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Arkansas Cotton Variety Test 2011

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ARKANSAS COTTON VARIETY TEST 2011



*F.M. Bourland, A.B. Beach,
and D.P. Roberts Jr.*

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**ARKANSAS
COTTON
VARIETY TEST
2011**

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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. These annual evaluations will then facilitate 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). The 2011 Arkansas Cotton Variety Test was separated into two experiments, the main test with 24 entries that were evaluated in both 2010 and 2011 and the 1st year test with 21, 1st year entries and 3 check varieties. Reported data include yield, lint percentage, plant height, open bolls, yield component variables, fiber properties, leaf pubescence, stem pubescence, and bract trichome density. Entries in both experiments were evaluated for response to tarnished plant bug in a separate test at Keiser. The 2011 growing season was characterized by wet conditions prior to planting followed by warm, dry conditions through harvest.

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Arkansas Cotton Variety Test 2011

*F.M. Bourland, A.B. Beach,
and D.P. Roberts Jr.¹*

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 evaluations, all varieties are treated identically within a location. No specialized production inputs were implemented with respect to genetically enhanced varieties. Round-up Ready Flex[®] (RF), Liberty Link[®] (LL) varieties, BollGard[®] (B2) varieties, Widestrike[®] (W) and conventional varieties were all treated equally with respect to weed and insect control.

Cotton varieties that were evaluated in the 2010 Arkansas Cotton Variety Test and were re-submitted in 2011 were entered in the 2011 main experiment. Lines submitted in 2011 that were not evaluated in the 2010 test were entered into the 2011, 1st year variety test. Common check varieties were included in both experiments.

Materials and Methods

Both the 2011 main and the 1st year experiment had 24 entries (Table 1). The 24 varieties in the main experiment included 19 Round-up Ready Flex[®] varieties (15 B2RF and 4 WRF), and 5 non-Round-up Ready Flex[®] varieties (all conventional). The 1st year experiment included 21 entries plus three check varieties (2 B2RF and 1 WRF). The 21 entries included 17 Round-up Ready Flex[®] varieties (15

B2RF and 2 WRF) and 4 non-Round-up Ready Flex[®] varieties (3 LLB2 and 1 conventional). Check varieties were chosen at the discretion of the project leader. All test sites included the same entries. Replications of the two experiments were randomized within each field.

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 Rohwer Research Station at Rohwer. 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 6 oz/100 lb seed. Plots were planted with a constant number of seed (about 4 seed/row ft). All varieties were planted in two-row plots on 38-inch centers and ranged from 40 to 50 feet in length. Experiments 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 the University of Arkansas Systeem 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 at Single Location:

Leaf pubescence: Leaf pubescence was visually rated on a scale of 1 (smooth leaf) to 9 (pilose, very hairy) in the irrigated experiments at Keiser using the system described by Bourland et al. (2003). A full-sized leaf, about 5-6 nodes from plant apex, was rated for 6 plants per plot for all 4 replications during August.

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Stem pubescence: Stem pubescence was visually rated on a scale of 1 (smooth stem) to 9 (very hairy) in the irrigated experiments at Keiser using a system similar to that used for leaves. After harvest, the upper 5-6 inches of the plant apex was rated for 6 plants per plot for all 4 replications.

Bract variables: After cutout, a bract from a full-sized, mid-canopy, 1st position boll was randomly sampled from six plants per plot (4 replications) in the Keiser experiments. Each bract was examined for marginal trichome density (no. of trichomes /cm) as described by Bourland and Hornbeck (2007). Means for the six bracts were evaluated as plot means.

Tarnished plant bug: Entries in the two experiments were evaluated for response to TPB in a separate field at Keiser. Each experiment included 12 replications of 1-row plots (18 feet long on 38-inch wide rows). The experiments were planted on May 31 and managed to encourage TPB infestations. Four rows of frego bract cotton between the experiments were planted on May 11. Response to TPB was determined by examining white flowers (6 flowers/plot/day for 6 days in late August) for presence of anther damage. A cumulative percentage of damaged flowers (“dirty blooms”) was determined for each plot.

Verticillium wilt: Since incidence of Verticillium wilt was relatively low at the Judd Hill site in 2011, visual ratings of wilted plants were not obtained. Relative yields of varieties over years at Judd Hill should be indicative of tolerance to Verticillium wilt.

Data Collected at All Locations:

Plant height: Plant height measurements (in cm) were collected after defoliation. Average plant heights for varieties were determined by measuring from the soil surface to the terminal of one average sized plant in each of the two rows. Plot means (average of the two measurements) were evaluated.

% Open bolls: 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.

Boll samples and lint percentage: Prior to mechanical harvest, hand-harvested samples of 50 open bolls were obtained from two replications at each location. 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: Fiber samples were taken from each boll sample and were evaluated using HVI classification included micronaire, fiber length, length uniformity index (Unif. ind.), strength and elongation. To reflect market demand for fiber quality, a weighted quality score (Q-score) was calculated as described by Bourland et al. (2010). Parameters (and weighting) included in Q-score were fiber length (50%), micronaire (25%), length uniformity index (15%), and strength (10%).

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.

Fibers per seed: Fibers per seed were estimated by dividing lint index by an estimated weight of individual fibers. Weight of an individual fiber was estimated by: (fiber length \times length uniformity \times (micronaire/1,000,000)).

Fiber density: Fiber density, reported as the number of fibers per mm², was estimated by dividing fibers per seed by seed surface area. Seed surface area (SSA) was estimated by the regression equation suggested by Groves and Bourland (2010): $SSA = 35.74 + 6.59SI$, where SI is equal to seed index associated with the sample.

Lint yield: Seedcotton yield per plot (determined by 2-row cotton picker) was converted to seedcotton yield per 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 practices, 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. Yields of varieties are considered significantly different if the difference between mean yields of two varieties is greater than the LSD value. Differences that are smaller than the LSD may have occurred by chance or may be associated with 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.

Results

Entries and participants in the main and 1st year test are listed in Table 1. Cultural inputs and production information for variety trials at Keiser, Judd Hill, Marianna, and Rohwer are reported in Table 2. Table 3 reports weather information for north, central, and south Arkansas locations during the 2011 production season.

Rain and subsequent wet conditions delayed planting at all locations (Tables 2 and 3). Good stands were obtained at all locations. Except for a relatively warm June, July, and August, heat units from May through the growing season were near normal. Total rainfall for the season was near normal, but was higher than normal in north Arkansas in May and in south Arkansas in August.

Other observations associated with each test site include:

Keiser. Early rains delayed planting until mid-May. Good stands were achieved, but intense rainfall and high winds in late May delayed plant development. Final plant height in the field was very good. No mepiquat chloride was applied.

Judd Hill. Relative yields of non-glyphosate tolerant varieties were reduced from 10% to 50% compared to similar glyphosate tolerant varieties in these tests and in

an adjacent study. Consequently, yields on non-glyphosate tolerant varieties (conventional and LLB2) at Judd Hill were not reported. Apparent incidence of Verticillium wilt was relatively low in 2011. Since wilt symptoms did not occur until late in the season, they were confounded by maturity of the varieties. Thus, ratings of Verticillium wilt incidence were not made. Mepiquat chloride (total of 26 oz/a) was used to control plant height.

Marianna. Good plant stands were achieved, and plants grew at a rapid, unrestricted pace. Subsequently, early maturation and high yields were attained. Mepiquat chloride (total of 46 oz/a) was used to control plant height.

Rohwer. Good plant stands were achieved, and plants grew at a rapid, unrestricted pace. Excessive rainfall in late August contributed to high incidence of boll rots. Mepiquat chloride (total of 26 oz/a) was used to control plant height.

Performance of entries in the main experiment of the 2011 Arkansas Cotton Variety Test, which includes varieties that were evaluated in both 2010 and 2011, are provided in Tables 4 through 13 with yield and yield-related variables in the even-numbered tables and fiber properties in the odd-numbered tables. Two and three year yield means for entries in the main test are in Tables 14 and 15, respectively. Performance data for first-year entries, which were evaluated in 2011 but not evaluated in 2010, are in Tables 16-25 with yield and yield-related variables in the even-numbered tables and fiber properties in the odd-numbered tables. Morphological and host plant resistance measurements for entries are in Tables 26 and 27.

References

- 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., R. Hogan, D.C. Jones, and E. Barnes. 2010. Development and utility of Q-score for characterizing cotton fiber quality. *J. Cotton Sci.* 14:53-63. Available at <http://www.cotton.org/journal/2010-14/2/upload/JCS14-53.pdf>
- Bourland, F.M., J.M. Hornbeck, A.B. McFall, and S.D. Calhoun. 2003. A rating system for leaf pubescence of cotton [Online]. *J. Cotton Sci.* 7:8-15. Available at <http://www.cotton.org/journal/2003-07/2/8.cfm>
- Bourland, F.M., and J.M. Hornbeck. 2007. Variation in marginal bract trichomes on Upland cotton. *J. Cotton Sci.* 11:242-251. Available at <http://www.cotton.org/journal/2007/11/4/242.cfm>

Groves, F.E. and F.M. Bourland. 2010. Estimating seed surface area of cottonseed. *J. Cotton Sci.* 14:74-81. Available at <http://www.cotton.org/journal/2010-14/2/upload/JCS14-74.pdf>

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tension Center, Lon Mann Cotton Research Station, and the Rohwer Research Station. Annually, the Judd Hill Foundation generously provides the test site for experiments at Judd Hill. Annual evaluation of cotton varieties is made possible by the work of the research assistants and technicians at these locations, and by the contributions of seed companies participating in the Arkansas Cotton Variety Test.

