,0	5/7	none	9/10	9/23
Judd Hill	Dundee silt loam	Furrow	90,28,80	5/5	6/1,23; 7/1,21,28; 8/4,11	9/7	9/21
Marianna	Callaway silt loam	Furrow	84,0,0	5/5	6/23,30; 7/22,29; 8/4,12,20	9/21	10/12
Rohwer	Desha silt loam	Furrow	100,35,90	5/3	6/29; 7/31; 8/9,19,25	9/5	10/5

Table 3. Weather summary for the 2005 production season in north, central and south Arkansas.

Location	Month	DD60's in 2005	Historical avg.1 DD60's	Rainfall (in.) in 2005
Keiser (northeast)	May	314	326	0.53
	June	587	549	1.42
	July	651	659	3.63
	August	716	579	4.63
	September	505	366	4.65
	Total	2772	2479	14.86
Marianna (central)	May	261	326	1.01
	June	525	549	1.48
	July	573	659	3.79
	August	651	579	4.26
	September	465	366	5.79
	Total	2475	2479	16.33
Rohwer (southeast)	May	311	635	5.07
	June	555	564	1.95
	July	656	672	4.67
	August	708	621	2.22
	September	471	532	5.77
	Total	2701	3024	19.68

^{1/} DD60 (growing degree days based on 60F) from historical weather data, 1960-1998.

Table 6. Results of the 2005 Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, AR.

Variety	Lint		Lint		Stand no./ft	Ht. cm	Open boll %	Seed		Mic	Fiber properties				Elo. %											
	yield lb/a	frac. %	index g	index g				per a mll.	r		Len. in.	r	Unif. %	r		Str. g/tex	r	Elo. %								
ST 4575 BR	1168	1	42.6	3	3.7	26	98	10	61	8	9.2	22	6.9	11	7.665	1	4.2	16	1.15	19	82.7	27	31.6	13	9.8	2
PHY 310 R	1137	2	43.2	2	4.6	10	99	5	55	22	9.0	25	7.0	10	7.341	8	4.5	6	1.13	25	83.8	10	31.6	14	9.3	7
ST 4892 BR, ck	1133	3	41.4	8	4.4	15	98	6	61	8	9.6	16	6.9	13	7.438	6	4.5	6	1.15	19	83.8	12	30.4	19	8.2	14
ST 5599 BR	1119	4	39.7	15	4.2	18	100	4	59	15	10.5	8	6.9	12	7.363	7	4.2	19	1.15	19	82.8	26	29.5	24	7.2	21
ST 4686 R	1115	5	43.3	1	3.9	23	98	12	59	15	9.0	23	7.1	8	7.135	11	4.3	12	1.14	23	83.1	23	33.4	3	10.2	1
DP 393, ck.	1090	6	40.7	11	5.2	1	96	16	56	19	9.5	17	6.8	16	7.330	9	4.5	4	1.21	2	83.8	10	33.0	5	9.4	5
ST 5242 BR	1083	7	41.5	7	4.0	21	93	21	66	3	10.6	6	7.6	1	6.463	18	4.1	21	1.12	26	83.1	22	28.5	26	8.8	9
DP 444 BG/RR	1083	8	40.9	10	3.9	22	99	7	65	4	10.0	9	7.1	7	6.930	13	4.1	22	1.15	17	83.4	18	29.7	23	8.3	12
DX 25105N	1067	9	42.2	4	4.0	19	88	26	61	8	9.5	18	7.0	9	6.893	16	4.3	12	1.15	17	82.9	24	29.7	22	8.5	10
DP 455 BG/RR	1056	10	42.2	5	4.5	12	99	8	51	26	8.9	26	6.6	18	7.208	10	4.0	24	1.19	5	83.6	15	31.3	16	7.3	20
DP 445 BG/RR	1038	11	41.3	9	4.6	11	88	25	64	5	9.3	21	6.7	17	7.058	12	4.2	18	1.17	10	83.9	9	33.0	5	9.5	3
DP 432 RR	1035	12	40.5	12	5.0	5	97	15	60	12	8.8	27	6.1	23	7.653	2	4.3	11	1.17	12	84.8	2	32.5	8	9.4	4
DP 434 RR	1030	13	42.1	6	4.7	8	98	9	68	2	9.0	24	6.8	15	6.897	14	3.9	26	1.19	5	83.8	13	28.6	25	8.5	10
ST 6636 BR	997	14	37.7	25	4.5	14	109	2	63	7	9.7	15	6.1	24	7.469	4	4.5	4	1.20	4	84.2	5	33.0	5	7.2	21
ST 5303 R	988	15	39.1	17	3.7	26	99	6	60	12	9.3	20	6.0	25	7.440	5	4.1	22	1.17	12	83.9	8	33.1	4	7.9	15
FM 960 B2R	978	16	40.1	13	4.7	8	94	19	50	27	10.7	5	7.3	3	6.051	21	4.3	12	1.17	12	82.9	25	31.6	15	6.5	27
DP 424 BG/RR	976	17	37.5	26	3.8	24	89	24	64	5	9.7	14	5.9	27	7.552	3	4.3	12	1.14	24	84.1	7	30.0	21	8.9	8
PHY 410 R	953	18	38.5	22	5.1	3	95	17	56	19	9.8	12	6.3	20	6.895	15	4.5	6	1.15	19	84.2	6	31.9	12	9.3	6
FM 960 BR	927	19	38.5	21	4.4	15	93	22	55	22	11.1	3	7.1	6	5.899	24	4.2	19	1.17	10	84.8	2	33.9	2	6.9	23
FM 958 LL	905	20	38.5	20	5.1	4	92	23	58	18	10.6	7	6.9	14	5.960	23	4.4	9	1.16	16	84.4	4	32.5	8	6.8	24
CS 37	892	21	38.0	23	4.9	7	102	3	61	8	9.9	10	6.2	22	6.531	17	4.0	24	1.18	7	83.2	20	31.1	17	7.8	16
FM 960 RR	891	22	39.2	16	3.7	25	82	27	60	12	10.9	4	7.2	5	5.629	25	3.8	27	1.18	7	83.5	16	31.1	18	6.5	25
PM 1218 BR, ck	890	23	37.9	24	4.0	19	94	20	71	1	9.8	11	6.3	21	6.453	19	4.4	10	1.09	27	83.1	21	27.4	27	8.3	12
DP 543 BG/RR	883	24	40.0	14	4.4	17	97	14	53	24	9.3	19	6.4	19	6.298	20	4.6	2	1.18	7	83.5	16	30.4	20	7.5	18
CS 38	858	25	38.8	18	4.9	6	98	11	53	24	11.5	1	7.4	2	5.255	26	4.6	1	1.22	1	83.7	14	32.5	8	7.6	17
FM 966 LL	828	26	38.6	19	4.5	12	98	13	59	15	11.1	2	7.3	4	5.190	27	4.2	16	1.17	12	83.4	18	32.2	11	6.5	25
ST 6848 R	800	27	37.2	27	5.1	2	114	1	56	19	9.8	13	6.0	26	6.039	22	4.6	2	1.20	3	85.2	1	34.7	1	7.3	19
Mean	997		40.0		4.4		96		59		9.9		6.7		6.742		4.3		1.16		83.7		31.4		8.1	
LSD 0.10	117		2.0		0.6		8		7		0.9		0.8		0.784		0.4		0.04		ns		1.8		0.6	
C.V.%	9.9		2.7		12.1		6.7		9.3		5.3		6.8		9.9		5.4		1.8		0.9		3.3		4.5	
R-sq x 100	67.6		83.0		55.7		56.4		59.2		80.9		69.5		69.2		64.9		78.5		64.3		85.2		94.9	

Table 7. Results of the 2005 Cotton Variety Test without irrigation on a Tunica silty clay soil at Keiser, AR.

Variety	Lint		Lint		Stand no./ft	Ht. cm	Open boll %	Seed		Mic	Fiber properties				Elo. %											
	yield lb/a	frac. %	index g	index g				per a mll.	r		Len. in.	r	Unif. %	r		Str. g/tex	r	Elo. %								
DP 393, ck.	1197	1	42.8	2	5.4	1	80	12	51	15	9.1	22	6.9	13	7.852	2	4.7	17	1.15	8	84.2	7	32.2	8	9.0	6
PHY 310 R	1185	2	42.5	4	4.8	8	80	11	55	6	9.2	20	7.2	7	7.516	3	5.0	3	1.07	25	83.1	20	31.2	14	8.3	9
ST 5599 BR	1125	3	40.7	14	4.2	18	87	3	45	23	10.1	10	7.1	8	7.179	7	5.0	2	1.10	20	83.2	18	29.4	23	7.4	19
ST 6636 BR	1099	4	40.0	16	4.3	16	90	1	56	4	9.9	12	6.7	18	7.396	5	4.9	4	1.17	2	84.5	2	30.7	17	7.1	22
ST 4686 R	1094	5	41.3	11	4.5	11	80	10	53	9	9.6	14	7.0	10	7.066	9	4.6	21	1.11	15	83.8	12	32.8	6	10.3	1
DP 434 RR	1053	6	42.4	5	5.3	2	79	14	64	1	8.8	24	6.7	20	7.184	6	4.5	24	1.16	3	83.9	11	27.9	25	8.6	7
DP 455 BG/RR	1037	7	42.8	1	4.5	12	80	9	51	15	8.2	26	6.4	23	7.413	4	4.5	23	1.15	7	83.3	16	30.8	16	7.7	16
DP 444 BG/RR	1024	8	41.1	12	4.2	22	86	4	64	1	9.3	18	6.7	19	6.991	10	4.3	27	1.10	19	83.2	18	29.6	22	8.3	9
DP 432 RR	1011	9	41.5	8	5.0	5	79	16	56	4	8.9	23	6.5	21	7.087	8	4.9	7	1.13	12	84.2	8	31.4	12	9.1	5
FM 960 B2R	1006	10	39.4	19	4.9	6	83	7	40	27	10.8	3	7.3	4	6.296	13	4.8	13	1.05	23	82.6	23	30.4	19	6.6	25
ST 4575 BR	1002	11	40.7	15	3.9	26	74	25	55	6	7.8	27	5.7	26	7.944	1	4.4	25	1.09	23	82.6	24	31.6	10	9.8	2
PM 1218 BR, ck	987	12	39.7	18	3.8	27	75	20	64	1	10.9	1	7.4	3	6.050	15	4.9	7	1.07	25	82.6	24	27.5	27	8.0	12
DP 445 BG/RR	971	13	42.0	6	4.4	13	74	22	54	8	9.1	21	6.8	15	6.452	11	4.7	15	1.14	10	84.3	4	32.9	4	9.7	3
ST 4892 BR, ck	927	14	41.5	9	4.4	13	79	14	51	15	10.4	7	7.6	2	5.513	20	4.7	17	1.13	12	83.6	14	30.9	15	7.5	17
ST 5242 BR	896	15	42.7	3	4.0	25	80	13	53	9	10.9	2	8.3	1	4.911	26	4.7	17	1.06	27	82.6	24	27.8	26	8.2	11
ST 6848 R	884	16	39.3	20	5.3	3	88	2	53	9	9.6	15	6.3	24	6.389	12	5.1	1	1.18	1	85.1	1	35.4	1	6.8	23
FM 958 LL	863	17	38.4	25	4.6	10	71	27	46	21	10.6	5	6.9	14	5.721	17	4.6	20	1.15	5	84.3	4	31.3	13	6.7	24
CS 37	846	18	39.2	22	4.6	9	84	5	49	19	9.2	19	6.1	25	6.282	14	4.6	21	1.16	3	83.8	12	32.9	4	7.8	14
ST 5303 R	840	19	41.0	13	4.4	13	81	8	53	9	9.4	17	6.7	17	5.655	18	4.9	7	1.08	24	84.1	9	33.0	3	7.5	17
DX 25105N	830	20	41.4	10	4.2	21	75	21	53	9	9.6	16	7.0	9	5.352	22	4.7	15	1.13	11	83.4	15	29.3	24	7.9	13
PHY 410 R	826	21	39.8	17	5.0	4	74	23	50	18	10.1	9	7.0	12	5.374	21	4.9	4	1.10	20	84.3	6	33.1	2	9.3	4
DP 424 BG/RR	800	22	37.9	26	4.1	23	78	17	53	9	10.3	8	6.4	22	5.651	19	4.8	11	1.11	15	84.5	2	30.5	18	8.4	8
FM 966 LL	794	23	39.0	24	4.0	24	74	24	46	21	10.8	4	7.2	5	4.970	24	4.4	25	1.12	14	84.1	9	32.6	7	6.2	27
FM 960 RR	785	24	41.6	7	4.2	20	73	26	45	23	9.7	13	7.2	6	4.951	25	4.8	11	1.10	17	82.4	27	30.2	20	7.3	

Table 8. Results of the 2005 Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, AR.