Table 1. Participants and entries in the 2011 Arkansas Cotton Variety Test.

Institution/Contact person	Main Test	Experimental no.	1st year Test	Experimental no.
Americot Inc. / Tom Brooks	AM 1511 B2RF AM 1550 B2RF	AMX 001 B2RF XAM 1550 B2RF	AMX003 B2RF	
Bayer Crop Science / Steve Lee	FM 1740 B2F ST 4288 B2F ST 5288 B2F ST 5458 B2RF	 BCSX0704B2RF BCSX0727B2RF	BCX 1150B2F BX 1252LLB2 BX 1254LLB2 BX 1261 B2F BX 1262 B2F ST 4145LLB2 ST 5458 B2RF, ck.	
Crop Production Services / Stacey Bruff	DG 2595 B2RF DG 2450 B2RF DG 2570 B2RF	CT 10624 B2RF DG CT07550	CT 11212 CT 11622	
Monsanto / David Albers	DP 0912 B2RF DP 0920 B2RF DP 1028 B2RF DP 1133 B2RF DP 1252 B2RF	 09R 615 B2R2 09R555 B2R2 10R052 B2RF	DP 1219 B2RF DP 1212 B2RF 10R020B2R2 10R051B2R2 11R159B2R2 DP 0912 B2RF, ck.	10R011B2R2 10R013B2R2
PhytoGen Seed Co./ Chad Brewer	PHY 367 WRF PHY 375 WRF PHY 499 WRF PHY 565 WRF			
PhytoGen Seed Co./ Mustafa McPherson			PX433906WRF PX433915WRF PHY 375 WRF ck.	
Seed Source Genetics / Edward Jungmann	SSG HQ110 CT SSG HQ210 CT			
Winfield Solutions, LLC / Robert Cossar	CG 3220 B2RF		CG 3787 B2RF	
Ark. Agric. Exp. Station / Fred Bourland	Ark 0219-15 UA222 UA48	Ark 0222-12 Ark 0102-48	Ark 0114-53 Ark 0619-20 B2RF Ark 061925-B2RF Ark 0620-48 B2RF	

Table 2. Cultural practices for locations of the 2011 Arkansas Cotton Variety Test.

Input	Location			
	Keiser	Judd Hill	Marianna	Rohwer
Soil type	Sharkey clay	Dundee silt loam	Callaway silt loam	Hebert silt loam
N, P, K (lbs)	130-0-0	100-14-41	100-0-90	110-19-60
Planting date	5/18	5/11	5/10	5/10
Irrigation method	furrow	furrow	furrow	furrow
Irrigation dates	7/21, 7/29, 8/8	6/3,6/10,6/24,7/1,7/7, 7/14,7/20,7/27,8/3,8/11	6/25, 7/4, 7/16, 7/22, 7/29, 8/4, 8/12	6/16, 6/29, 7/14, 7/21, 8/4, 8/10
Defoliation date	9/12, 9/22	9/8, 9/16	9/12, 9/21	9/9, 9/16
Harvest date	10/6	10/10	10/5	10/5

Table 3. Weather summary for the 2011 production season in north, central and south Arkansas.

	Month	DD60s in 2011	Historical avg. ¹ DD60s	Rainfall (in.) in 2011	Historical avg. ¹ rainfall
Keiser (northeast)	May	326	314	11.6	5.2
	June	743	532	3.6	3.9
	July	797	644	3.4	3.7
	August	704	583	1.2	2.9
	September	358	363	2.2	3.7
	October	139	127	2.3	3.3
	Total	3067	2563	24.2	22.6
Marianna (central)	May	322	336	5.9	5.1
	June	690	538	2.5	3.9
	July	729	646	4.4	3.9
	August	675	601	3.4	2.8
	September	347	397	2.2	3.2
	October	140	154	2.2	3.5
	Total	2903	2672	20.6	22.4
Rohwer (southeast)	May	351	354	2.4	4.9
	June	678	551	1.7	3.6
	July	728	661	3.7	3.7
	August	676	618	5.6	2.6
	September	400	415	4.1	3.0
	October	140	167	2.3	3.4
	Total	2973	2766	19.9	21.3

¹DD60 (growing degree days based on 60F) and rainfall from historical weather data from 1960 through 2007.

Table 4. Yield and related properties - 2011 Main Cotton Variety Test across four Arkansas test sites.

Variety	Lint yield ¹		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre ¹		Fibers/seed		Fiber density		
	lb/a	r	%	r		cm	%	r	g	r	g	r	mil.	r	no.	r	no.	
AM 1511 B2RF	1563	1	40.6	5	117	8	60	5	10.2	16	7.1	6	9.986	3	16515	6	161	6
PHY 499 WRF	1515	2	41.4	3	127	2	53	16	10.2	15	7.3	3	8.632	12	16596	5	161	5
DP 0912 B2RF	1394	3	38.3	12	111	18	59	7	10.2	14	6.5	18	10.260	2	14859	18	144	16
ST 5288B2F	1394	4	37.2	18	116	10	58	9	9.6	21	5.8	23	11.130	1	13556	22	137	21
DP 0920 B2RF	1382	5	39.4	7	111	20	60	5	9.5	22	6.3	20	9.489	4	14780	20	150	12
DG 2570 B2RF	1355	6	39.0	9	117	7	59	8	10.6	8	6.9	10	8.802	10	15989	10	151	10
PHY 375 WRF	1344	7	39.9	6	118	6	56	13	10.5	11	7.1	5	8.102	18	17235	1	164	3
ST 5458 B2RF	1340	8	36.4	21	116	9	56	10	10.9	6	6.6	12	9.222	5	15471	14	144	17
Ark 0219-15	1336	9	38.6	11	115	11	60	4	12.1	2	7.8	1	8.853	9	16855	2	146	15
DG 2450 B2RF	1322	10	37.8	14	112	16	68	1	10.6	9	6.6	13	9.159	6	15970	11	151	9
DP 1028 B2RF	1319	11	41.8	2	123	4	49	20	9.5	22	7.0	8	8.225	17	16243	8	165	2
FM 1740 B2F	1309	12	37.8	15	112	15	56	12	11.2	5	7.0	9	8.782	11	16498	7	151	11
DP 1133 B2RF	1306	13	40.7	4	121	5	38	24	9.5	24	6.7	11	8.558	14	15960	12	163	4
DG 2595 B2RF	1261	14	39.2	8	113	13	54	14	9.9	18	6.5	17	8.569	13	14279	21	142	20
UA222	1258	15	38.0	13	111	17	53	17	11.7	4	7.3	2	8.002	19	16128	9	143	19
CG 3220 B2RF	1234	16	37.6	17	114	12	62	2	10.7	7	6.5	15	8.878	8	15458	15	146	13
AM 1550 B2RF	1230	17	37.7	16	111	19	62	2	10.5	10	6.5	16	8.485	15	16654	4	158	7
SST HQ110CT	1216	18	37.0	19	113	14	56	10	10.3	12	6.2	21	8.967	7	14895	17	144	18
DP 1252 B2RF	1203	19	42.6	1	132	1	41	23	9.6	20	7.3	4	7.750	23	16789	3	170	1
PHY 367 WRF	1184	20	38.6	10	111	21	51	19	10.2	17	6.5	14	7.752	22	15835	13	154	8
ST 4288B2F	1175	21	34.4	24	109	22	52	18	11.9	3	6.4	19	8.379	16	14807	19	130	23
PHY 565 WRF	1130	22	36.8	20	125	3	45	21	10.3	13	6.1	22	7.826	21	15058	16	146	14
UA48	1119	23	35.2	22	105	24	54	15	12.8	1	7.1	7	7.500	24	13433	23	112	24
SSG HQ210CT	1045	24	34.9	23	107	23	43	22	9.7	19	5.4	24	7.945	20	12971	24	130	22
Mean	1304		38.4		115		54		10.5		6.7		8.600		15534		149	
Var. LSD 0.10	79		0.8		5		4		0.4		0.3		0.462		734		8	
Loc. LSD 0.10	ns		0.3		2		2		0.2		ns		ns		290		3	
C.V.%	9.0		2.5		7.0		12.7		4.6		5.7		9.2		5.7		6.3	
R-sq x 100	67.2		93.1		80.0		83.5		89.0		85.2		73.6		82.0		83.4	
Prob (var x loc)	<.0001		0.028		ns		<.0001		0.552		0.043		<.0001		0.670		0.671	

¹Lint yield and seed per acre are across three locations; Judd Hill yield data excluded due to possible glyphosate drift.

Table 5. Fiber properties - 2011 Main Cotton Variety Test across four Arkansas test sites.

Variety	Lint		Quality			Fiber properties								
	yield ¹	r	score	r	Micronaire	r	Length	r	Unif. index	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
AM 1511 B2RF	1563	1	55	22	4.4	6	1.17	22	84.5	15	33.9	7	8.1	5
PHY 499 WRF	1515	2	59	18	4.4	4	1.18	21	84.8	11	35.2	2	7.7	8
DP 0912 B2RF	1394	3	49	24	4.5	3	1.16	24	84.5	16	32.7	12	7.2	15
ST 5288B2F	1394	4	65	8	4.2	14	1.20	7	84.0	21	30.4	23	7.5	10
DP 0920 B2RF	1382	5	57	21	4.3	8	1.18	19	84.3	20	30.6	22	7.3	13
DG 2570 B2RF	1355	6	59	16	4.3	7	1.18	20	84.8	13	33.2	11	8.2	3
PHY 375 WRF	1344	7	61	14	4.1	19	1.19	13	84.9	10	31.1	20	7.0	20
ST 5458 B2RF	1340	8	58	20	4.3	8	1.19	12	83.1	24	32.4	16	6.8	21
Ark 0219-15	1336	9	71	4	4.4	5	1.23	3	85.4	3	34.3	6	7.5	12
DG 2450 B2RF	1322	10	66	7	4.1	21	1.20	11	85.0	8	30.8	21	7.1	17
DP 1028 B2RF	1319	11	63	10	4.3	12	1.20	9	84.8	11	32.1	18	8.4	2
FM 1740 B2F	1309	12	62	12	4.2	16	1.18	17	85.0	7	32.6	13	7.0	19
DP 1133 B2RF	1306	13	71	3	4.1	20	1.22	5	85.1	5	35.1	3	7.5	11
DG 2595 B2RF	1261	14	63	11	4.5	2	1.20	9	84.4	18	32.0	19	7.0	18
UA222	1258	15	84	2	4.2	13	1.26	2	85.3	4	33.4	10	8.2	4
CG 3220 B2RF	1234	16	62	13	4.2	15	1.18	18	85.5	2	32.4	15	7.9	7
AM 1550 B2RF	1230	17	54	23	4.0	23	1.16	23	84.5	14	30.4	23	7.3	14
SST HQ110CT	1216	18	58	19	4.2	17	1.18	16	84.4	17	33.5	9	6.7	22
DP 1252 B2RF	1203	19	61	15	4.3	8	1.19	14	84.9	9	32.2	17	8.8	1
PHY 367 WRF	1184	20	68	5	4.0	22	1.21	6	85.1	6	34.3	5	7.7	9
ST 4288B2F	1175	21	64	9	4.3	11	1.20	8	84.0	22	32.6	14	7.2	16
PHY 565 WRF	1130	22	66	6	4.0	24	1.22	4	84.4	19	34.5	4	8.0	6
UA48	1119	23	89	1	4.7	1	1.31	1	86.6	1	36.4	1	5.5	24
SSG HQ210CT	1045	24	59	17	4.2	18	1.19	15	83.9	23	33.6	8	6.6	23
Mean	1304		63		4.2		1.20		84.7		32.9		7.4	
Var. LSD 0.10	79		7		0.2		0.02		0.5		1.0		0.5	
Loc. LSD 0.10	ns		ns		ns		0.01		0.2		ns		0.2	
C.V.%	9.0		13.8		7.0		1.8		0.8		3.7		7.5	
R-sq x 100	67.2		74.4		69.1		87.2		80.5		82.3		83.3	
Prob (var x loc)	<.0001		0.538		0.320		0.265		0.008		0.392		0.688	

¹Lint yield means are across three locations; Judd Hill yield data excluded due to possible glyphosate drift.

Table 6. Yield and related properties - 2011 Main Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, Ark.

Variety	Lint yield		Lint frac.		Ht. r	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/a	r	%	r		cm	%	r	g	r	g	mil.	r	no.	r	no.	r	
AM 1511 B2RF	1574	1	42.0	3	101	13	61	6	10.1	10	7.6	2	9.358	6	16646	5	162	6
PHY 499 WRF	1562	2	41.9	5	112	1	58	11	9.7	16	7.2	3	9.069	9	17249	2	173	3
PHY 375 WRF	1412	3	40.4	6	106	7	60	8	10.2	9	7.1	5	8.490	15	16622	6	162	7
DP 0912 B2RF	1398	4	39.1	9	100	16	63	5	10.1	12	6.7	9	10.110	2	15279	15	149	14
Ark 0219-15	1382	5	38.9	10	100	15	68	1	12.1	1	8.0	1	9.236	7	17198	3	149	16
DP 0920 B2RF	1380	6	40.1	7	99	19	54	16	8.9	23	6.1	20	9.490	4	14907	19	158	8
UA222	1332	7	37.8	18	103	11	55	15	11.0	4	6.9	6	8.975	10	15405	13	142	20
DG 2450 B2RF	1329	8	38.3	14	96	22	66	2	10.2	8	6.5	13	9.230	8	15718	11	153	12
DP 1133 B2RF	1302	9	42.1	2	109	4	43	24	9.2	22	6.8	7	8.129	16	17109	4	178	1
ST 5288B2F	1302	10	38.2	16	100	17	61	6	9.4	18	6.0	21	10.220	1	13899	22	142	21
AM 1550 B2RF	1300	11	38.6	12	97	20	65	4	10.1	11	6.6	11	8.806	13	17319	1	169	5
SST HQ110CT	1290	12	38.6	11	104	8	60	8	10.0	14	6.4	14	9.878	3	15053	18	148	17
DG 2570 B2RF	1257	13	38.3	15	104	8	56	14	10.1	13	6.4	15	8.894	11	16086	10	157	10
DG 2595 B2RF	1249	14	39.5	8	101	12	54	16	9.4	19	6.3	17	8.825	12	14037	21	144	19
CG 3220 B2RF	1224	15	37.4	19	97	21	66	2	10.4	5	6.4	16	9.395	5	15602	12	149	15
PHY 367 WRF	1212	16	38.1	17	108	5	49	21	9.9	15	6.3	18	7.911	19	15223	16	151	13
DP 1028 B2RF	1210	17	42.0	4	107	6	49	21	8.9	24	6.7	10	7.909	20	16483	8	175	2
FM 1740 B2F	1194	18	38.5	13	104	8	58	11	10.3	7	6.7	8	8.105	17	16360	9	157	9
PHY 565 WRF	1170	19	37.2	20	110	3	50	20	9.5	17	5.7	23	7.906	21	15113	17	155	11
ST 5458 B2RF	1167	20	36.6	21	100	18	58	11	10.4	6	6.2	19	8.770	14	15393	14	147	18
DP 1252 B2RF	1134	21	42.9	1	112	2	45	23	9.2	21	7.2	4	7.901	22	16580	7	172	4
SSG HQ210CT	1098	22	35.9	22	95	23	53	19	9.3	20	5.4	24	7.847	23	13420	23	138	22
ST 4288B2F	1088	23	34.2	24	94	24	54	16	11.3	3	6.0	22	8.023	18	14049	20	127	23
UA48	987	24	35.0	23	101	14	59	10	11.9	2	6.5	12	7.263	24	13119	24	115	24
Mean	1273		38.8		102		57		10.1		6.6		8.739		15578		153	
LSD 0.10	90		1.3		9		8		1.0		0.7		0.595		1920		22	
C.V.%	6.0		2.0		7.8		12.7		5.6		6.3		5.8		7.2		8.3	
R-sq x 100	84.3		94.6		53.6		59.4		82.6		79.5		81.2		71.7		73.3	