Variety	Lint		Open		Stand	Ht.	r	Open	Seed		Lint		Seed		Fiber properties											
	yield	frac.	bolts	%					r	index	per a	r	index	per a	r	index	per a	r	Mic	r	Len.	r	Unif.	r	Str.	r
	lb/a	%			no./ft	cm		%	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
DP 432 RR	1355	1	40.8	5	3.6	9	100	12	71	1	9.7	21	6.8	14	9.096	2	4.3	7	1.14	16	84.1	7	30.9	15	9.2	6
PHY 310 R	1348	2	43.0	1	3.5	16	101	11	65	10	10.1	14	7.8	2	7.802	12	4.2	9	1.14	20	84.7	2	31.2	11	8.9	8
ST 4575 BR	1321	3	40.5	8	3.6	11	96	19	66	8	9.5	24	6.6	19	9.133	1	3.9	19	1.14	16	83.9	9	31.4	7	10.3	2
ST 4892 BR, ck	1306	4	41.4	3	3.5	13	114	3	61	16	11.0	6	7.9	1	7.475	19	4.5	2	1.14	16	84.7	2	31.5	6	8.6	12
DP 393, ck.	1290	5	39.7	15	4.0	5	88	25	65	10	10.4	11	7.0	11	8.378	7	4.2	13	1.16	11	83.9	9	31.4	7	9.4	4
DP 445 BG/RR	1259	6	39.8	12	4.1	4	106	6	64	12	9.8	20	6.6	18	8.693	4	3.8	22	1.18	6	84.2	6	31.9	4	9.4	4
ST 5303 R	1238	7	39.8	13	3.9	7	113	4	60	19	9.6	23	6.4	21	8.767	3	4.4	5	1.10	25	83.6	16	31.2	12	8.0	16
ST 4686 R	1208	8	40.6	6	3.5	14	89	23	68	5	10.4	10	7.2	7	7.585	15	4.2	13	1.13	22	82.6	26	31.9	3	10.6	1
DX 25105N	1201	9	40.1	11	3.5	14	96	20	68	5	10.4	9	7.2	9	7.636	14	4.0	18	1.20	1	83.3	19	28.8	23	9.2	7
DP 444 BG/RR	1194	10	41.3	4	3.4	19	98	15	69	4	9.9	17	7.2	8	7.556	16	3.8	20	1.14	16	83.9	11	29.6	22	8.5	13
DP 434 RR	1174	11	42.0	2	3.7	8	94	21	71	1	9.6	22	7.1	10	7.538	17	3.8	22	1.17	9	83.7	12	27.8	26	8.9	8
ST 5242 BR	1164	12	40.4	9	3.4	20	99	13	68	5	11.2	4	7.8	3	6.778	24	4.1	16	1.12	24	83.7	13	28.1	25	8.5	13
FM 960 BR	1158	13	39.4	16	3.6	11	98	17	59	23	10.0	15	6.7	16	7.920	11	3.5	26	1.14	20	82.8	23	31.1	14	7.0	25
DP 543 BG/RR	1139	14	40.3	10	3.0	25	104	8	56	27	8.9	27	6.1	25	8.405	5	4.4	5	1.15	13	83.4	18	29.7	20	7.4	23
FM 960 RR	1137	15	38.5	19	3.5	17	88	26	61	16	11.5	2	7.4	6	7.018	21	3.4	27	1.18	8	83.0	22	29.9	19	6.7	27
DP 424 BG/RR	1135	16	37.5	24	3.4	21	97	18	63	13	10.1	13	6.2	23	8.339	8	4.2	9	1.10	25	82.7	25	28.5	24	8.7	10
ST 6636 BR	1134	17	37.5	23	2.6	27	114	2	63	13	10.0	16	6.3	22	8.170	10	4.5	2	1.19	2	83.7	13	31.3	9	7.7	19
PHY 410 R	1126	18	39.0	17	3.9	6	103	9	66	8	10.1	12	6.7	17	7.688	13	4.3	8	1.13	22	83.3	19	31.3	9	10.1	3
ST 5599 BR	1125	19	40.5	7	3.1	24	99	14	58	25	9.8	18	6.8	13	7.496	18	4.1	15	1.16	11	84.0	8	30.4	17	7.7	19
PM 1218 BR, ck	1092	20	39.8	14	2.8	26	98	16	70	3	11.3	3	7.6	4	6.521	25	4.7	1	1.10	25	83.1	21	27.5	27	8.7	11
ST 6848 R	1086	21	38.8	18	3.4	18	106	7	60	19	9.3	25	6.0	26	8.268	9	4.5	2	1.15	13	84.8	1	34.9	1	7.6	21
FM 958 LL	1043	22	38.5	20	4.2	2	89	24	61	16	10.8	8	6.9	12	6.843	23	4.2	12	1.19	4	84.4	4	31.7	5	7.4	22
DP 455 BG/RR	1023	23	37.0	26	3.3	22	107	5	58	25	9.1	26	5.6	27	8.403	6	3.7	24	1.17	10	82.6	26	29.6	21	7.9	18
FM 966 LL	1012	24	38.4	21	3.6	10	89	22	60	19	11.8	1	7.4	5	6.187	27	4.2	9	1.15	13	84.3	5	32.7	2	7.2	24
FM 960 B2R	992	25	35.8	27	3.3	22	86	27	63	13	11.1	5	6.5	20	6.995	22	3.8	21	1.19	2	83.5	17	30.0	18	6.8	26
CS 37	978	26	37.8	22	4.8	1	115	1	59	23	9.8	19	6.2	24	7.223	20	4.1	17	1.18	6	83.7	13	31.2	12	8.4	15
CS 38	963	27	37.4	25	4.1	3	103	10	60	19	10.8	7	6.7	15	6.486	26	3.6	25	1.19	4	82.7	24	30.5	16	8.0	16
Mean	1156		39.5		3.6		99		63		10.2		6.8		7.719		4.1		1.15		83.6		30.6		8.4	
LSD 0.10	129		2.2		ns		13		7		0.9		0.9		0.875		0.3		0.04		ns		1.7		0.5	
C.V.%	9.5		3.2		21.5		11.3		9.5		5.2		7.5		9.6		4.6		1.9		1.0		3.6		3.5	
R-sq x 100	62.4		78.3		30.9		53.6		44.3		80.6		76.1		64.4		87.4		78.7		57.8		81.9		96.2	

Table 9. Results of the 2005 Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, AR.

Variety	Lint		Open		Stand	Ht.	r	Open	Seed		Lint		Seed		Fiber properties											
	yield	frac.	bolts	%					r	index	per a	r	index	per a	r	index	per a	r	Mic	r	Len.	r	Unif.	r	Str.	r
	lb/a	%			no./ft	cm		%	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
ST 5599 BR	1506	1	41.7	6	2.9	23	122	5	70	23	9.3	12	6.9	8	10.000	9	4.5	5	1.12	11	83.0	15	27.5	25	7.8	20
DP 393, ck.	1490	2	42.2	1	3.7	6	109	24	84	5	8.9	19	6.8	11	9.993	10	4.5	2	1.11	15	82.8	22	31.1	3	9.5	8
DP 434 RR	1469	3	41.8	5	3.6	9	110	23	85	3	8.8	21	6.6	13	10.060	7	4.0	24	1.15	3	82.7	24	27.1	26	8.9	12
DP 445 BG/RR	1448	4	40.0	13	4.0	1	107	26	84	5	9.1	17	6.4	16	10.270	5	4.2	20	1.14	5	83.5	8	30.8	5	9.8	4
PHY 310 R	1419	5	42.2	2	3.1	19	117	12	88	2	9.0	18	6.8	10	9.432	15	4.2	20	1.07	27	82.8	18	28.5	20	9.2	10
DP 432 RR	1416	6	39.1	19	3.9	2	115	15	80	10	8.5	23	5.9	22	10.830	2	4.5	5	1.09	21	83.5	8	29.9	11	9.6	7
DP 455 BG/RR	1384	7	42.1	4	3.8	3	122	7	76	17	8.4	24	6.5	15	9.669	11	3.7	26	1.11	13	81.5	27	28.7	18	8.0	19
DP 444 BG/RR	1356	8	41.7	7	3.0	20	118	10	89	1	9.2	14	6.9	7	8.912	17	4.0	24	1.13	7	84.2	1	28.8	17	8.6	14
ST 6848 R	1349	9	38.7	21	3.6	8	130	1	68	27	8.8	22	5.7	23	10.680	3	4.6	1	1.13	7	84.2	1	31.7	1	8.1	18
FM 958 LL	1344	10	41.6	8	3.8	5	110	21	76	17	9.9	7	7.1	2	8.569	20	4.3	17	1.12	11	83.3	11	31.6	2	7.8	21
ST 4892 BR, ck	1326	11	39.2	17	2.9	23	110	21	79	14	9.4	9	6.4	17	9.475	14	4.4	9	1.10	18	82.8	21	28.9	16	8.4	16
DX 25105N	1325	12	41.5	9	3.4	13	111	20	83	7	9.3	10	6.9	9	8.783	19	4.4	7	1.12	10	82.9	17	28.6	19	9.4	9
ST 6636 BR	1322	13	37.1	26	2.3	27	127	3	74	20	8.8	20	5.4	26	11.040	1	4.5	2	1.16	1	83.9	4	30.7	7	7.7	22
ST 4686 R	1320	14	42.2	3	3.7	7	107	25	80	10	8.4	25	6.3	18	9.568	13	4.2	19	1.08	26	82.5	26	29.7	12	11.3	1
ST 5242 BR	1307	15	40.3	12	2.9	22	117	14	83	7	10.5	4	7.3	1	8.141	24	4.0	23	1.10	16	83.3	12	27.8	24	9.7	6
FM 966 LL	1302	16	41.1	10	3.6	10	111	18	69	26	10.0	5	7.1	3	8.323	22	4.3	15	1.09	23	83.1	14	30.8	5	7.0	27
ST 5303 R	1296	17	39.6	14	2.6	26	117	11	81	9	8.3	26	5.6	24	10.640	4	4.4	9	1.09	21	84.1	3	29.7	12	8.1	17
ST 4575 BR	1277	18	40.9	11	3.4	14	122	8	76	17	9.2	14	6.5	14	8.820	18	4.4	9	1.11	13	82.8	22	30.5	10	11.3	1
PM 1218 BR, ck	1266	19	38.5	24	3.2	18	112	17	85	3	10.7	3	6.9	5	8.299	23	4.5	2	1.09	23	82.8	18	26.7	27	9.0	11
CS 37	1262	20	38.6	23	3.4	12	128	2	80	10	9.3	13	6.0	21	9.639	12	4.3	17	1.15	4	82.9	16	30.6	8	8.5	15
PHY 410 R	1238	21	38.7	22	3.2	17	122	5	79	14	9.3	11	6.0	20	9.315	16	4.4	7	1.10	16	83.5	8	29.7	14	9.8	4
DP 424 BG/RR	1228	22	35.7	27	2.7	25	113	16	74	20	9.5	8	5.6	25	10.060	8	4.3	15	1.10	18	83.9</					

Table 10. Results of the 2005 Cotton Variety Test with irrigation on a Desha silt loam at Rohwer, AR.