Table 7. Fiber properties - 2011 Main Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, Ark.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	Unif. ind.	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
AM 1511 B2RF	1574	1	58	20	4.7	1	1.16	22	85.1	6	33.5	8	8.6	3
PHY 499 WRF	1562	2	60	16	4.3	9	1.17	21	83.9	18	34.6	3	8.1	9
PHY 375 WRF	1412	3	68	5	4.2	13	1.19	8	85.5	1	32.2	15	6.7	21
DP 0912 B2RF	1398	4	54	23	4.5	4	1.16	23	84.2	15	32.6	12	7.2	20
Ark 0219-15	1382	5	58	21	4.6	3	1.20	5	84.8	7	33.5	9	8.1	9
DP 0920 B2RF	1380	6	59	17	4.2	12	1.18	17	83.3	21	31.0	20	7.5	17
UA222	1332	7	83	1	4.3	9	1.25	2	84.5	11	33.5	9	8.5	4
DG 2450 B2RF	1329	8	67	8	4.1	14	1.19	6	84.7	9	30.1	22	7.7	14
DP 1133 B2RF	1302	9	65	10	4.0	20	1.19	8	83.9	17	35.7	1	7.9	11
ST 5288B2F	1302	10	62	15	4.4	6	1.19	8	83.3	21	29.4	23	7.6	15
AM 1550 B2RF	1300	11	57	22	3.9	24	1.16	23	84.5	12	28.4	24	7.8	12
SST HQ110CT	1290	12	64	12	4.3	8	1.19	8	84.0	16	33.8	7	6.3	22
DG 2570 B2RF	1257	13	65	9	4.0	20	1.19	8	84.3	13	33.5	9	8.4	5
DG 2595 B2RF	1249	14	64	12	4.5	4	1.18	16	84.6	10	31.6	16	7.3	19
CG 3220 B2RF	1224	15	69	4	4.1	17	1.19	6	85.1	5	31.3	19	8.4	6
PHY 367 WRF	1212	16	75	3	4.0	20	1.21	3	85.3	4	34.3	5	8.2	8
DP 1028 B2RF	1210	17	65	10	4.1	17	1.19	8	84.3	14	32.4	13	8.8	2
FM 1740 B2F	1194	18	68	5	4.1	17	1.19	8	85.4	3	32.3	14	7.3	18
PHY 565 WRF	1170	19	52	24	3.9	23	1.18	17	83.7	19	33.9	6	8.2	7
ST 5458 B2RF	1167	20	59	17	4.1	14	1.19	8	82.3	24	30.8	21	7.6	16
DP 1252 B2RF	1134	21	63	14	4.4	7	1.18	17	84.8	8	31.6	16	9.4	1
SSG HQ210CT	1098	22	59	17	4.1	14	1.18	17	83.0	23	34.8	2	5.8	24
ST 4288B2F	1088	23	68	5	4.3	9	1.21	4	83.5	20	31.6	16	7.8	13
UA48	987	24	80	2	4.7	1	1.28	1	85.5	1	34.5	4	6.3	23
Mean	1273		61		4.2		1.19		84.3		32.5		7.7	
LSD 0.10	90		ns		ns		0.04		1.2		2.3		1.1	
C.V.%	6.0		14.7		8.5		1.8		0.8		4.1		8.0	
R-sq x 100	84.3		56.1		45.5		76.4		74.7		79.0		79.1	

Table 8. Yield and related properties - 2010 Main Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, Ark.

Variety	Lint yield ¹		Lint frac.		Ht. cm	Open bolls		Seed index		Lint index		Seed/acre ¹		Fibers/seed		Fiber density		
	lb/a	r	%	r		%	r	g	r	g	r	mil.	r	no.	r	no.		
AM 1511 B2RF	1602	1	40.4	2	119	13	45	6	10.2	17	7.1	3	10.280	1	16363	3	159	3
DG 2450 B2RF	1349	2	37.4	9	122	10	56	1	11.0	7	6.7	8	8.901	8	15589	10	144	13
PHY 499 WRF	1332	3	40.2	4	131	4	40	9	10.2	18	7.0	4	8.537	12	15714	9	152	5
DP 0912 B2RF	1315	4	37.2	11	117	16	40	9	10.5	14	6.3	16	9.810	3	13500	21	129	21
ST 5458 B2RF	1288	5	32.8	24	123	8	39	12	10.5	13	6.1	19	9.961	2	15438	12	147	10
DP 0920 B2RF	1268	6	38.0	7	114	21	46	4	9.9	20	6.3	17	9.021	7	15090	13	149	6
CG 3220 B2RF	1258	7	36.4	17	117	17	50	3	11.4	5	6.6	9	9.326	5	14322	18	129	20
DP 1028 B2RF	1254	8	40.2	3	135	2	33	18	9.5	24	6.5	12	8.188	14	15470	11	157	4
DG 2570 B2RF	1249	9	37.4	10	122	9	46	4	10.4	16	6.4	13	8.728	10	14394	17	138	16
FM 1740 B2F	1243	10	36.2	18	116	18	44	7	11.4	6	6.6	10	8.659	11	16085	4	145	12
AM 1550 B2RF	1241	11	36.5	15	115	19	55	2	10.8	8	6.3	15	8.899	9	15775	6	148	9
PHY 375 WRF	1230	12	38.3	6	128	6	38	14	10.7	9	6.7	7	8.107	15	18210	1	171	1
ST 5288B2F	1229	13	36.5	14	120	12	41	8	9.6	23	5.7	23	9.442	4	13061	22	132	18
DG 2595 B2RF	1213	14	38.0	8	118	14	38	14	10.6	12	6.6	11	8.335	13	13808	20	131	19
ST 4288B2F	1186	15	32.8	23	113	22	40	9	11.8	4	5.9	20	9.271	6	14220	19	125	22
PHY 367 WRF	1124	16	36.8	13	109	24	36	16	10.7	11	6.3	14	7.703	16	15767	7	149	7
DP 1133 B2RF	1090	17	38.8	5	130	5	20	23	9.7	22	6.3	18	7.414	17	14455	16	146	11
DP 1252 B2RF	969	18	42.7	1	148	1	25	22	9.8	21	7.5	1	5.838	19	16060	5	160	2
PHY 565 WRF	830	19	34.1	20	134	3	28	20	10.7	10	5.8	21	6.641	18	14608	15	137	17
Ark 0219-15			37.1	12	120	11	39	12	11.9	2	7.2	2			16950	2	148	8
UA222			36.4	16	117	15	31	19	11.8	3	6.9	5			15717	8	139	15
UA48			33.2	21	111	23	26	21	13.4	1	6.8	6			12765	23	103	24
SSG HQ210CT			32.9	22	115	20	18	24	10.1	19	5.1	24			12197	24	119	23
SST HQ110CT			34.7	19	124	7	35	17	10.5	15	5.7	22			14852	14	142	14
Mean	1221		36.9		122		38		10.7		6.4		8.658		15017		142	
LSD 0.10	158		1.6		10		10		0.9		0.6		1.301		1447		16	
C.V.%	10.9		2.6		7.2		21.6		5.1		5.4		12.7		5.6		6.5	
R-sq x 100	74.7		93.6		63.5		67.4		84.4		83.1		69.2		84.2		83.5	

¹Due to possible glyphosate drift, lint yield and seed per acre only determined for varieties tolerant to glyphosate.

Table 9. Fiber properties - 2011 Main Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, Ark.

Variety	Lint yield ¹		Quality		Fiber properties									
	lb/a	r	score	r	Micronaire		Length		Unif. ind.		Strength		Elongation	
						r	in.	r	%	r	g/tex	r	%	
AM 1511 B2RF	1602	1	54	22	4.4	8	1.18	22	84.8	14	33.7	10	8.6	3
DG 2450 B2RF	1349	2	66	7	4.2	10	1.21	10	85.6	4	30.0	24	7.6	16
PHY 499 WRF	1332	3	54	22	4.5	6	1.17	24	85.2	10	34.9	6	7.8	11
DP 0912 B2RF	1315	4	50	24	4.7	1	1.18	22	85.7	3	33.4	12	8.2	6
ST 5458 B2RF	1288	5	56	20	4.0	20	1.21	10	82.3	24	32.3	18	7.2	22
DP 0920 B2RF	1268	6	62	12	4.1	13	1.21	15	84.7	15	31.4	21	7.9	10
CG 3220 B2RF	1258	7	61	13	4.5	3	1.20	17	86.3	2	33.5	11	8.1	7
DP 1028 B2RF	1254	8	61	15	4.2	10	1.21	15	84.3	19	32.5	17	8.4	5
DG 2570 B2RF	1249	9	57	19	4.4	7	1.18	20	85.4	6	34.0	8	8.8	2
FM 1740 B2F	1243	10	57	18	4.1	13	1.19	19	84.6	17	32.9	14	7.6	15
AM 1550 B2RF	1241	11	56	21	4.0	17	1.18	20	85.1	11	32.0	20	7.5	18
PHY 375 WRF	1230	12	58	17	3.6	24	1.22	9	85.0	12	31.2	22	7.4	21
ST 5288B2F	1229	13	59	16	4.3	9	1.20	17	84.3	19	30.6	23	8.1	8
DG 2595 B2RF	1213	14	66	7	4.6	2	1.22	8	84.8	13	32.2	19	7.7	14
ST 4288B2F	1186	15	66	9	4.0	17	1.23	6	84.1	22	33.3	13	7.5	17
PHY 367 WRF	1124	16	62	11	4.0	20	1.21	10	84.3	18	34.1	7	7.8	11
DP 1133 B2RF	1090	17	76	4	4.1	12	1.25	5	85.4	6	35.0	5	7.4	20
DP 1252 B2RF	969	18	65	10	4.5	3	1.21	10	85.3	9	32.6	16	9.0	1
PHY 565 WRF	830	19	67	6	3.8	23	1.26	3	83.4	23	35.4	2	8.4	4
Ark 0219-15			77	3	4.0	17	1.25	4	85.4	6	35.1	3	7.5	18
UA222			82	2	4.1	15	1.28	2	85.4	5	33.8	9	7.9	9
UA48			93	1	4.5	3	1.37	1	87.6	1	37.4	1	5.6	24
SSG HQ210CT			68	5	4.1	16	1.23	6	84.6	16	35.1	4	6.7	23
SST HQ110CT			61	13	3.8	22	1.21	10	84.2	21	32.8	15	7.7	13
Mean	1221		64		4.2		1.22		84.9		33.3		7.7	
LSD 0.10	158		16		ns		0.05		1.1		1.1		0.9	
C.V.%	10.9		14.6		7.3		2.3		72.6		72.6		6.6	
R-sq x 100	74.7		69.5		62.5		81.9		84.2		84.2		81.1	

¹Due to possible glyphosate drift, lint yield was only determined for varieties tolerant to glyphosate.

Table 10. Yield and related properties - 2011 Main Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, Ark.

Variety	Lint yield		Lint frac.		Ht. cm	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/a	r	%	r		%	r	g	r	g	r	mil.	r	no.	r	no.		
AM 1511 B2RF	1761	1	40.5	5	129	11	73	3	10.0	18	6.9	11	11.590	2	16262	13	160	8
DP 0920 B2RF	1545	2	40.1	7	125	17	74	2	10.1	15	7.0	10	10.190	5	15018	21	146	16
PHY 499 WRF	1532	3	41.4	3	145	2	63	14	10.7	10	7.7	2	8.415	14	17042	7	160	7
DG 2570 B2RF	1529	4	40.2	6	131	8	73	3	11.3	7	7.7	4	9.125	8	17304	5	158	9
ST 5458 B2RF	1527	5	37.5	19	134	6	69	9	11.6	6	7.1	8	10.450	3	15874	15	141	19
ST 5288B2F	1472	6	36.4	20	133	7	70	7	9.5	24	5.5	24	11.700	1	13176	24	134	23
DG 2595 B2RF	1423	7	40.1	8	126	14	66	11	9.8	20	6.7	17	9.399	7	15500	18	154	11
DG 2450 B2RF	1422	8	38.4	12	122	22	83	1	10.7	12	6.8	15	9.590	6	16540	10	156	10
DP 0912 B2RF	1419	9	38.1	14	125	15	73	3	10.6	14	6.6	19	10.280	4	15527	17	147	15
DP 1028 B2RF	1415	10	41.8	2	141	3	56	19	9.6	22	7.0	9	8.898	11	17363	3	175	2
FM 1740 B2F	1356	11	37.9	15	124	19	60	18	11.8	5	7.3	5	9.024	9	17447	2	153	12
Ark 0219-15	1356	12	38.3	13	129	12	73	3	12.5	3	7.9	1	9.008	10	16359	12	139	20
DP 1133 B2RF	1281	13	40.8	4	130	10	43	24	9.6	23	6.7	16	8.400	15	16647	9	169	3
PHY 375 WRF	1274	14	39.3	9	134	5	63	14	10.8	9	7.1	6	7.721	19	17361	4	163	5
CG 3220 B2RF	1267	15	37.8	17	130	9	70	7	11.0	8	6.8	14	8.819	13	15474	20	143	18
ST 4288B2F	1263	16	34.7	24	125	18	56	19	12.7	1	6.8	12	8.896	12	15995	14	134	22
PHY 367 WRF	1245	17	39.1	10	123	20	63	14	10.0	19	6.6	18	7.955	18	16361	11	161	6
UA222	1240	18	38.6	11	127	13	64	13	12.0	4	7.7	3	7.688	20	17020	8	148	14
AM 1550 B2RF	1210	19	37.8	18	125	15	65	12	10.6	13	6.5	20	8.330	16	17190	6	163	4
DP 1252 B2RF	1102	20	41.8	1	148	1	44	22	9.6	21	7.1	7	7.230	23	17896	1	181	1
SST HQ110CT	1097	21	36.0	21	122	21	63	14	10.7	10	6.2	22	8.271	17	15484	19	145	17
UA48	1090	22	35.0	23	109	24	68	10	12.6	2	6.8	13	7.333	22	13358	23	113	24
SSG HQ210CT	1060	23	35.3	22	121	23	44	22	10.0	17	5.6	23	7.604	21	13937	22	137	21
PHY 565 WRF	1012	24	37.9	16	139	4	49	21	10.1	16	6.3	21	6.852	24	15609	16	153	13
Mean	1329		38.5		129		63		10.7		6.9		8.865		16073		151	
LSD 0.10	168		1.4		9		8		0.7		0.6		1.139		1362		14	
C.V.%	10.7		2.1		6.0		10.6		3.8		4.8		10.9		4.9		5.3	
R-sq x 100	70.0		93.7		69.0		77.8		92.1		87.9		71.1		83.9		87.5	

Table 11. Fiber properties - 2011 Main Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, Ark.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	Unif. ind.	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
AM 1511 B2RF	1761	1	44	23	4.4	6	1.16	24	84.0	24	34.4	7	7.9	4
DP 0920 B2RF	1545	2	54	21	4.6	1	1.18	19	85.8	5	30.8	21	7.1	15
PHY 499 WRF	1532	3	63	12	4.5	4	1.19	18	85.3	10	36.2	3	7.6	11
DG 2570 B2RF	1529	4	56	19	4.5	5	1.18	20	84.8	16	33.1	15	7.8	6
ST 5458 B2RF	1527	5	62	13	4.4	6	1.21	9	84.2	22	33.5	11	6.3	23
ST 5288B2F	1472	6	73	5	4.0	15	1.24	5	84.9	14	30.6	22	7.6	10
DG 2595 B2RF	1423	7	56	18	4.3	9	1.20	14	84.5	21	32.3	19	7.1	15
DG 2450 B2RF	1422	8	63	11	4.0	15	1.20	14	85.5	8	30.6	22	6.9	19
DP 0912 B2RF	1419	9	43	24	4.4	8	1.16	23	84.7	18	33.2	12	7.0	18
DP 1028 B2RF	1415	10	69	6	3.9	19	1.22	8	85.3	11	32.4	18	8.9	2
FM 1740 B2F	1356	11	61	14	4.2	12	1.20	14	84.8	17	32.7	17	6.3	22
Ark 0219-15	1356	12	66	7	4.6	1	1.23	6	85.7	6	34.2	8	7.5	13
DP 1133 B2RF	1281	13	83	3	3.7	24	1.27	2	86.3	2	35.3	4	7.8	8
PHY 375 WRF	1274	14	55	20	4.2	12	1.18	20	84.6	20	31.6	20	7.3	14
CG 3220 B2RF	1267	15	64	9	4.3	9	1.20	14	86.3	3	33.2	13	7.9	4
ST 4288B2F	1263	16	64	9	4.2	11	1.20	10	85.0	12	33.9	9	6.9	19
PHY 367 WRF	1245	17	65	8	3.9	20	1.22	7	85.5	9	35.2	5	7.8	9
UA222	1240	18	85	2	4.2	12	1.27	2	86.1	4	34.5	6	8.5	3
AM 1550 B2RF	1210	19	49	22	3.9	22	1.16	22	84.7	19	30.2	24	7.1	15
DP 1252 B2RF	1102	20	57	15	3.9	20	1.20	10	85.0	12	32.7	16	9.0	1
SST HQ110CT	1097	21	57	15	4.0	18	1.20	10	84.9	14	33.7	10	6.5	21
UA48	1090	22	95	1	4.6	3	1.30	1	86.7	1	36.9	1	5.5	24
SSG HQ210CT	1060	23	57	17	4.0	15	1.20	10	84.1	23	33.2	13	7.6	11
PHY 565 WRF	1012	24	73	4	3.8	23	1.25	4	85.7	6	36.3	2	7.8	6
Mean	1329		63		4.2		1.21		86.2		33.3		7.4	
LSD 0.10	168		17		0.4		0.03		1.2		1.3		0.8	
C.V.%	10.7		15.8		5.9		1.6		0.8		2.2		6.6	
R-sq x 100	70.0		77.7		82.4		89.6		69.2		92.5		85.1	

Table 12. Yield and related properties - 2011 Main Cotton Variety Test with irrigation on a Hebert silt loam at Rohwer, Ark.