Variety	Lint yield		Lint frac.		Stand no./ft	Ht. cm	Open bolls %	Seed index		Lint index g	Seed per a mil.	Mic r	Len. in.		Unif. %		Sfr. g/tex	r	Elo. %							
	r	lb/a	r	%				r	g				r	in.	r	%										
DP 432 RR	1958	1	41.1	11	3.8	9	97	13	65	19	10.1	18	7.2	21	12,260	1	4.8	13	1.13	16	84.1	7	30.3	14	8.9	5
ST 5303 R	1851	2	40.3	19	3.3	21	105	7	66	15	10.5	14	7.3	20	11,580	3	5.0	2	1.10	24	84.1	7	30.9	11	7.2	20
ST 4892 BR, ck	1820	3	41.7	7	3.7	11	107	5	64	22	10.3	17	7.6	14	10,870	8	4.9	10	1.13	16	84.1	11	28.8	23	8.3	10
DX 25105N	1818	4	43.0	2	3.4	17	94	20	70	3	9.6	25	7.4	16	11,090	5	4.7	16	1.13	18	83.1	22	27.7	25	8.5	8
DP 445 BG/RR	1812	5	41.4	8	4.0	7	95	17	65	19	9.8	22	7.2	23	11,450	4	4.5	22	1.15	8	83.6	16	30.8	12	8.9	6
DP 393, ck.	1812	6	42.5	3	3.9	8	94	21	70	3	10.1	19	7.6	13	10,760	9	4.8	14	1.17	3	84.6	3	30.5	13	9.0	4
DP 455 BG/RR	1796	7	42.1	4	4.2	3	93	22	68	8	9.8	23	7.4	18	11,060	6	4.6	20	1.14	15	82.9	25	29.8	15	7.2	20
CS 38	1726	8	40.6	14	3.3	21	109	4	64	22	11.9	2	8.2	1	9,526	17	4.7	16	1.18	2	84.0	13	31.1	10	7.6	15
PHY 310 R	1712	9	43.8	1	4.3	2	98	12	68	8	9.6	24	7.8	8	9,971	12	4.9	10	1.11	23	83.4	20	31.3	8	8.1	12
ST 5599 BR	1683	10	42.0	6	3.0	26	110	3	64	22	11.1	7	8.2	2	9,301	19	5.0	2	1.13	18	83.3	21	27.9	24	7.3	19
FM 960 BR	1655	11	41.2	9	4.0	6	93	22	73	2	10.9	8	7.8	11	9,687	16	4.5	22	1.12	20	84.1	7	29.7	16	7.0	23
CS 37	1641	12	40.1	20	3.4	18	107	6	66	15	10.6	12	7.3	19	10,250	10	4.6	18	1.19	1	84.8	2	32.1	2	7.9	14
DP 434 RR	1640	13	40.4	15	4.4	1	102	8	70	3	9.6	26	6.8	24	10,920	7	4.4	24	1.16	5	83.6	18	26.9	27	8.5	9
ST 5242 BR	1605	14	39.2	23	3.2	23	97	15	68	8	11.6	5	7.8	6	9,295	20	4.5	21	1.10	24	83.6	16	27.0	26	8.1	13
ST 4575 BR	1605	15	42.0	5	3.2	25	90	26	68	8	10.4	16	7.8	9	9,354	18	5.0	2	1.12	20	83.5	19	31.8	3	9.5	1
PHY 410 R	1592	16	40.8	13	4.0	5	100	10	66	15	10.5	15	7.4	15	9,731	15	4.9	7	1.09	26	84.6	4	31.8	3	9.1	3
ST 6636 BR	1579	17	37.2	27	3.6	13	116	1	64	22	10.0	20	6.5	26	11,690	2	5.0	2	1.15	8	83.8	14	31.2	9	7.5	17
DP 424 BG/RR	1578	18	39.0	24	3.4	19	88	27	66	15	10.7	11	7.2	22	9,960	13	4.9	10	1.12	20	84.2	6	29.1	19	8.6	7
FM 960 B2R	1549	19	39.3	22	3.4	19	95	18	68	8	12.0	1	8.0	4	8,746	24	4.8	14	1.16	5	83.0	23	29.1	18	6.8	25
PM 1218 BR, ck	1547	20	39.7	21	3.5	15	95	16	69	7	11.4	6	7.8	7	8,976	21	5.3	1	1.07	27	82.7	26	28.9	22	7.5	16
ST 4686 R	1537	21	41.1	10	3.6	12	92	24	68	8	10.9	9	7.9	5	8,793	23	4.9	7	1.15	8	83.7	15	31.5	7	9.2	2
DP 543 BG/RR	1457	22	40.4	17	4.2	3	99	11	64	22	9.4	27	6.5	25	10,090	11	4.9	7	1.14	14	82.7	26	29.0	20	7.5	17
FM 958 LL	1444	23	40.3	18	3.5	14	97	14	65	19	10.6	13	7.4	17	8,887	22	4.6	18	1.15	8	84.3	5	31.8	5	6.6	27
DP 444 BG/RR	1441	24	40.4	16	3.2	23	100	9	74	1	10.8	10	7.7	12	8,551	25	4.4	26	1.16	5	84.1	7	28.9	21	8.2	11
FM 960 RR	1405	25	40.9	12	2.9	27	92	25	68	8	11.8	4	8.2	3	7,790	27	4.4	26	1.16	4	83.0	24	29.6	17	6.8	25
ST 6848 R	1395	26	38.5	26	3.5	16	112	2	64	22	9.9	21	6.4	27	9,913	14	5.0	2	1.15	8	85.0	1	33.6	1	7.2	22
FM 966 LL	1395	27	38.9	25	3.7	10	94	19	70	3	11.8	3	7.8	10	8,138	26	4.4	24	1.15	8	84.1	11	31.7	6	6.9	24
Mean	1629		40.7		3.6		99		67		10.6		7.5		9,961		4.7		1.13		83.8		30.1		7.9	
LSD 0.10	243		1.8		0.7		9		5		0.9		0.7		1,455		0.3		0.03		1.0		1.8		0.6	
C.V.%	12.2		2.5		17.1		8.0		6.0		5.1		5.2		12.0		3.1		1.7		0.7		3.5		4.2	
R-sq x 100	50.2		78.4		37.9		70.7		91.4		81.2		76.0		58.9		84.8		81.5		69.8		83.5		92.9	

Table 11. Two-year average lint yields (lb/a) for cultivars at the six locations of the 2004-2005 Arkansas Cotton Variety Test.

Variety	Manilla		Keiser		Keiser		Keiser		Marianna		Rohwer		All	
	Irrigated	r	Irrigated	r	Non-irrig.	r	Non-irrig.	r	Irrigated	r	Irrigated	r	Irrigated	loc.
DX 25105N	1130	3	1447	1	1170	6	1447	2	1523	4	1674	4	1398	1
PHY 310 R	1305	1	1167	16	1231	3	1315	16	1490	7	1778	1	1381	2
DP 445 BG/RR	1122	4	1263	6	1130	10	1424	4	1528	3	1747	2	1369	3
ST 5599 BR	928	18	1320	4	1346	1	1374	10	1551	1	1601	9	1353	4
ST 4892 BR, ck	1096	5	1299	5	1142	9	1472	1	1432	14	1607	8	1341	5
DP 434 RR	1233	2	1193	12	1112	12	1367	12	1547	2	1587	12	1340	6
DP 432 RR	1063	9	1193	13	1098	14	1416	6	1477	9	1734	3	1330	7
ST 5242 BR	1048	10	1331	2	1176	5	1332	15	1466	10	1596	10	1325	8
DP 444 BG/RR	1079	8	1327	3	1149	7	1419	5	1484	8	1489	16	1324	9
DP 455 BG/RR	1094	6	1235	9	1104	13	1356	14	1512	6	1628	5	1321	10
DP 393, ck.	964	15	1200	11	1279	2	1361	13	1514	5	1588	11	1318	11
ST 4686 R	1040	11	1254	7	1180	4	1377	9	1443	12	1609	7	1317	12
ST 4575 BR	1081	7	1240	8	1112	11	1429	3	1447	11	1556	13	1311	13
FM 960 RR	974	14	1178	15	1034	18	1294	18	1306	22	1622	6	1234	14
ST 5303 R	1003	13	1135	19	992	23	1371	11	1346	19	1531	14	1229	15
PHY 410 R	952	16	1202	10	1045	17	1390	7	1367	17	1390	23	1224	16
PM 1218 BR, ck	1031	12	1124	20	1143	8	1158	26	1375	16	1439	19	1212	17
FM 960 BR	906	19	1167	17	996	22	1386	8	1341	20	1399	20	1199	18
FM 958 LL	830	24	1185	14	1065	15	1304	17	1438	13	1326	25	1191	19
DP 424 BG/RR	933	17	1138	18	1016	21	1242	21	1211	27	1456	18	1166	20
FM 966 LL	837	23	1097	21	1017	20	1223	23	1396	15	1392	22	1160	21
ST 6636 BR	768	26	1042	24	1032	19	1277	20	1356	18	1467	17	1157	22
FM 960 B2R	851	22	1072	22	1059	16	1173	24	1306	23	1383	24	1141	23
CS 37	794	25	1053	23	966	24	1164	25	1341	21	1398	21	1119	24
CS 38	884	21	1021	25	908	25	1151	27	1211	26	1499	15	1112	25
DP 543 BG/RR	903	20	988	26	839	27	1278	19	1301	24	1320	26	1105	26
ST 6848 R	636	27	911	27	844	26	1230	22	1284	25	1242	27	1024	27
Mean	981		1177		1081		1323		1407		1520		1248	

1/ Mean of tests at Clarkedale in 2004 and Judd Hill in 2005 (both on Dundee silt loam soil).

Table 12. Three-year average lint yields (lb/a) for cultivars at the six locations of the 2003-2005 Arkansas Cotton Variety Test.

Variety	Manila		Keiser		Keiser		Keiser		Cik/JH1		Marianna		Rohwer		All	
	Irrigated	r	Irrigated	r	Non-irrig.	r	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r
ST 5599 BR	946	10	1261	2	1141	1	1218	3	1316	1	1715	1	1266	1	1266	1
DP 444 BG/RR	1078	3	1324	1	1069	3	1302	2	1188	6	1547	5	1251	2	1251	2
ST 4892 BR, ck	1056	6	1203	4	1044	4	1305	1	1208	4	1658	2	1246	3	1246	3
ST 5242 BR	1065	4	1256	3	1102	2	1189	4	1260	2	1601	3	1246	4	1246	4
DP 434 RR	1225	1	1109	11	926	7	1109	10	1257	3	1507	7	1189	5	1189	5
DP 432 RR	1079	2	1138	6	948	6	1173	6	1195	5	1582	4	1186	6	1186	6
ST 5303 R	1015	7	1120	9	903	11	1180	5	1044	11	1519	6	1130	7	1130	7
PM 1218 BR, ck	1065	5	1076	12	1007	5	1052	11	1108	9	1411	9	1120	8	1120	8
FM 960 BR	906	12	1110	10	922	8	1149	8	1117	7	1416	8	1103	9	1103	9
PHY 410 R	1005	8	1145	5	877	12	1125	9	1056	10	1401	10	1102	10	1102	10
FM 958 LL	929	11	1135	8	904	10	1165	7	1117	8	1357	12	1101	11	1101	11
DP 424 BGII/RR	980	9	1138	7	909	9	1033	12	1033	12	1376	11	1078	12	1078	12
Mean	1029		1168		979		1167		1158		1508		1168		1168	

1/ Mean of tests at Clarkedale in 2003-2004 and Judd Hill in 2005 (both on Dundee silt loam soil).

Table 13. Results of the 2005 1st-year (non-Flex) Cotton Variety Test across six Arkansas test sites.