Variety	Lint yield		Lint frac.		Ht. cm	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/a	r	%	r		%	r	g	r	g	r	mil.	r	no.	r	no.		
PHY 499 WRF	1451	1	42.0	3	122	2	51	22	10.1	13	7.5	6	8.410	12	16380	6	160	4
ST 5288B2F	1407	2	37.6	21	111	9	58	19	9.7	20	5.9	23	11.450	1	14090	22	142	17
FM 1740 B2F	1378	3	38.6	17	105	15	63	6	11.2	5	7.2	8	9.216	3	16101	10	147	15
DP 1252 B2RF	1374	4	42.9	2	123	1	49	23	9.6	22	7.4	7	8.120	18	16620	4	168	1
DP 0912 B2RF	1366	5	38.9	13	102	20	61	10	9.7	19	6.3	20	10.380	2	15128	16	152	12
AM 1511 B2RF	1356	6	39.6	9	119	3	60	11	10.2	12	6.8	13	9.003	5	16788	2	163	3
PHY 375 WRF	1345	7	41.6	4	105	15	63	6	10.5	10	7.6	5	8.095	19	16745	3	160	5
DP 1133 B2RF	1335	8	41.2	5	115	5	49	23	9.7	21	6.9	11	9.144	4	15629	14	157	7
DP 1028 B2RF	1333	9	43.0	1	110	10	60	11	10.1	14	7.7	4	7.868	21	15657	13	153	9
ST 5458 B2RF	1326	10	38.9	14	108	12	60	11	11.0	6	7.1	10	8.448	10	15178	15	141	18
UA48	1280	11	37.7	20	101	21	64	4	13.2	1	8.1	1	7.905	20	14489	19	118	24
DG 2570 B2RF	1279	12	40.1	7	112	6	60	11	10.6	9	7.1	9	8.387	13	16170	9	153	11
Ark 0219-15	1270	13	40.0	8	112	7	63	6	11.8	4	7.9	2	8.316	16	16914	1	149	13
SST HQ110CT	1260	14	38.7	15	100	22	68	1	9.9	16	6.4	17	8.751	7	14191	20	140	19
DP 0920 B2RF	1221	15	39.2	10	105	17	65	2	9.0	24	5.9	22	8.790	6	14107	21	148	14
DG 2450 B2RF	1216	16	37.3	22	108	12	65	2	10.5	11	6.3	19	8.658	9	16032	11	153	10
CG 3220 B2RF	1210	17	38.7	16	111	8	63	6	9.8	18	6.3	21	8.419	11	16433	5	164	2
PHY 565 WRF	1208	18	37.9	19	117	4	53	21	10.8	7	6.6	16	8.721	8	14901	18	140	20
UA222	1202	19	39.2	12	99	23	60	11	12.0	2	7.9	3	7.344	24	16368	7	143	16
AM 1550 B2RF	1180	20	38.2	18	107	14	64	4	10.7	8	6.7	15	8.319	15	16332	8	154	8
ST 4288B2F	1174	21	35.9	23	102	19	59	18	11.9	3	6.7	14	8.219	17	14963	17	131	22
DG 2595 B2RF	1112	22	39.2	11	109	11	60	11	9.8	17	6.4	18	7.483	22	13770	23	137	21
PHY 367 WRF	1095	23	40.5	6	103	18	58	19	10.0	15	6.9	12	7.390	23	15988	12	158	6
SSG HQ210CT	978	24	35.5	24	99	23	60	11	9.5	23	5.3	24	8.384	14	12329	24	125	23
Mean	1264		39.3		109		60		10.5		6.9		8.551		15471		148	
LSD 0.10	124		2.0		9		6		0.7		0.7		0.857		1241		11	
C.V.%	8.3		3.0		7.3		8.6		3.7		6.2		8.5		4.7		4.5	
R-sq x 100	60.9		84.3		58.1		65.0		92.5		84.8		67.7		84.2		87.3	

Table 13. Fiber properties - 2011 Main Cotton Variety Test with irrigation on a Hebert silt loam at Rohwer, Ark.

Variety	Lint yield		Quality		Fiber properties									
	lb/a	r	score	r	Micronaire		Length		Unif. ind.		Strength		Elongation	
					r	r	r	r	r	r	r	r		
PHY 499 WRF	1451	1	60	14	4.6	6	1.17	14	84.7	8	35.1	2	7.4	6
ST 5288B2F	1407	2	67	6	4.2	21	1.20	5	83.7	18	31.1	22	6.8	13
FM 1740 B2F	1378	3	63	11	4.5	9	1.17	17	85.2	3	32.6	9	6.8	13
DP 1252 B2RF	1374	4	59	16	4.5	9	1.17	14	84.7	8	32.1	13	7.7	4
DP 0912 B2RF	1366	5	50	23	4.4	16	1.14	24	83.5	24	31.8	16	6.6	16
AM 1511 B2RF	1356	6	65	8	4.1	22	1.18	10	84.2	15	34.2	5	7.3	7
PHY 375 WRF	1345	7	64	9	4.6	8	1.19	7	84.6	12	29.4	23	6.6	17
DP 1133 B2RF	1335	8	63	11	4.5	15	1.18	12	84.9	7	34.6	3	6.8	11
DP 1028 B2RF	1333	9	59	16	4.9	2	1.18	10	85.2	3	31.2	20	7.8	3
ST 5458 B2RF	1326	10	54	21	4.8	3	1.18	12	83.6	20	32.9	8	6.3	19
UA48	1280	11	88	1	5.0	1	1.29	1	86.9	1	36.7	1	4.9	24
DG 2570 B2RF	1279	12	60	13	4.5	9	1.16	18	84.6	12	32.5	10	7.8	2
Ark 0219-15	1270	13	84	3	4.5	14	1.23	3	85.9	2	34.5	4	6.8	11
SST HQ110CT	1260	14	49	24	4.7	4	1.14	23	84.7	8	33.7	7	6.3	19
DP 0920 B2RF	1221	15	55	18	4.4	17	1.16	19	83.6	22	29.2	24	6.9	10
DG 2450 B2RF	1216	16	66	7	4.0	23	1.19	7	84.2	15	32.5	10	6.2	22
CG 3220 B2RF	1210	17	55	20	4.0	23	1.15	21	84.3	14	31.8	16	7.2	8
PHY 565 WRF	1208	18	74	4	4.4	17	1.21	4	84.6	11	32.3	12	7.6	5
UA222	1202	19	87	2	4.5	9	1.26	2	85.2	3	31.9	15	7.9	1
AM 1550 B2RF	1180	20	55	18	4.3	20	1.15	20	84.0	17	31.2	21	6.7	15
ST 4288B2F	1174	21	60	14	4.6	6	1.17	14	83.6	22	31.6	18	6.5	18
DG 2595 B2RF	1112	22	64	9	4.7	5	1.19	6	83.6	20	32.1	13	6.0	23
PHY 367 WRF	1095	23	69	5	4.3	19	1.19	7	85.2	6	33.8	6	7.0	9
SSG HQ210CT	978	24	53	22	4.5	9	1.15	21	83.7	18	31.5	19	6.2	21
Mean	1264		63		4.5		1.18		84.5		32.5		6.8	
LSD 0.10	124		10		0.5		0.03		0.9		2.7		1.0	
C.V.%	8.3		8.9		6.2		1.3		0.6		4.9		8.6	
R-sq x 100	60.9		87.9		64.1		91.4		82.3		70.9		75.3	

Table 14. Two-year average lint yields (lb/a) for varieties at the four locations of the 2010-2011 Arkansas Cotton Variety Test.

Variety	Traits	Keiser	r	Judd Hill	r	Marianna	r	Rohwer	r	All	r
		Irrigated lb/a		Irrigated ¹ lb/a		Irrigated lb/a		Irrigated lb/a		locations lb/a	
Glyphosate-tolerant:											
AM 1511 B2RF	B2R	1268	1	1376	3	1547	1	1501	1	1423	1
PHY 499 WRF	WRF	1262	2	1278	7	1369	6	1483	2	1348	2
DP 0912 B2RF	B2R	1123	4	1383	2	1370	5	1465	4	1335	3
ST 5458 B2RF	B2R	1044	11	1397	1	1381	4	1472	3	1323	4
DG 2570 B2RF	B2R	1060	8	1319	6	1419	3	1431	7	1307	5
DP 0920 B2RF	B2R	1112	5	1235	10	1457	2	1331	13	1284	6
DG 2450 B2RF	B2R	1097	6	1320	5	1309	8	1321	14	1262	7
ST 5288 B2F	B2R	1058	9	1191	13	1299	10	1442	6	1247	8
AM 1550 B2RF	B2R	1087	7	1354	4	1236	12	1285	17	1241	9
PHY 375 WRF	WRF	1169	3	1198	12	1276	11	1319	15	1240	10
CG 3220 B2RF	B2R	1040	12	1268	8	1216	15	1397	11	1230	11
DG 2595 B2RF	B2R	1045	10	1201	11	1318	7	1331	12	1224	12
DP 1028 B2RF	B2R	944	15	1238	9	1203	16	1414	9	1200	13
FM 1740 B2F	B2R	939	16	1183	14	1219	14	1429	8	1192	14
DP 1133 B2RF	B2R	955	14	1125	15	1227	13	1405	10	1178	15
PHY 367 WRF	WRF	1002	13	1099	16	1304	9	1192	19	1149	16
ST 4288 B2F	B2R	890	18	1050	17	1127	17	1319	16	1096	17
DP 1252 B2RF	B2R	828	19	982	18	1004	18	1450	5	1066	18
PHY 565 WRF	WRF	911	17	944	19	957	19	1223	18	1009	19
Mean		1044		1218		1275		1379		1229	
Not glyphosate tol.:											
UA222	Conv	1084	3	n/a		1300	1	1435	1	1273	1
Ark 0219-15	Conv	1086	2	n/a		1252	2	1401	2	1246	2
SST HQ110CT	Conv	1095	1	n/a		1126	3	1345	3	1188	3
UA48	Conv	852	4	n/a		1125	4	1296	4	1091	4
SSG HQ210 CT	Conv	799	5	n/a		956	5	1038	5	931	5
Mean		983				1152		1303		1146	

¹Lint yield not determined at Judd Hill in 2011 due to possible glyphosate drift.

Table 15. Three-year average lint yields (lb/a) for varieties at four locations of the 2009-2011 Arkansas Cotton Variety Test.

Variety		Keiser		Judd Hill		Marianna		Rohwer		All	
		Irrigated	r	Irrigated ¹	r	Irrigated	r	Irrigated	r	locations	r
		lb/a		lb/a		lb/a		lb/a		lb/a	
Glyphosate-tolerant:											
DP 0912 B2RF	B2R	1058	2	1245	1	1208	2	1296	1	1202	1
ST 5458 B2RF	B2R	1016	3	1207	3	1195	4	1247	3	1166	2
DG 2570 B2RF	B2R	975	7	1224	2	1195	3	1239	5	1158	3
ST 5288 B2F	B2R	986	6	1109	9	1175	5	1271	2	1135	4
DP 0920 B2RF	B2R	1000	4	1152	5	1217	1	1116	11	1121	5
PHY 375 WRF	WRF	1071	1	1124	8	1084	7	1147	9	1106	6
AM 1550 B2RF	B2R	987	5	1192	4	1042	10	1131	10	1088	7
DP 1028 B2RF	B2R	876	12	1146	6	1082	8	1239	4	1086	8
FM 1740 B2F	B2R	905	10	1090	10	1079	9	1239	6	1078	9
CG 3220 B2RF	B2R	926	8	1125	7	1038	11	1152	8	1060	10
ST 4288 B2F	B2R	898	11	1071	11	1032	12	1190	7	1048	11
PHY 367 WRF	WRF	907	9	1047	12	1115	6	1043	13	1028	12
PHY 565 WRF	WRF	856	13	900	13	891	13	1098	12	936	13
Mean		958		1126		1104		1185		1093	
Not glyphosate tol.:											
UA48	Conv	785	1	n/a		1012	1	1162	1	986	1
SSG HQ210 CT	Conv	760	2	n/a		840	2	828	2	810	2
Mean		773				926		995		898	

¹Lint yield not determined at Judd Hill in 2011 due to possible glyphosate drift.

Table 16. Yield and related properties - 2011 1st-year Cotton Variety Test across four Arkansas test sites.

Variety	Lint yield ¹		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre ¹		Fibers/seed		Fiber density	
	lb/a	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
PX433906WRF	1530	1	39.8	5	121	13	64	1	10.1	21	6.7	11	9.987	3	16017	11	157	7
PX433915WRF	1504	2	39.1	9	119	17	63	2	10.4	14	6.8	9	9.664	4	15652	14	152	10
AMX 003 B2RF	1414	3	40.4	3	120	15	62	3	9.1	24	6.3	20	10.110	2	14255	23	150	13
ST 5445 LLB2	1412	4	38.7	11	116	21	51	17	11.5	2	7.4	3	8.783	16	16606	8	147	18
Ark 0620-48 B2RF	1392	5	40.7	1	126	6	59	5	10.9	7	7.6	2	8.704	17	17724	3	164	3
CG 3787 B2RF	1387	6	40.6	2	126	7	53	14	10.3	15	7.1	4	8.846	14	16270	9	158	5
PHY 375 WRF, ck.	1385	7	39.4	8	121	12	59	5	10.6	11	7.0	8	9.324	7	18546	1	177	1
DP 0912 B2RF, ck.	1384	8	38.3	14	116	22	59	5	10.3	17	6.5	15	9.390	5	15087	19	145	20
Ark 0114-53	1381	9	38.3	15	124	10	57	11	12.6	1	7.9	1	9.363	6	18215	2	152	11
ST 5458 B2RF, ck.	1373	10	36.7	19	114	23	53	15	11.3	5	6.6	13	10.390	1	15401	18	140	23
BX 1262 B2F	1338	11	37.6	17	116	20	60	4	10.5	12	6.5	16	9.132	10	15610	15	150	14
CT 11212 B2RF	1329	12	39.4	7	117	19	58	10	10.2	18	6.7	12	8.872	13	15447	16	149	16
DP 1219 B2RF	1282	13	37.9	16	133	1	39	24	9.7	22	6.0	22	8.814	15	14876	21	151	12
10R051B2R2	1273	14	40.3	4	128	5	44	21	10.1	19	7.0	7	7.761	22	16929	6	166	2
Ark 0619-20 B2RF	1257	15	38.5	12	130	3	53	16	11.3	4	7.1	6	8.529	18	17577	4	157	8
BX 1252LLB2	1247	16	36.5	20	114	24	54	13	10.8	9	6.3	18	9.214	8	15727	12	146	19
10R020B2R2	1235	17	38.5	13	125	8	55	12	11.2	6	7.1	5	7.897	21	17228	5	158	6
Ark 0619-25 B2RF	1204	18	37.4	18	125	9	58	8	10.5	13	6.3	17	8.949	12	15431	17	145	21
ST 4145LLB2	1200	19	36.2	22	120	16	50	19	10.9	8	6.3	19	9.112	11	16122	10	150	15
11R159B2R2	1176	20	38.8	10	132	2	40	23	9.5	23	6.1	21	7.328	23	14619	22	154	9
BCSX 1150 B2F	1173	21	35.0	23	122	11	58	8	10.6	10	5.8	23	9.195	9	13744	24	130	24
DP 1212 B2RF	1156	22	36.5	21	121	14	51	18	11.4	3	6.6	14	8.405	20	15709	13	142	22
CT 11622 B2RF	1150	23	39.4	6	129	4	44	22	10.3	16	6.8	10	7.313	24	16643	7	162	4
BX 1261 B2F	1114	24	34.9	24	119	18	49	20	10.1	20	5.5	24	8.505	19	15001	20	148	17
Mean	1304		38.3		122		5		10.6		6.7		8.899		16018		152	
Var. LSD 0.10	79		0.9		5		4		0.5		0.4		0.537		808		8	
Loc. LSD 0.10	ns		0.3		2		2		ns		ns		0.189		ns		3	
C.V.%	9.0		2.7		6.6		13.1		6.0		7.0		8.9		6.1		6.4	
R-sq x 100	67.2		88.9		85.1		77.6		79.8		82.2		72.6		80.3		75.1	
Prob (var x loc)	<.0001		0.020		0.199		<.0001		0.138		0.056		<.0001		0.635		0.717	

¹Lint yield and seed per acre are across three locations; Judd Hill excluded due to possible glyphosate drift.

Table 17. Fiber properties - 2011 1st-year Cotton Variety Test across four Arkansas test sites.

Variety	Lint		Quality		Fiber properties									
	yield ¹	r	score	r	Micronaire	r	Length	r	Unif. ind.	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
PX433906WRF	1530	1	65	12	4.2	11	1.19	16	84.8	9	32.2	15	7.2	10
PX433915WRF	1504	2	70	3	4.2	10	1.21	6	84.7	12	32.4	11	7.0	13
AMX 003 B2RF	1414	3	61	17	4.3	6	1.18	18	84.4	17	31.3	20	7.3	9
ST 5445 LLB2	1412	4	68	7	4.4	3	1.21	5	84.4	16	33.6	7	6.4	22
Ark 0620-48 B2RF	1392	5	58	19	4.4	5	1.17	21	84.7	11	32.7	10	7.0	14
CG 3787 B2RF	1387	6	67	9	4.2	9	1.20	10	85.3	1	32.4	12	7.7	6
PHY 375 WRF, ck.	1385	7	51	22	3.9	21	1.16	22	83.6	24	30.8	22	6.7	17
DP 0912 B2RF, ck.	1384	8	44	24	4.6	1	1.14	24	84.2	20	31.8	17	7.2	11
Ark 0114-53	1381	9	57	21	4.5	2	1.18	20	84.2	18	31.1	21	7.1	12
ST 5458 B2RF, ck.	1373	10	61	16	4.3	7	1.19	17	84.0	22	32.8	8	6.4	23
BX 1262 B2F	1338	11	65	14	4.1	14	1.20	15	84.9	6	34.8	2	7.7	7
CT 11212 B2RF	1329	12	60	18	4.4	4	1.18	19	85.2	2	32.3	14	8.3	1
DP 1219 B2RF	1282	13	69	5	3.9	21	1.23	2	84.1	21	34.3	3	6.6	18
10R051B2R2	1273	14	65	13	4.0	17	1.20	11	84.6	13	32.1	16	8.3	2
Ark 0619-20 B2RF	1257	15	73	2	4.1	16	1.22	3	84.9	8	30.3	23	6.5	20
BX 1252LLB2	1247	16	68	6	4.0	19	1.21	4	84.4	15	34.0	6	6.9	16
10R020B2R2	1235	17	51	23	4.3	8	1.15	23	84.5	14	30.2	24	6.5	19
Ark 0619-25 B2RF	1204	18	70	4	4.1	13	1.21	9	85.1	3	31.7	18	8.2	3
ST 4145LLB2	1200	19	64	15	3.8	23	1.20	11	84.7	10	31.7	19	6.4	21
11R159B2R2	1176	20	67	10	3.9	20	1.21	6	84.2	19	34.1	5	6.3	24
BCSX 1150 B2F	1173	21	78	1	4.1	14	1.24	1	84.9	5	36.4	1	7.0	15
DP 1212 B2RF	1156	22	68	8	4.2	12	1.21	8	84.9	6	34.2	4	7.8	5
CT 11622 B2RF	1150	23	66	11	4.0	18	1.20	13	85.1	4	32.4	13	7.9	4
BX 1261 B2F	1114	24	58	20	3.6	24	1.20	13	83.8	23	32.8	9	7.4	8
Mean	1304		63		4.1		1.20		84.6		32.6		7.1	
Var. LSD 0.10	79		7		0.3		0.02		0.7		0.9		0.4	
Loc. LSD 0.10	ns		ns		0.1		0.01		0.3		0.4		0.2	
C.V.%	9.0		6.7		7.6		1.9		1.0		3.3		6.8	
R-sq x 100	67.2		74.3		72.9		84.1		70.4		84.3		86.5	
Prob (var x loc)	<.0001		0.753		0.758		0.289		0.215		0.208		0.091	