Variety	Lint		Lint		Lint		Lint		Seed		Seed		Seed		Seed		Seed		Fiber properties							
	yield	frac.	frac.	%	Stand	no./ft	Ht.	cm	Open	bolls	%	index	g	index	g	per a	mil.	Mic	Len.	in.	Unif.	%	Str.	g/tex	Elc.	r
STX416B2R	1329	1	39.3	13	3.0	26	99	12	66	8	9.5	21	6.4	22	9.491	1	4.7	9	1.12	23	83.3	18	29.9	18	8.0	13
PHY 370 WR	1308	2	42.3	2	3.8	14	98	13	66	9	9.8	20	7.4	1	8.027	8	4.8	6	1.11	24	83.8	9	31.2	12	8.6	5
DPLX 04Y170BR	1248	3	41.0	6	3.8	15	103	7	63	15	8.6	24	6.2	25	8.428	4	4.6	13	1.14	15	83.0	26	29.7	22	7.5	17
ST 5599BR, ck	1245	4	40.3	7	3.8	20	102	9	57	24	10.4	9	7.2	5	7.804	11	4.6	11	1.13	17	83.3	17	29.8	20	7.4	19
DPLX 03X179R	1234	5	42.2	3	4.0	7	95	15	58	23	9.2	23	6.9	12	8.765	3	4.8	3	1.18	6	84.6	1	33.3	2	8.2	9
DPLX 05X648DR	1225	6	41.9	4	3.9	13	106	2	61	19	8.4	26	6.3	23	8.825	2	4.8	5	1.13	19	83.0	25	28.8	26	7.3	23
DP 444 BG/RR, ck	1225	7	41.1	5	3.9	10	102	8	71	5	10.0	17	7.2	6	7.805	10	4.1	26	1.13	16	84.0	5	29.3	25	8.2	6
PHY 440 W	1221	8	39.3	14	4.1	4	95	17	66	9	9.9	18	6.7	19	8.317	6	4.5	16	1.14	14	83.7	12	31.5	11	9.5	1
Ark 9304-39-15	1219	9	39.8	9	4.2	3	88	26	74	3	10.7	5	7.3	2	7.526	15	4.2	24	1.12	22	83.4	15	30.0	16	8.6	3
DP 454 BG/RR	1200	10	43.0	1	4.1	5	104	5	63	12	8.6	25	6.7	17	8.201	7	4.3	23	1.10	25	83.1	24	29.4	24	8.0	12
Ark 9304-39-02	1184	11	38.7	19	4.0	8	89	24	72	4	10.4	11	6.9	13	7.904	9	4.5	14	1.13	17	83.8	10	31.6	10	9.1	2
FM 960 BR, ck	1182	12	39.0	17	4.0	9	92	20	63	12	10.5	8	7.0	10	7.729	12	4.3	21	1.13	21	83.2	21	32.6	3	6.9	24
FMx00E2LLB2	1157	13	38.6	20	3.7	21	90	23	64	11	11.3	1	7.3	3	7.229	20	4.9	2	1.16	9	84.0	6	31.8	9	7.3	20
DX 24101-20	1152	14	38.9	18	4.2	2	91	22	67	7	9.4	22	6.2	24	8.398	5	4.4	17	1.15	10	83.1	23	30.8	14	7.5	18
CS 42	1146	15	39.6	10	3.8	19	104	4	62	16	10.2	14	6.9	11	7.539	14	4.3	22	1.19	4	83.9	8	32.4	5	8.1	10
Ark 9409-40-08	1138	16	39.5	11	3.6	23	88	25	76	1	9.9	19	6.7	18	7.644	13	4.4	19	1.14	13	83.5	14	29.7	21	8.2	7
CS 44	1136	17	40.0	8	3.8	17	92	21	67	6	10.4	10	7.3	4	7.260	19	4.7	8	1.16	8	83.4	16	30.0	17	7.6	15
Ark 9308-17-04	1127	18	39.0	16	3.4	24	99	10	75	2	10.7	6	7.0	9	7.302	18	4.8	4	1.15	11	84.2	4	32.1	7	8.2	8
FMx022B2LL	1086	19	38.3	22	3.8	16	95	18	62	17	11.2	2	7.2	7	6.946	21	4.4	20	1.15	11	83.5	13	30.6	15	6.7	26
CS 41	1072	20	38.5	21	4.1	6	95	16	63	12	10.1	16	6.6	21	7.403	16	4.2	24	1.21	3	84.0	7	29.8	19	7.3	22
CS 43	1029	21	35.2	26	3.9	12	110	1	60	21	11.0	3	6.1	26	7.372	17	4.4	18	1.21	1	84.2	3	31.2	13	8.6	4
DX 241203-16	1003	22	39.3	15	3.9	11	99	11	62	17	10.2	15	6.7	16	6.775	22	4.5	15	1.19	5	83.3	19	32.5	4	8.0	11
CES 33	954	23	37.5	25	3.7	22	103	6	55	25	11.0	4	6.8	14	6.354	23	4.7	7	1.18	7	83.7	11	32.0	8	6.8	25
NIM03012	932	24	38.1	23	3.3	25	106	3	59	22	10.6	7	6.8	15	6.268	24	4.6	11	1.21	2	84.4	2	36.8	1	7.9	14
CES 25	917	25	39.3	12	3.8	18	94	19	61	20	10.4	12	7.0	8	5.924	26	4.6	10	1.10	26	83.3	20	32.2	6	7.5	16
CES 21	875	26	37.8	24	4.2	1	98	14	54	26	10.4	13	6.6	20	6.134	25	4.9	1	1.13	19	83.2	22	29.6	23	7.3	21
Mean	1136		39.5		3.8		98		64		10.1		6.8		7.592		4.5		1.15		83.6		31.1		7.9	
Var. LSD 0.10	62		0.7		0.3		4		6		0.4		0.2		0.421		0.2		0.02		0.5		0.8		0.2	
Loc. LSD 0.10	30		0.3		0.2		3		5		0.1		0.1		0.206		0.1		0.01		0.2		0.4		0.1	
C.V.%	11.7		2.5		15.4		8.7		7.5		6.4		4.0		11.9		5.0		2.1		0.9		3.8		3.9	
R-sq x 100	82.8		89.3		55.6		79.7		88.6		82.8		90.2		81.4		84.8		84.7		65.0		86.5		92.5	
Prob (var x loc)	<.001		<.001		<.001		<.001		<.001		0.402		<.001		<.001		0.391		0.170		0.149		0.052		0.211	

Table 18. Results of the 2005 1st-year (non-Flex) Cotton Variety Test with irrigation on a Caloway silt loam soil at Marianna, AR.

Variety	Lint yield lb/a	Lint frac. %	Stand no./ft	Ht. cm	Open boll %	Seed index g	Lint index g	per a mil.	Seed			Mic			Len.			Unif.			Str. g/tex	Elo. %				
									r	frac.	no./ft	r	index	r	per a	r	index	r	Len.	r			in.	r	Unif.	r
PHY 370 WR	1575	1	42.7	1	3.4	14	121	10	81	9	9.4	14	7.1	2	10.060	3	4.5	6	1.11	21	83.3	16	30.2	12	9.0	5
Ark 9304-39-15	1448	2	41.8	4	4.0	1	97	26	90	1	9.6	12	7.0	3	9.390	11	4.0	21	1.13	17	83.4	15	30.0	13	8.5	8
FM 960 BR, ck	1407	3	39.3	17	3.6	6	108	21	71	19	9.5	13	6.5	14	9.890	6	4.1	18	1.08	26	82.4	24	30.9	7	7.2	26
ST 5599BR, ck	1403	4	39.5	16	2.7	24	127	4	65	22	11.0	1	7.3	1	8.726	19	4.4	10	1.15	10	84.1	1	29.9	14	7.9	20
DPLX 04Y170BR	1391	5	41.4	7	2.8	22	125	7	76	14	7.4	26	5.5	26	9.550	10	4.1	19	1.10	23	82.1	26	27.6	25	8.0	18
PHY 440 W	1378	6	39.9	12	3.6	4	110	19	78	12	9.2	17	6.4	16	9.841	7	4.1	19	1.16	8	83.9	6	31.2	6	10.6	1
STX416B2R	1375	7	39.6	15	2.4	26	107	22	85	6	9.1	19	6.2	18	10.060	4	4.6	2	1.10	22	83.0	19	28.6	22	8.5	11
Ark 9308-17-04	1362	8	40.7	9	2.5	25	118	12	90	1	9.9	9	6.8	5	9.090	15	4.6	1	1.15	11	83.8	8	29.6	15	8.5	8
FMX0052LLB2	1360	9	38.9	19	3.6	8	107	23	75	15	10.3	3	6.7	10	9.262	13	4.5	6	1.14	12	83.5	11	29.4	17	7.8	22
DP 444 BG/RR, ck	1346	10	41.5	6	3.5	11	116	14	86	4	9.2	18	6.7	12	9.186	14	3.8	25	1.13	14	83.9	5	27.9	24	9.0	4
DPLX 03X179R	1335	11	41.9	3	3.2	18	119	11	63	24	9.0	22	6.7	8	10.880	1	4.6	2	1.18	6	84.0	3	32.4	3	8.3	13
CS 44	1334	12	39.0	18	3.4	12	110	20	85	6	10.3	2	6.9	4	8.782	18	4.4	10	1.19	5	83.5	11	28.7	21	8.3	14
DP 454 BG/RR	1325	13	41.9	2	3.8	3	123	9	79	10	8.0	24	6.0	21	10.010	5	4.0	22	1.10	23	82.8	20	28.0	23	8.4	12
FMX0222B2LL	1321	14	38.0	22	3.4	13	123	8	73	18	10.2	4	6.5	13	8.966	16	4.0	22	1.13	14	83.2	17	29.0	18	7.3	24
CS 41	1307	15	39.7	14	3.5	10	114	16	74	17	9.1	20	6.2	19	9.641	9	4.0	22	1.20	2	83.9	6	28.8	20	8.1	16
DPLX 05X648DR	1306	16	41.6	5	2.9	20	126	5	75	15	7.9	25	5.8	25	10.170	2	4.4	10	1.11	20	82.6	22	27.0	26	7.4	23
DX 24101-20	1282	17	40.0	11	3.6	4	111	17	86	4	8.8	23	6.0	20	9.645	8	4.2	16	1.13	17	82.5	23	30.3	11	7.9	20
Ark 9304-39-02	1252	18	38.5	21	3.3	16	100	25	85	6	10.1	5	6.7	7	8.484	21	4.3	15	1.12	19	83.5	11	30.6	10	9.8	2
Ark 9409-40-08	1250	19	39.8	13	3.0	19	110	18	90	1	9.8	10	6.7	6	8.417	22	4.4	10	1.16	7	83.7	9	30.7	8	8.6	7
DX 241203-16	1232	20	41.0	8	3.9	2	118	13	78	12	9.1	21	6.4	15	8.889	17	4.4	8	1.14	12	82.3	25	31.6	4	8.5	8
CS 42	1210	21	37.2	24	3.3	15	131	2	68	21	9.3	15	5.9	23	9.290	12	3.8	26	1.20	2	84.1	2	32.7	2	8.8	6
CES 33	1200	22	37.6	23	2.8	21	131	3	61	25	9.9	8	6.3	17	8.645	20	4.5	5	1.16	8	83.5	11	30.7	9	7.2	25
CS 43	1089	23	36.0	26	3.6	6	135	1	64	23	10.1	5	5.9	24	8.369	23	4.2	17	1.20	2	83.7	9	31.4	5	9.4	3
NM03012	1041	24	38.9	20	2.7	23	116	14	71	19	10.1	5	6.7	9	7.066	25	4.4	10	1.21	1	84.0	4	35.2	1	8.2	15
CES 21	1000	25	36.9	25	3.5	9	126	6	60	26	9.6	11	6.0	22	7.569	24	4.6	2	1.13	14	82.7	21	28.9	19	8.1	16
CES 25	929	26	40.2	10	3.2	17	105	24	79	10	9.3	16	6.7	11	6.329	26	4.4	8	1.09	25	83.1	18	29.5	16	8.0	18
Mean	1287		39.8		3.3		117		76		9.4		6.4		9.084		4.3		1.14		83.3		30.0		8.3	
LSD 0.10	107		1.7		0.6		10		7		0.8		0.4		0.763		0.4		0.04		ns		1.8		0.5	
C.V.%	7.0		2.5		14.9		7.6		7.6		4.9		3.5		7.1		5.3		1.9		0.8		3.5		3.5	
R-sq x 100	77.9		85.4		51.4		64.0		78.0		86.7		88.2		77.1		72.2		85.2		62.8		85.7		93.5	

Table 19. Results of the 2005 1st-year (non-Flex) Cotton Variety Test with irrigation on a Desha silt loam at Rohwer, AR.

Variety	Lint yield lb/a	Lint frac. %	Stand no./ft	Ht. cm	Open boll %	Seed index g	Lint index g	per a mil.	Seed			Mic			Len.			Unif.			Str. g/tex	Elo. %				
									r	frac.	no./ft	r	index	r	per a	r	index	r	Len.	r			in.	r	Unif.	r
PHY 370 WR	1776	1	44.1	2	3.8	7	102	12	68	13	10.6	17	8.7	1	9.345	12	5.2	2	1.10	25	84.0	11	30.4	11	8.7	5
DPLX 03X179R	1731	2	42.3	4	3.6	13	101	14	68	13	9.4	22	7.2	16	11.130	4	4.9	8	1.17	7	84.5	3	32.6	2	8.0	12
DPLX 05X648DR	1722	3	43.7	3	3.0	23	112	3	64	22	8.9	25	6.9	17	11.290	2	5.0	7	1.13	16	83.2	19	28.2	24	7.4	18
STX416B2R	1719	4	39.2	17	2.6	26	109	6	65	18	9.4	23	6.3	25	12.450	1	4.6	19	1.12	20	83.3	18	28.7	20	7.8	13
ST 5599BR, ck	1694	5	42.0	6	3.5	16	111	4	61	24	11.5	7	8.4	2	9.108	16	5.1	5	1.12	18	82.8	23	28.0	25	7.4	18
Ark 9409-40-08	1656	6	41.2	8	3.4	18	83	26	78	1	10.7	14	7.7	9	9.752	10	4.6	15	1.16	11	84.5	3	30.5	10	8.4	7
Ark 9304-39-15	1627	7	42.2	5	4.1	4	86	25	75	2	11.1	9	8.2	3	9.013	17	4.6	18	1.12	18	83.5	16	29.1	15	8.8	4
Ark 9308-17-04	1616	8	39.5	14	3.3	20	106	7	71	3	11.8	4	8.0	6	9.130	14	4.9	8	1.14	13	84.3	5	30.4	12	8.9	3
DPLX 04Y170BR	1613	9	40.6	9	4.2	2	102	12	65	18	9.2	24	6.8	18	10.680	6	4.5	24	1.16	10	83.6	14	29.0	16	7.3	21
Ark 9304-39-02	1595	10	39.4	15	3.5	15	89	23	71	3	9.6	20	6.5	23	11.110	5	4.9	8	1.11	22	84.3	6	31.3	5	9.1	2
DX 24101-20	1591	11	37.4	25	3.6	14	90	22	69	8	10.2	19	6.4	24	11.220	3	4.6	19	1.14	13	83.1	20	29.0	16	7.2	23
CS 44	1555	12	40.2	10	3.4	18	98	18	65	18	11.5	8	8.1	5	8.736	19	5.0	6	1.17	7	83.7	13	29.5	14	7.5	15
DP 444 BG/RR, ck	1550	13	41.3	7	3.8	9	106	8	69	8	11.0	10	7.9	7	8.879	18	4.5	21	1.16	11	84.2	8	28.6	21	8.1	10
PHY 440 W	1518	14	37.8	23	3.8	9	99	17	70	6	10.6	16	6.7	20	10.360	7	4.5	21	1.13	16	83.5	16	30.9	8	9.2	1
FM 960 BR, ck	1507	15	40.2	11	3.9	5	97	19	69	8	10.9	13	7.5	11	9.120	15	4.7	12	1.11	23	82.7	25	31.9	4	6.9	24
FMX0052LLB2	1489	16	39.2	16	3.5	17	88	24	71	3	11.9	2	7.9	8	8.564	20	5.2	2	1.17	9	83.9	12	30.3	13	7.4	20
CS 41	1464	17	38.8	20	3.7	11	96	21	68	13	11.0	12	7.2	15	9.182	13	4.4	26	1.20	4	84.3	6	28.0	25	7.3	21
DP 454 BG/RR	1455	18	44.1	1	4.6	1	105	9	69	8	8.2	26	6.5	22	10.110	8	4.5	21	1.10	24	82.8	22	28.4	22	7.7	14
CS 43	1438	19	36.0	26	3.9	6	114	2	66	16	11.9	3	6.7	19	9.789	9	4.6	17	1.21	1	84.1	10	28.8	18	8.5	6
FMX0222B2LL	1403	20	39.0	18	3.6	12	101	15	65	18	12.1	1	8.2	4	7.890	23	4.7	12	1.14	13	82.7	24	28.7	19	6.7	25
CS 42	1330	21	39.9	13	3.2	21	104	10	66	16	11.0	11	7.5	12	8.065	22	4.5	24	1.21	1	83.6	14	30.9	9	8.2	9
CES 21	1307	22	37.9	22	4.2	3	103	11	58	26	9.6	21	6.1	26	9.725	11	5.3	1	1.12	20	83.1	20	28.2	23	7.5	16
DX 241203-16	1287	23	39.0	19	3.2	22	97	19	70	6	11.5	6	7.6	10	7.396	24	4.6	15	1.21	1	84.7	1	31.2	6	8.0	11
NM03012	1250	24	37.7	24	3.0	25	117	1	64	22	10.5	18	6.6	21	8.539	21	4.7	12	1.20	5	84.5	2	35.3			

Table 22. Results of the 2005 1st-year (Flex) Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, AR.

Variety	Lint yield lb/a	Lint frac. %	Lint r	Stand no./ft	Ht. cm	Open bolts	Seed index g	Seed per a mill.	Seed			Fiber properties																
									r	index	g	r	Len. in.	Unif. %	g/tex													
PHY 410 R, ck.	1125	1	42.7	1	4.3	15	99	11	59	14	9.4	34	7.2	4	7.142	22	4.4	8	1.14	34	83.7	17	31.8	11	9.5	9		
ST 4554 B2RF	1114	2	40.5	7	3.9	38	89	24	58	16	9.3	35	6.7	11	7.945	2	4.6	5	1.12	40	83.4	27	32.9	5	11.2	1		
ST 5242 BR, ck.	1111	3	41.2	3	3.8	41	89	24	63	4	10.1	9	7.3	2	6.963	26	4.4	1.10	42	83.0	34	27.9	38	8.9	25			
ST 4664 RF	1105	4	40.1	12	4.3	13	85	33	60	10	9.5	30	6.5	16	7.626	6	4.2	22	1.14	34	83.7	19	33.1	4	10.9	2		
DP 444 BG/RR, ck.	1104	5	41.9	2	3.9	36	96	15	66	1	9.1	39	6.5	14	7.663	5	4.1	34	1.16	20	83.5	26	28.4	30	8.8	26		
BW-4630B2F	1093	6	39.3	18	4.9	1	88	27	63	4	10.2	4	6.8	8	7.279	13	4.3	17	1.18	12	83.7	17	27.6	40	9.4	11		
BW-9124B2F	1074	7	39.4	17	4.3	13	86	32	60	10	9.2	38	6.2	26	7.891	3	4.1	31	1.16	20	82.1	42	27.7	39	9.4	13		
ST 5599 BR, ck.	1046	8	40.9	4	4.1	27	96	16	50	37	10.2	3	7.3	1	6.538	34	4.6	4	1.14	34	83.8	15	28.6	28	8.0	37		
CG 4020 B2RF	1040	9	39.7	15	4	31	92	22	56	23	9.7	18	6.5	15	7.242	14	4.1	31	1.19	7	84.1	9	28.7	26	9.0	22		
Dyna-Gro 2215 B2RF	1023	10	37.1	37	4.2	21	82	39	58	16	9.9	14	5.9	33	7.877	4	3.9	40	1.15	29	82.8	38	28.0	37	9.1	19		
DP 152 RF	1013	11	38.6	24	3.6	42	85	34	61	8	9.4	31	6.2	25	7.468	10	3.9	39	1.15	26	82.9	35	28.2	33	8.1	35		
PHY 415 RF	1003	12	39.0	21	4.3	15	100	9	59	14	9.8	17	6.3	22	7.196	20	4.5	7	1.15	29	84.2	7	29.1	22	10.1	5		
FM 960 BR, ck.	1003	13	40.4	9	4.3	17	89	23	49	41	10.1	7	7.0	6	6.545	33	4.2	29	1.17	14	82.9	35	31.5	13	7.3	42		
BW-4575B2F	1001	14	38.2	28	4.6	3	80	40	63	4	10.1	6	6.3	21	7.178	21	3.8	42	1.12	41	82.7	40	27.6	40	9.3	14		
Dyna-Gro 2100 B2RF	1000	15	38.0	30	4.6	3	80	41	63	4	9.6	23	6.0	30	7.535	8	4.0	37	1.14	31	83.6	21	27.0	42	9.3	14		
STX0509B2F	998	16	39.4	16	4.4	11	94	19	56	23	11.0	1	7.2	3	7.074	23	3.9	40	1.17	14	83.7	19	28.2	33	9.1	19		
Dyna-Gro 2520 B2RF	998	17	38.2	29	4.6	5	85	35	58	16	9.0	41	5.6	40	8.094	1	4.1	30	1.18	11	83.9	12	29.2	21	9.3	14		
PHY 425 RF	993	18	37.4	35	4	33	102	6	55	28	9.8	16	6.2	28	7.340	12	4.8	1	1.14	31	84.3	5	31.9	10	10.3	3		
PHY 470 WR	992	19	38.9	22	4.5	7	98	13	55	28	10.6	2	6.9	7	6.529	35	4.4	8	1.14	31	84.0	11	32.8	7	10.1	4		
CG 3020 B2RF	991	20	39.9	13	3.9	37	79	42	64	2	9.8	15	6.7	10	6.704	29	4.2	22	1.13	38	84.1	9	28.9	24	9.6	7		
DP 147 RF	985	21	38.3	27	4	33	109	1	55	28	9.4	32	6.0	32	7.471	9	4.3	17	1.23	1	83.8	14	30.6	17	8.2	31		
Dyna-Gro 2242 B2RF	985	22	37.7	34	4.4	10	89	26	60	10	10.0	10	6.2	27	7.240	15	4.2	24	1.17	16	83.1	31	28.6	27	9.6	7		
DP 108 RF	980	23	40.7	5	4	29	108	2	61	8	9.9	12	7.1	5	6.322	38	4.1	34	1.13	39	83.1	32	29.0	23	8.4	29		
DP 164 B2RF	980	24	38.5	25	4.2	22	100	8	50	37	9.0	40	5.9	34	7.573	7	4.4	8	1.21	3	84.6	3	31.4	14	8.1	36		
BW-4021B2F	974	25	37.8	32	4.2	22	83	37	58	16	9.6	24	6.1	29	7.231	17	4.1	31	1.16	22	83.6	21	28.3	32	8.8	26		
DP 156 B2RF	969	26	39.0	20	4.1	27	93	21	60	10	9.6	24	6.3	23	7.012	24	4.4	13	1.17	16	83.3	29	28.9	24	7.8	38		
DP 113 B2RF	958	27	40.4	8	4.1	24	95	18	56	23	9.6	22	6.6	12	6.546	32	4.2	24	1.17	16	83.9	13	32.3	8	7.8	38		
BW-1004B2F	929	28	37.4	36	4.2	19	87	29	56	23	9.7	21	5.9	35	7.213	18	4.2	24	1.16	22	83.6	21	28.3	31	9.5	9		
PHY 480 WR	929	29	36.6	38	4.3	17	99	12	55	28	9.7	20	5.7	38	7.352	11	4.3	17	1.19	5	85.0	2	33.4	3	9.8	6		
CG 3520 B2RF	928	30	38.6	23	4.1	24	83	38	64	2	9.9	11	6.4	19	6.594	31	4.2	24	1.16	22	83.1	32	28.0	35	9.3	14		
DP 147 RF	920	31	40.6	6	4.1	26	100	7	51	34	9.6	26	6.7	9	6.202	39	4.4	13	1.18	12	82.6	41	28.0	36	7.8	38		
DP 110 RF	915	32	39.9	14	3.8	40	100	10	53	33	9.6	29	6.5	17	6.377	37	4.6	3	1.15	26	83.6	21	35.6	1	9.0	22		
DP 117 B2RF	914	33	39.2	19	4.3	12	94	20	58	16	9.3	36	6.2	24	6.640	30	4.3	17	1.17	16	83.4	27	33.5	2	8.2	32		
STX0510B2F	907	34	36.6	39	4	33	84	36	56	23	9.9	13	5.9	36	6.997	25	4.0	38	1.19	5	84.3	6	31.5	12	9.2	18		
BW-3255B2F	902	35	37.9	31	4.8	2	86	30	58	16	10.1	8	6.4	20	6.409	36	4.1	34	1.14	34	83.8	15	28.6	28	9.4	11		
STX0414B2RF	880	36	38.3	26	4	31	106	5	50	37	9.6	28	6.0	31	6.875	27	4.3	15	1.15	26	83.3	29	29.9	18	8.2	33		
STX5885B2RF	865	37	37.7	33	3.9	38	98	14	51	34	9.2	37	5.7	39	5.660	41	4.6	5	1.19	7	83.5	25	32.9	5	9.0	24		
BW-8391B2F	864	38	35.7	42	4.4	9	86	31	58	16	9.6	27	5.4	41	7.199	19	4.4	12	1.21	2	85.3	1	30.9	15	9.1	21		
ST 6622 RF	860	39	40.2	11	4.5	8	106	4	51	34	9.7	18	6.6	13	5.889	40	4.8	1	1.16	22	84.2	8	30.8	16	8.3	30		
ST 6611 B2RF	852	40	35.9	41	4	30	108	2	50	37	10.1	5	5.8	37	6.723	28	4.4	8	1.19	7	82.9	35	29.7	20	8.2	33		
BW-1505RF	822	41	36.4	40	4.2	19	88	28	54	32	8.9	42	5.2	42	7.236	16	4.3	15	1.19	7	84.5	4	32.2	9	7.6	41		
DP 143 B2RF	797	42	40.4	10	4.5	6	95	17	48	42	9.4	33	6.4	18	5.617	42	4.3	17	1.20	4	82.8	39	29.9	18	8.5	28		
Mean	975		38.9		4.2		93		57		9.7		6.3		7.005		4.2		1.16		83.6		30.0		8.9			
LSD 0.10	109		2.0		0.5		9		6		ns		0.8		0.790		0.3		0.04		1.0		2.0		0.6			
C.V.%	9.6		3.1		0.3		8.4		8.5		6.5		7.8		9.6		4.8		1.8		0.7		4.0		4.1			
R-sq x 100	66.0		78.3		36.5		66.0		61.0		48.0		67.3		65.6		70.3		77.6		73.7		86.2		86.2		91.8	

Table 23. Results of the 2005 1st-year (Flex) Cotton Variety Test without irrigation on a Tunica silty clay soil at Keiser, AR.

Variety	Lint yield lb/a	Lint frac. %	Lint r	Stand no./ft	Ht. cm	Open bolts	Seed index g	Seed per a mill.	Seed			Fiber properties														
									r	index	g	r	Len. in.	Unif. %	g/tex											
BW-4630B2F	1045	1	41.6	2	4.4	15	73	29	58	10	9.1	26	6.7	10	7.083	8	4.4	19	1.13	16	83.9	4	27.3	33	8.6	18
ST 5599 BR, ck.	1044	2	39.2	23	4	34	89	3	46	40	10.3	5	6.8	7	6.983	9	4.5	17	1.10	30	82.9	21	28.5	25	7.8	31
CG 4020 B2RF	1024	3	39.9	19	4.2	21	76	19	56	19	8.9	34	6.1	28	7.622	3	3.9	40	1.14	8	83.3	13	26.8	38	8.5	21
BW-9124B2F	1002	4	40.5	14	4.4	15	75	24	58	10	9.2	21	6.6	17	6.906	11	4.3	31	1.09	33	82.0	38	25.5	41	9.1	9
ST 4664 RF	992	5	40.7	11	4.6	4	74	28	58	10	9.1	26	6.7	11	7.542	4	4.5	13	1.09	33	82.6	29	33.0	4	10.0	2
PHY 410 R, ck.	974	6	40.7	13	4.1	24	76	21	58	10	9.3	18	6.7	8	6.552	15	4.8	4	1.09	37	82.7	26	31.3	8	8.5	19
DP 164 B2RF	973	7	39.6	21	4.1	24	87	5	53	30	9.3	19	6.3	22	6.960	10	4.5	13	1.18	2	83.6	6	31.0	11	7.9	30
Dyna-Gro 2520 B2RF	952	8	42.0	1	4.5	8	76	22	61	3	9.0	30	7.0	4	6.216	22	4.5	17	1.11	23	82.7	26	26.9	37	8.7	15
DP 156 B2RF	952	9	39.1	25	4.1	24	77	17	55	22	8.3	42	5.5	40												

Table 24. Results of the 2005 1st-year (Flex) Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, AR.

Variety	Lint yield lb/a	Lint frac. %	Lint r	Stand no./ft	Ht. cm	Open bolts	Seed index g	Lint index g	Seed per a mill.	Mic				Len.				Unif.				g/tex	r	Elo. %		
										r	r	r	r	r	r	r	r	r	r	r	r				r	r
PHY 410 R, ck.	1283	1	41.4	1	3.2	28	100	14	70	20	9.2	35	6.8	8	8.585	13	4.5	1	1.10	42	84.2	7	30.7	16	9.1	15
STX0414B2RF	1259	2	38.9	12	3.6	9	115	1	55	42	9.7	20	6.5	14	10.260	2	4.3	4	1.18	9	83.4	24	31.8	7	7.5	40
ST 5242 BR, ck.	1249	3	39.1	9	2.7	41	98	19	65	27	11.9	1	7.7	1	7.323	36	4.1	9	1.12	34	83.7	17	29.3	21	8.6	22
DP 167 RF	1240	4	39.1	10	3.1	34	110	4	61	33	10.3	11	6.7	9	8.380	18	4.1	9	1.22	2	85.1	2	31.4	9	7.9	31
ST 6622 RF	1204	5	38.5	19	3.7	7	101	13	61	33	9.3	32	6.0	25	8.750	9	4.4	2	1.17	12	84.7	3	31.6	8	7.9	31
BW-4575B2F	1188	7	35.9	37	3.1	29	93	32	68	25	10.3	9	6.0	26	8.994	4	3.7	30	1.13	30	84.2	9	27.5	32	9.3	7
DP 164 B2RF	1188	6	36.9	35	2.9	38	107	8	56	40	7.8	42	4.2	42	11.510	1	3.8	26	1.18	9	82.7	35	30.7	17	8.1	29
CG 3520 B2RF	1183	8	38.6	16	3.4	18	94	29	71	16	9.7	22	6.2	17	8.630	12	4.0	13	1.19	5	83.9	13	27.4	33	9.4	6
CG 4020 B2RF	1170	9	39.9	5	3.5	12	91	36	69	22	10.0	15	6.8	5	7.810	25	4.1	10	1.16	16	83.0	31	26.9	40	8.7	21
DP 143 B2RF	1165	10	38.6	15	3.9	3	102	12	56	40	9.3	28	5.9	29	8.942	6	3.9	19	1.21	4	83.5	23	31.2	12	8.0	30
PHY 470 WR	1157	11	39.6	6	3.8	4	94	26	65	27	10.3	10	6.9	2	7.607	29	4.0	13	1.12	38	82.9	32	31.2	12	9.0	4
BW-1004B2F	1149	12	37.8	26	3.7	5	99	15	75	1	9.4	27	5.8	31	8.974	5	3.8	26	1.15	22	83.3	26	27.9	28	9.2	10
ST 5599 BR, ck.	1139	13	38.9	11	3.6	9	110	4	59	37	10.3	8	6.8	6	7.606	30	4.0	12	1.13	30	82.7	36	29.1	22	7.8	33
DP 113 B2RF	1135	14	38.8	14	3.4	17	95	23	75	1	10.7	5	6.9	3	7.454	34	3.8	22	1.15	23	83.1	30	28.8	24	7.3	41
PHY 425 RF	1134	15	38.0	23	3	37	110	3	68	25	9.7	21	6.1	22	8.473	17	4.2	8	1.13	30	84.5	4	33.0	2	9.9	4
PHY 480 WR	1132	16	40.2	3	4.2	1	104	9	65	27	9.9	17	6.9	4	7.480	33	4.3	4	1.16	18	84.2	7	32.0	6	10.2	3
CG 3020 B2RF	1130	17	37.6	27	3.6	8	82	41	73	11	10.5	7	6.7	10	7.717	27	3.8	23	1.14	27	84.0	11	27.2	35	9.2	12
Dyna-Gro 2242 B2RF	1120	18	38.0	24	3.3	22	96	20	74	5	8.9	40	5.6	36	9.039	3	3.6	34	1.17	14	82.8	34	27.4	33	9.3	7
BW-8391B2F	1117	19	36.1	36	3.3	24	94	28	64	31	10.2	12	5.9	30	8.633	11	4.0	13	1.19	5	84.4	6	28.4	26	9.0	16
Dyna-Gro 2520 B2RF	1112	20	37.3	31	3.4	15	96	21	69	22	9.3	32	5.5	34	8.865	7	3.6	34	1.19	8	83.3	28	28.1	27	8.5	25
PHY 415 RF	1112	21	40.0	4	3.3	23	104	10	75	1	9.6	23	6.5	13	7.750	26	3.8	23	1.12	38	83.3	26	28.5	25	9.1	14
STX0509B2F	1095	22	36.9	34	3.1	31	94	29	71	16	9.3	34	5.7	35	8.717	10	3.3	40	1.18	11	83.1	29	26.4	41	8.8	19
BW-4630B2F	1072	23	39.3	7	3.4	15	93	33	74	5	8.7	41	5.8	32	8.511	15	3.4	39	1.14	27	82.4	40	27.0	36	9.0	17
ST 6611 B2RF	1071	24	37.2	32	3.2	26	109	6	60	35	10.1	14	6.1	23	7.486	32	4.3	3	1.16	18	84.1	10	30.8	15	7.6	39
FM 960 BR, ck.	1068	25	37.4	30	3.3	24	81	42	73	11	9.5	26	6.5	12	6.968	40	3.8	26	1.15	23	83.3	25	32.3	5	10.3	2
Dyna-Gro 2100 B2RF	1064	26	35.8	38	3.1	31	89	38	71	16	10.6	6	6.1	21	7.904	23	3.7	32	1.12	38	83.6	21	27.6	31	9.2	10
STX0510B2F	1060	27	35.4	40	3.1	35	94	25	59	37	11.0	3	6.2	18	8.293	19	4.1	10	1.22	2	85.4	1	30.0	18	8.6	23
DP 156 B2RF	1059	28	38.0	25	3.7	6	94	31	65	27	9.2	36	5.5	38	8.522	14	3.9	21	1.16	16	82.4	42	27.8	30	7.8	33
Dyna-Gro 2215 B2RF	1050	29	37.1	33	3.6	11	95	24	74	5	9.1	38	5.4	39	8.787	8	3.3	41	1.11	41	82.4	40	25.4	42	8.8	18
DP 444 BG/RR, ck.	1046	30	38.5	17	2.8	39	102	11	75	1	9.3	31	6.0	27	7.960	22	3.9	17	1.13	30	82.9	32	29.3	20	8.4	27
DP 147 RF	1042	31	38.3	21	3.5	12	110	2	64	31	9.8	18	6.2	20	7.634	28	3.6	37	1.23	1	83.7	17	29.1	22	7.6	38
BW-3255B2F	1034	32	37.5	28	3.1	30	89	38	74	5	9.3	28	5.7	33	8.182	20	3.7	33	1.12	34	83.8	14	27.0	36	9.2	12
ST 4554 B2RF	1032	33	40.4	2	3.3	24	81	42	73	11	9.5	26	6.5	12	6.968	40	3.8	26	1.15	23	83.3	25	32.3	5	10.3	2
BW-9124B2F	1031	34	38.2	22	4	2	95	22	73	11	9.8	19	6.2	19	7.543	31	3.6	37	1.17	12	83.6	19	27.0	38	8.5	25
DP 117 B2RF	1011	35	39.2	8	3.1	31	94	27	70	20	9.6	24	6.4	15	7.132	38	3.9	17	1.16	18	83.7	15	32.4	4	8.6	24
BW-4021B2F	1009	36	35.6	39	3.2	26	89	40	73	11	9.5	25	5.4	40	8.475	16	3.2	42	1.16	18	82.5	39	27.8	29	9.3	9
DP 110 RF	992	37	38.4	20	2.5	42	108	7	74	5	10.0	16	6.4	16	7.025	39	4.3	4	1.15	23	84.0	11	35.0	1	8.8	19
ST 4664 RF	976	38	38.5	18	3.4	19	98	18	74	5	9.3	30	6.0	28	7.336	35	3.6	34	1.12	34	83.6	21	30.9	14	10.4	1
DP 152 RF	968	39	37.5	29	3.3	20	98	17	69	22	9.1	39	5.6	37	7.849	24	3.8	26	1.12	34	82.6	38	27.0	38	7.8	33
STX5885B2RF	954	40	35.0	42	3	36	92	35	60	35	9.1	37	5.0	41	7.977	21	3.8	23	1.17	14	83.7	15	32.5	3	8.3	28
DP 108 RF	943	41	38.9	13	3.5	12	99	15	71	16	10.1	13	6.6	11	6.498	41	4.0	13	1.15	23	83.6	19	31.3	11	7.7	37
BW-1505RF	867	42	35.4	41	2.8	40	91	37	73	11	10.9	4	6.1	24	6.469	42	3.7	30	1.19	5	84.5	4	31.3	10	7.7	36
Mean	1095		38.1		3.3		98		68		9.8		6.2		8.124		3.8		1.15		83.5		29.4		8.6	
LSD 0.10	169		1.6		ns		9		6		1.0		0.8		1.267		0.4		0.04		1.1		1.7		0.6	
C.V.%	13.2		2.4		23.0		7.7		7.5		6.3		7.3		13.3		6.9		2.0		0.8		3.5		4.4	
R-sq x 100	43.1		86.9		24.6		78.9		72.3		74.7		79.5		55.2		75.7		80.9		71.9		90.7		91.0	

Table 25. Results of the 2005 1st-year (Flex) Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, AR.

Variety	Lint yield lb/a	Lint frac. %	Lint r	Stand no./ft	Ht. cm	Open bolts	Seed index g	Lint index g	Seed per a mill.	Mic				Len.				Unif.				g/tex	r	Elo. %		
										r	r	r	r	r	r	r	r	r	r	r	r				r	r
ST 4664 RF	1531	1	40.7	3	3.2	21	117	26	75	22	9.3	27	6.6	8	11.730	2	4.4	6	1.13	27	83.5	15	31.5	5	11.3	1
PHY 410 R, ck.	1495	2	41.2	2	3.1	24	121	22	81	11	9.5	18	6.8	4	9.968	23	4.2	14	1.10	40	82.9	34	30.1	10	8.9	23
ST 4554 B2RF	1492	3	39.1	23	3.4	126	11	69	30	10.0	8	6.7	6	12.010	1	4.5	4	1.13	26	83.6	12	32.2	3	10.9	2	
CG 4020 B2RF	1455	4	39.1	20	3.2	18	115	29	76	19	9.4	21	6.4	14	10.390	10	4.0	26	1.17	7	83.7	11	27.6	33	9.0	22
DP 444 BG/RR, ck.	1454	5	41.5	1	3	28	123	18	85	6	9.4	22	6.8	5	9.702	30	3.9	31	1.12	33	83.4	17	29.9	12	8.5	28
CG 3520 B2RF	1453	6	39.5	12	3.2	15	109	42	84	7	9.1	35	6.2	21	10.740	5	4.1	17	1.14	21	83.0	31	27.7	32	9.8	8
Dyna-Gro 2520 B2RF	1450	7	39.9	6	3.8	2	114	32	80	15	9.4	23	6.3	17	10.410	8	4.1	19	1.14	21	83.4	17	27.2	38	9.2	17
BW-1004B2F	1448	8	39.8	9	3.4	5	111	39	86																	

Table 26. Results of the 2005 1st-year (Flex) Cotton Variety Test with irrigation on a Desha silt loam at Rohwer, AR.

Variety	Lint		Lint		Stand		Ht.		Open		Seed		Lint		Seed		Fiber properties									
	yield	frac.	r	%	r	no./ft	r	cm	r	bolts	r	index	r	g	r	per a	r	in.	r	Unif.	r	Str.	r	Elo.	r	
ST 4664 RF	1721	1	40.5	7	3.4	24	103	21	68	14	9.9	30	6.9	16	11.350	6	4.5	13	1.13	30	84.0	14	29.4	21	10.2	2
Dyna-Gro 2520 B2RF	1717	2	40.8	5	3.3	32	100	29	69	11	10.6	13	7.5	6	10.420	23	4.4	26	1.15	24	83.3	32	28.3	27	8.3	26
BW-4630B2F	1695	3	39.6	19	3.4	25	100	30	65	23	10.2	22	6.9	19	11.220	8	4.4	26	1.19	6	83.9	16	27.7	36	8.5	21
BW-3255B2F	1691	4	39.3	23	3.6	20	102	26	74	1	10.7	11	7.1	8	10.770	14	4.3	33	1.12	36	83.8	21	27.3	39	8.8	15
Dyna-Gro 2100 B2RF	1666	5	38.2	34	3.5	22	97	37	65	23	11.0	7	7.1	9	10.640	20	4.2	40	1.13	32	83.9	18	27.8	34	9.7	5
DP 164 B2RF	1665	6	39.3	25	2.7	42	115	2	60	39	9.7	37	6.5	36	11.600	1	4.4	18	1.20	4	84.4	10	29.4	19	7.9	29
BW-4575B2F	1663	7	38.7	32	3.3	32	93	41	65	23	11.0	8	7.1	10	10.680	18	4.4	18	1.12	36	83.4	31	27.3	39	8.9	14
STX0509B2F	1661	8	40.1	11	3.6	14	96	38	70	4	10.2	21	6.9	15	11.060	9	4.4	18	1.18	7	84.5	6	28.2	30	8.6	20
BW-1004B2F	1647	9	39.6	18	3.7	11	101	28	68	14	10.3	17	7.0	12	10.690	17	4.5	13	1.14	26	83.5	27	27.5	37	8.8	15
ST 6622 RF	1632	10	39.4	22	4.5	1	114	4	63	35	9.9	34	6.7	31	10.970	25	4.7	6	1.17	11	84.5	5	32.3	1	7.4	36
DP 167 RF	1628	11	40.1	9	3.7	11	111	9	64	32	10.0	28	6.8	27	10.910	12	4.3	30	1.20	2	84.4	8	30.2	16	7.8	30
DP 110 RF	1621	12	39.3	24	3.2	37	102	24	68	14	10.3	16	6.9	17	10.690	16	4.4	18	1.16	19	83.9	16	31.8	5	9.0	10
DP 143 B2RF	1620	13	40.8	4	3.2	36	103	20	60	39	9.8	35	6.8	22	10.810	13	4.3	33	1.17	11	82.0	42	28.2	28	8.2	27
ST 5242 BR, ck.	1618	14	40.7	6	3.2	34	109	11	65	23	11.8	1	8.3	1	8.872	42	4.5	13	1.10	41	83.6	23	27.8	32	8.3	24
ST 5599 BR, ck.	1612	15	41.1	1	3.4	25	112	8	61	37	10.9	9	7.8	2	9.402	38	5.0	4	1.11	38	82.6	39	28.3	25	7.7	31
BW-9124B2F	1608	16	39.7	15	3.9	5	109	12	71	2	9.9	30	6.7	32	10.930	11	4.3	33	1.16	17	83.3	32	28.1	31	8.4	23
DP 113 B2RF	1600	17	39.6	17	3.6	15	103	16	68	14	11.4	3	7.7	3	9.475	36	4.4	18	1.18	9	84.4	8	30.2	15	7.0	41
PHY 410 R, ck.	1600	18	40.1	10	3.6	19	107	13	71	2	10.1	25	7.0	13	10.410	24	4.7	8	1.10	42	83.9	18	30.3	14	10.1	4
BW-4021B2F	1496	34	39.1	30	3.6	15	86	42	70	4	10.1	23	6.7	30	10.110	30	4.4	26	1.13	32	82.6	39	27.0	42	9.0	13
PHY 470 WR	1494	35	39.2	26	3.7	10	103	21	63	35	10.1	24	6.8	26	9.994	33	4.6	12	1.13	30	84.0	15	31.4	8	10.2	2
CG 4020 B2RF	1532	28	40.1	12	4.1	2	102	25	66	20	9.9	32	6.8	28	10.260	27	4.4	18	1.16	17	83.5	27	27.8	32	8.8	18
DP 117 B2RF	1492	36	41.0	2	3	40	107	14	65	23	10.6	12	7.5	5	9.004	41	4.7	6	1.16	19	83.2	34	32.1	4	7.4	36
Dyna-Gro 2215 B2RF	1472	37	37.1	38	3.4	25	98	33	65	23	9.9	33	6.0	40	11.260	7	3.9	42	1.15	22	83.1	36	27.3	39	9.6	6
DP 152 RF	1455	38	39.2	27	3.5	21	103	19	68	14	9.3	42	6.2	38	10.640	19	4.3	33	1.15	24	83.6	26	29.2	22	7.7	32
STX5885B2RF	1443	39	36.9	40	3.5	23	102	23	64	32	9.5	38	5.7	42	10.270	26	4.7	8	1.17	11	83.6	23	32.2	2	8.5	21
STX0414B2RF	1430	40	36.3	41	3.4	28	122	1	58	42	9.8	36	5.7	41	11.550	2	4.7	8	1.17	11	84.3	11	31.5	7	7.4	34
STX0510B2F	1348	41	37.0	39	3.6	13	98	35	59	41	11.4	4	7.0	14	9.469	37	4.3	33	1.21	1	85.2	1	29.6	17	8.3	24
BW-8391B2F	1331	42	35.9	42	3.3	29	101	27	61	37	11.4	5	6.6	33	9.145	40	4.4	18	1.20	2	84.1	12	28.3	25	8.6	19
Mean	1569		39.2		3.5		104		66		10.3		6.8		10.448		4.5		1.15		83.7		29.4		8.4	
LSD 0.10	132		2.0		0.7		7		5		0.9		0.7		0.908		0.4		0.04		1.2		1.9		0.6	
C.V.%	7.2		3.1		17.1		6.1		7.0		5.0		6.1		7.4		5.6		1.9		0.8		3.8		4.2	
R-sq x 100	63.9		68.6		34.2		66.1		79.9		74.0		74.8		66.8		67.2		78.1		68.8		82.5		93.5	

Table 27. Leaf pubescence and bract measurement for entries in the 2005 main and 1st-year (non-Flex) Arkansas Cotton Variety Test.

Main test - Variety	Leaf		Bract ²		1st year (non-Flex) test -		Leaf		Bract ²							
	pub. ¹	rating	r	Tric.	r	Cir.	r	Len.	r	Tric.	r	Cir.	r	Len.		
CS 37	1.8	23	33.0	18	41.2	3	4.9	26	2.2	21	30.5	11	26.2	26	4.9	20
CS 38	5.9	2	41.2	3	41.6	2	5.4	5	3.3	10	27.9	14	29.7	21	5.1	13
DP 393, ck.	2.6	16	35.8	9	36.1	22	5.3	7	3.1	12	28.2	12	32.0	17	5.3	7
DP 424 BG/RR	2.7	14	32.4	21	39.8	6	5.5	2	1.3	25	22.6	24	28.4	24	4.7	26
DP 432 RR	5.8	3	40.6	4	30.4	28	4.7	28	1.2	26	27.3	15	37.3	5	4.9	18
DP 434 RR	2.4	20	34.3	13	37.6	14	5.1	19	2.5	18	24.4	22	37.4	4	5.0	15
DP 444 BG/RR	2.7	15	26.4	26	32.6	26	5.2	14	2.9	14	35.3	5	40.8	2	5.4	5
DP 445 BG/RR	3.5	12	25.1	28	39.8	7	5.0	23	2.5	18	25.7	21	34.0	14	4.9	17
DP 455 BG/RR	2.6	16	37.4	7	38.0	17	4.9	24	2.0	22	23.0	23	40.4	3	5.7	2
DP 543 BG/RR	1.3	27	35.7	10	37.4	9	5.1	20	2.5	20	21.2	26	44.2	1	5.7	1
DX 25105N	3.7	10	40.1	5	37.7	12	5.1	17	2.8	15	33.5	6	34.3	12	4.7	25
FM 958 LL	3.7	10	34.0	15	36.5	21	4.9	25	3.8	7	26.4	20	27.2	25	5.1	12
FM 960 B2R	1.7	24	35.0	12	38.1	11	4.8	27	4.4	5	37.7	1	33.5	16	5.3	6
FM 960 BR	1.4	26	31.2	22	42.8	1	5.5	4	2.6	16	28.0	13	31.9	18	4.9	24
FM 960 RR	2.8	13	32.8	19	37.0	18	5.3	10	1.9	23	26.7	17	34.1	13	5.4	4
FM 966 LL	1.8	22	35.3	11	40.0	5	5.3	11	3.8	8	32.2	7	31.4	20	4.9	23
PHY 310 R	4.0	9	33.3	16	38.5	8	5.2	12	4.4	3	36.3	3	34.6	11	4.9	21
PHY 410 R	4.2	7	36.9	8	37.7	13	5.4	6	3.2	11	22.0	25	36.2	8	5.0	16
PM 1218 BR, ck	2.6	18	28.0	25	33.8	25	5.3	8	4.2	6	27.0	16	35.0	10	5.2	11
ST 4575 BR	5.0	5	29.3	23	37.5	15	5.2	15	2.6	16	26.5	19	35.2	9	5.3	8
ST 4686 R	5.2	4	33.2	17	35.7	24	5.1	22	1.6	24	26.5	18	36.3	7	5.3	9
ST 4892 BR, ck	6.1	1	41.3	2	32.1	27	5.1	21	4.7	2	31.9	8	36.9	6	5.5	3
ST 5242 BR	4.2	7	25.9	27	35.8	23	5.8	1	3.0	13	30.8	10	31.8	19	5.1	14
ST 5303 R	1.1	28	28.9	24	36.6	20	5.2	13	4.4	3	36.6	2	29.3	23	4.9	22
ST 5599 BR	4.3	6	34.0	14	36.6	19	5.3	9	3.6	9	31.3	9	33.5	15	5.3	10
ST 6636 BR	2.6	18	32.7	20	41.0	4	5.5	3	5.8	1	35.6	4	29.4	22	4.9	19
ST 6848 R	1.7	24	43.8	1	37.2	16	5.1	18								
Mean	3.2		34.4		37.4		5.2				Mean					
LSD 0.10	1.5		5.8		ns		0.4				LSD 0.10					
C.V.%	41.0		13.4		12.1		5.9				C.V.%					
R-sq x 100	63.9		65.7		58.5		59.4				R-sq x 100					

1/ Leaf pubescence rated at Keiser irrigated test using method of Bourland et al. (2003).
2/ Marginal trichomes (Tric.), circumference (Cir.), and length (Len.) of bracts were determined at Keiser irrigated test.

APPENDIX
2005 County Variety Demonstrations
University of Arkansas Cooperative Extension Service
Coordinated by W. C. Robertson and Matt Cordell

Table 28. Leaf pubescence and bract measurements for entries in the 2005 1st-year (Flex) Arkansas Cotton Variety Test.

Variety	Leaf pub. rating		Tric. no./cm		Bract ² Cir. cm		Bract ² Len. cm		r	r
	pub. ¹	rating	r	r	r	r	r	r		
BW-1004B2F	4.9	7	29.0	11	23.8	32	4.9	30		
BW-1505RF	1.1	41	14.6	42	38.3	2	5.3	14		
BW-3255B2F	1.2	40	30.1	7	22.8	37	4.8	31		
BW-4021B2F	1.5	37	24.2	30	24.7	28	4.7	36		
BW-4575B2F	1.5	35	29.8	9	22.6	38	4.8	31		
BW-4630B2F	2.0	27	25.8	23	22.0	40	4.6	40		
BW-8391B2F	1.8	30	25.4	25	25.5	26	5.2	17		
BW-9124B2F	2.5	23	25.3	26	20.4	41	4.6	38		
CG 3020 B2RF	2.2	26	28.3	15	23.4	33	4.6	37		
CG 3520 B2RF	4.1	12	28.4	14	23.3	34	4.7	33		
CG 4020 B2RF	3.2	17	27.2	18	22.1	39	4.6	39		
DP 108 RF	4.8	8	26.0	21	30.4	12	5.7	3		
DP 110 RF	3.6	15	37.6	2	34.6	5	5.8	1		
DP 113 B2RF	6.1	2	24.3	28	29.4	16	5.4	8		
DP 117 B2RF	7.0	1	38.1	1	33.2	6	5.6	4		
DP 143 B2RF	4.6	10	23.7	33	29.0	17	5.1	20		
DP 147 RF	3.0	18	26.6	20	28.3	19	5.1	22		
DP 152 RF	2.5	24	21.0	36	26.9	22	4.7	33		
DP 156 B2RF	1.0	42	20.2	38	25.5	25	4.9	27		
DP 164 B2RF	1.6	33	18.0	41	28.6	18	4.9	29		
DP 167 RF	1.8	29	19.6	39	34.7	4	5.3	11		
DP 444 BG/RR,ck.	3.4	16	19.0	40	26.2	24	5.2	15		
Dyna-Gro 2100 B2RF	1.6	32	28.5	13	24.4	30	4.9	26		
Dyna-Gro 2215 B2RF	1.3	39	24.1	31	18.9	42	4.4	42		
Mean										
LSD (0.05)										
CV (%)										

1/ Leaf pubescence rated at Keiser irrigated test using method of Bourland et al. (2003).
 2/ Marginal trichomes (Tric.), circumference (Cir.), and length (Len.) of bracts were determined at Keiser irrigated test.

Methods:

Varieties were tested in replicated strips (length of field) within cooperators' fields. Cooperator made all management decisions and applied production practices. Technologies of varieties were employed, e.g. glyphosate was used on RR varieties. Extension personnel assisted with planting and harvesting of plots. Plot weights were obtained with a boll buggy equipped with load cells. Grab samples were taken from one replication. Laboratory gin, not equipped with lint cleaner, was used to gin the grab samples. Lint fractions determined from grab samples were used to convert seedcotton yield to lint yield. Fiber data for lint samples were obtained by HVI analysis.

Clay County
 Chad Agee - Cooperator
 Andy Vangilder - Staff Chair

Planting Date: 5/6/05
 Replications: 2
 Irrigation: Furrow (8)
 Management: Bollgard Roundup Ready BMPs

Harvest Date: 10/15/05
 Soil Series: Amagon Silt Loam
 Fertility: 110-45-90 1.5B 10S

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
ST 4575BR	1504	0.44	5.0	1.10	29.2
ST 5242BR	1410	0.42	4.6	1.10	28.6
ST 5599BR	1380	0.44	5.0	1.11	30.0
DP 444BG/RR	1348	0.44	4.2	1.13	30.8
PHY 470WR	1227	0.42	4.7	1.10	28.9
DP 424B2/RR	1248	0.40	4.8	1.14	27.6
FM 960BR	1232	0.43	4.8	1.08	31.4
FM 960B2R	1202	0.41	4.6	1.16	29.4
Mean	1319	0.43	4.7	1.11	29.5
LSD (0.05)	64.42	--	--	--	--
CV (%)	2.07	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Desha County
 Greg Simpson - Cooperator
 Wes Kirkpatrick and Steve Kelly - Agents

Planting Date: 5/12/05 Harvest Date: 10/11/05
 Replications: 3 Soil Series: Sharkey/Desha Silt Loam
 Irrigation: Furrow Fertility: 100-40-80
 Management: Roundup Ready BMPs for Refuge

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 432RR	1197	0.42	4.5	1.10	29.6
FM 960R	1165	0.42	4.8	1.09	28.0
DP 434RR	1140	0.43	3.9	1.18	27.4
BCG 28R	980	0.42	4.8	1.14	25.9
PHY 310R	826	0.40	3.7	1.15	33.7
ST 4686R	762	0.42	4.4	1.11	29.0
Mean	1012	0.42	4.4	1.13	28.9
LSD (0.05)	77.05	--	--	--	--
CV (%)	4.19	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Jefferson County
 Jason Young Cooperator
 Don Plunkett - Staff Chair

Planting Date: 5/23/05 Harvest Date: 10/31/05
 Replications: 4 Soil Series:
 Irrigation: Furrow (1) Fertility:
 Management: Bollgard Roundup Ready BMPs

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
ST 4646B2R	1170	0.44	5.0	1.11	26.9
DP 424B2/RR	1114	0.41	4.9	1.13	27.1
PHY 470WR	1022	0.43	4.6	1.12	29.3
FM 960B2R	834	0.43	5.0	1.14	31.8
Mean	1035	0.43	4.9	1.13	28.8
LSD (0.05)	50.75	--	--	--	--
CV (%)	2.45	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Jefferson County
Jason Young - Cooperator
Don Plunkett - Staff Chair

Planting Date: 5/23/05
Replications: 3
Irrigation: Furrow (1)
Management: Bollgard Roundup Ready BMPs

Harvest Date: 10/27/05
Soil Series:
Fertility:

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 454BG/RR	1143	0.46	4.4	1.14	28.7
ST 5599BR	1127	0.44	4.9	1.09	27.8
DP 444BG/RR	1112	0.45	4.2	1.12	29.8
ST 4575BR	1099	0.45	4.8	1.09	29.1
DP 445BG/RR	1090	0.45	4.6	1.14	32.8
ST 5242BR	1046	0.44	4.4	1.12	30.1
FM 989BR	880	0.45	4.8	1.10	28.2
Mean	1071	0.45	4.6	1.11	29.5
LSD (0.05)	73.70	--	--	--	--
CV (%)	3.78	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Lee County
Billy Don Hinkle – Cooperator
Bill Robertson - Extension Agronomist

Planting Date: 5/3/05
Replications: 2
Irrigation: Furrow
Management: Bollgard II/WideStrike Roundup Ready BMPs

Harvest Date: 10/18/05
Soil Series: Henry Silt Loam
Fertility:

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 164B2RF	1301	0.42	4.6	1.19	31.9
DP 444BG/RR	1270	0.44	4.1	1.11	28.8
ST4554B2RF	1246	0.43	4.4	1.14	30.3
CG 3020B2RF	1235	0.42	4.5	1.09	25.2
DP 108RF	1230	0.45	4.5	1.11	29.8
DP 117B2RF	1215	0.43	4.6	1.12	31.3
ST 4664RF	1113	0.43	4.6	1.08	29.0
DP 113B2RF	1097	0.40	4.0	1.15	31.8
CG 4020B2RF	1067	0.42	4.3	1.15	26.8
BCG 4630B2RF	1051	0.42	4.2	1.14	27.8
CG 3520B2RF	1015	0.40	4.2	1.14	26.4
BCG 9775B2RF	962	0.38	3.9	1.19	28.1
BCG 2038B2RF	953	0.41	4.3	1.15	27.6
BCG 3255B2RF	944	0.40	4.3	1.11	27.5
BCG 3255B2RF	944	0.40	4.3	1.11	27.5
DP 110RF	700	0.43	4.2	1.11	31.9
Mean	1093	0.42	4.3	1.13	28.9
LSD (0.05)	559.43	--	--	--	--
CV (%)	23.86	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Mississippi County
Cole Hawkins - Cooperator,
Susan Matthews - Agent

Planting Date: 5/4/05
Replications: 4
Irrigation: Furrow
Management: Bollgard Roundup Ready BMPs

Harvest Date: 10/12/05
Soil Series: Crevasse Loamy Sand
Fertility: 120-40-100

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
ST 4575BR	1463	0.44	4.3	1.11	27.8
DP 445BG/RR	1364	0.44	4.3	1.17	29.9
ST 5599BR	1327	0.41	4.5	1.05	28.2
ST 5242BR	1316	0.41	4.8	1.07	27.0
DP 444BG/RR	1271	0.44	3.8	1.17	29.4
PHY 470WR	1232	0.43	4.5	1.13	30.5
DP 454BG/RR	1185	0.47	4.5	1.11	28.3
FM 960BR	1134	0.41	4.4	1.12	32.1
DP 451BR	1101	0.38	4.8	1.15	27.1
FM 989BR	1015	0.40	4.4	1.16	30.6
Mean	1241	0.42	4.4	1.12	29.1
LSD (0.05)	128.40	--	--	--	--
CV (%)	7.13	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Mississippi County
Kenny Jackson - Cooperator
Susan Matthews - Agent

Planting Date: 5/7/05
Replications: 4
Irrigation: Furrow
Management: Roundup Ready BMPs for Refuge

Harvest Date: 10/19/05
Soil Series: Crevasse Loamy Sand
Fertility: 130-20-80

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 434RR	1667	0.45	4.7	1.17	26.5
DP 432RR	1602	0.42	4.5	1.12	27.9
BCG 28R	1565	0.42	4.9	1.14	27.9
ST 4686R	1522	0.43	4.7	1.09	28.8
PHY 410R	1503	0.41	4.7	1.13	29.4
PHY 310R	1470	0.43	4.5	1.15	29.2
ST 4793R	1326	0.44	4.9	1.11	28.2
FM 960R	1036	0.40	3.7	1.11	30.5
Mean	1461	0.43	4.6	1.13	28.6
LSD (0.05)	168.60	--	--	--	--
CV (%)	7.85	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

Poinsett County
Brent Henderson - Cooperator
Craig Allen - Agent

Planting Date: 5/3/05 Harvest Date: 10/19/05
Replications: 2 Soil Series:
Irrigation: None Fertility: 55-30-90
Management: Skip-row Bollgard Roundup Ready BMPs

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 454BG/RR	1124	0.48	4.3	1.08	26.8
ST 5599BR	1121	0.46	4.6	1.08	26.9
ST 5242BR	1082	0.44	4.2	1.05	27.0
DP 445BG/RR	1019	0.45	4.3	1.11	29.1
DP 444BG/RR	1000	0.45	4.2	1.08	26.9
ST 4575BR	993	0.42	4.3	1.08	27.4
FM 960B2R	903	0.44	4.4	1.11	32.6
Mean	1035	0.45	4.3	1.08	28.1
LSD (0.05)	107.82	--	--	--	--
CV (%)	4.26	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

St. Francis County
Joe Whittenton – Cooperator
Bill Robertson – Extension Agronomist
Mitch Crow - Staff Chair

Planting Date: 4/27/05 Harvest Date: 10/19/05
Replications: 4 Soil Series: Silt Loam
Irrigation: Drip Fertility:
Management: Bollgard Roundup Ready BMPs

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 445BG/RR	1859	0.45	4.5	1.12	27.7
ST 4575BR	1679	0.45	5.1	1.13	28.2
ST 5242BR	1665	0.43	4.5	1.08	26.1
ST 5599BR	1640	0.42	4.1	1.12	29.7
DP 444BG/RR	1605	0.45	4.5	1.10	28.8
DP 454BG/RR	1491	0.44	3.9	1.11	28.0
Mean	1656	0.44	4.4	1.11	28.1
LSD (0.05)	72.22	--	--	--	--
CV (%)	2.89	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

St. Francis County
 Joe Whittenton – Cooperator
 Bill Robertson – Extension Agronomist
 Mitch Crow - Staff Chair

Planting Date: 4/27/05
 Replications: 4
 Irrigation: Pivot
 Management: Bollgard Roundup Ready BMPs

Harvest Date: 10/19/05
 Soil Series: Silt Loam
 Fertility:

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 445BG/RR	1721	0.43	4.7	1.14	28.2
DP 455BG/RR	1590	0.44	4.5	1.14	28.8
ST 4575BR	1531	0.43	4.6	1.12	28.2
ST 5599BR	1492	0.41	4.6	1.12	27.7
FM 960BR	1482	0.42	4.1	1.11	30.8
ST 5242BR	1478	0.41	4.5	1.10	26.5
DP 454BG/RR	1434	0.42	3.9	1.12	29.0
DP444BG/RR	1383	0.42	4.1	1.14	27.2
Mean	1514	0.42	4.4	1.12	28.3
LSD (0.05)	254.11	--	--	--	--
CV (%)	11.41	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

St. Francis County
 Joe Whittenton - Cooperator
 Bill Robertson – Extension Agronomist
 Mitch Crow - Staff Chair

Planting Date: 5/1/05
 Replications: 4
 Irrigation: Pivot
 Management: Roundup Ready BMPs for Refuge

Harvest Date: 10/9/05
 Soil Series: Silt Loam
 Fertility:

Variety	Lint Yield lb/A	Lint Fraction [†]	Micronaire	Length in	Strength g/tex
DP 434RR	1335	0.44	4.4	1.16	27.7
DP 432RR	1303	0.42	4.7	1.11	29.2
DP 444BR	1272	0.43	4.2	1.13	27.9
ST 4686R	1224	0.42	4.4	1.14	29.9
FM 960R	1214	0.41	4.2	1.13	28.9
BCG 28R	984	0.42	4.8	1.11	26.5
Mean	1222	0.42	4.4	1.13	28.3
LSD (0.05)	105.49	--	--	--	--
CV (%)	5.73	--	--	--	--

[†] Data obtained from a laboratory gin without the use of a lint cleaner.

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