¹Lint yield means are across three locations; Judd Hill yield data excluded due to possible glyphosate drift.

Table 18. Yield and related properties - 2011 1st-year Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, Ark.

Variety	Lint yield		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/a	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
PHY 375 WRF, ck.	1505	1	40.3	7	109	2	59	7	9.9	16	6.8	10	10.170	3	19003	1	188	1
AMX 003 B2RF	1456	2	42.4	1	103	15	66	2	8.4	23	6.2	22	10.710	1	14296	23	158	12
PX433915WRF	1455	3	38.6	16	97	23	71	1	9.7	17	6.3	18	9.411	6	15355	18	154	16
PX433906WRF	1433	4	39.7	10	102	16	61	3	9.6	19	6.4	16	9.460	5	15814	14	160	10
CG 3787 B2RF	1411	5	41.6	2	101	17	60	5	10.0	15	7.2	5	9.258	8	16713	9	164	7
Ark 0114-53	1389	6	38.5	18	105	9	58	9	12.2	1	7.7	1	9.072	9	18324	3	158	11
DP 0912 B2RF, ck.	1369	7	38.7	15	98	22	60	5	10.1	14	6.5	15	8.807	14	15410	17	151	19
ST 5445 LLB2	1363	8	39.4	12	100	19	56	13	11.4	2	7.6	2	8.571	15	17109	6	154	17
BX 1262 B2F	1347	9	37.4	20	104	11	59	7	10.2	13	6.3	19	10.240	2	16483	10	160	9
Ark 0619-20 B2RF	1313	10	40.2	8	106	8	55	15	10.7	9	7.2	3	8.317	17	18735	2	176	2
Ark 0620-48 B2RF	1309	11	40.5	6	107	5	58	9	10.3	11	7.2	6	8.338	16	17417	4	168	4
DP 1219 B2RF	1308	12	39.5	11	109	3	49	21	9.3	21	6.2	21	9.050	10	15859	13	163	8
BX 1252LLB2	1292	13	38.8	14	96	24	61	3	10.7	8	6.9	8	9.293	7	16777	8	158	13
Ark 0619-25 B2RF	1280	14	37.4	21	107	6	56	13	10.9	5	6.6	13	8.981	12	15518	16	144	22
ST 4145LLB2	1272	15	37.6	19	103	14	54	16	10.8	6	6.7	12	9.642	4	16783	7	157	14
DP 1212 B2RF	1251	16	39.3	13	100	18	54	16	10.7	10	7.1	7	8.031	22	15795	15	149	20
10R020B2R2	1247	17	38.6	17	103	13	58	9	11.3	3	7.2	4	8.312	19	17267	5	156	15
ST 5458 B2RF, ck.	1236	18	36.4	23	99	21	50	20	10.8	6	6.3	17	8.970	13	15133	20	142	23
10R051B2R2	1226	19	41.5	3	104	10	46	24	9.0	22	6.5	14	6.904	24	16371	11	172	3
11R159B2R2	1225	20	40.8	5	108	4	49	21	8.3	24	5.8	23	8.036	21	15094	21	168	5
CT 11212 B2RF	1202	21	39.8	9	103	12	58	9	10.2	12	6.8	9	8.317	18	15251	19	148	21
BCSX 1150 B2F	1167	22	35.9	24	106	7	53	18	11.0	4	6.3	20	8.984	11	14188	24	131	24
BX 1261 B2F	1128	23	36.8	22	100	19	51	19	9.7	18	5.7	24	8.285	20	15067	22	151	18
CT 11622 B2RF	1080	24	40.8	4	110	1	48	23	9.6	20	6.7	11	7.246	23	16310	12	165	6
Mean	1303		39.2		103		56		10.2		6.7		8.850		16253		158	
LSD 0.10	116		1.6		ns		8		0.7		0.6		0.764		2031		20	
C.V.%	7.6		2.4		8.0		12.6		4.1		5.3		7.3		7.3		7.5	
R-sq x 100	68.1		87.1		42.5		52.3		91.0		83.5		75.4		70.2		66.3	

Table 19. Fiber properties - 2011 1st-year Cotton Variety Test with irrigation on a Tunica silty clay soil at Keiser, Ark.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	Unif. ind.	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
PHY 375 WRF, ck.	1505	1	44	24	3.8	21	1.14	23	83.2	24	29.0	23	7.5	16
AMX 003 B2RF	1456	2	64	11	4.4	5	1.19	9	83.6	22	30.0	22	8.1	8
PX433915WRF	1455	3	83	1	3.9	18	1.24	1	85.4	1	32.6	7	7.5	16
PX433906WRF	1433	4	59	19	4.2	12	1.17	19	84.2	14	32.2	11	7.7	13
CG 3787 B2RF	1411	5	63	13	4.4	5	1.18	16	84.6	10	32.6	7	8.1	8
Ark 0114-53	1389	6	58	20	4.3	7	1.17	19	83.8	19	30.5	20	8.1	6
DP 0912 B2RF, ck.	1369	7	50	23	4.4	4	1.14	24	84.0	17	31.5	16	8.1	6
ST 5445 LLB2	1363	8	61	17	4.5	1	1.18	16	84.0	18	32.4	10	6.7	21
BX 1262 B2F	1347	9	68	6	3.8	22	1.21	6	85.0	4	34.9	3	8.1	8
Ark 0619-20 B2RF	1313	10	75	4	3.8	22	1.23	4	84.3	11	30.3	21	7.2	18
Ark 0620-48 B2RF	1309	11	58	20	4.2	10	1.16	21	84.3	11	31.8	13	8.2	5
DP 1219 B2RF	1308	12	68	6	3.9	18	1.21	6	83.3	23	34.2	6	6.5	23
BX 1252LLB2	1292	13	67	8	4.1	14	1.20	8	84.1	16	34.3	5	7.6	15
Ark 0619-25 B2RF	1280	14	82	2	4.1	15	1.24	1	85.2	2	30.6	19	8.9	1
ST 4145LLB2	1272	15	63	14	4.0	17	1.19	9	84.9	5	30.7	18	6.9	19
DP 1212 B2RF	1251	16	60	18	4.5	3	1.19	13	84.7	8	35.1	2	7.8	12
10R020B2R2	1247	17	57	22	4.3	8	1.16	22	84.3	11	28.8	24	6.8	20
ST 5458 B2RF, ck.	1236	18	65	10	4.2	10	1.18	15	84.7	9	31.9	12	7.7	13
10R051B2R2	1226	19	64	11	4.0	16	1.19	9	83.6	20	31.3	17	8.7	2
11R159B2R2	1225	20	63	14	3.9	20	1.19	9	84.1	15	34.5	4	6.2	24
CT 11212 B2RF	1202	21	62	16	4.5	1	1.18	16	84.9	5	31.7	14	8.6	4
BCSX 1150 B2F	1167	22	81	3	4.3	9	1.23	3	84.8	7	36.0	1	6.6	22
BX 1261 B2F	1128	23	69	5	3.8	22	1.22	5	83.6	20	31.7	15	7.9	11
CT 11622 B2RF	1080	24	67	8	4.1	13	1.19	13	85.1	3	32.5	9	8.6	3
Mean	1303		61		4.1		1.19		84.3		32.1		7.6	
LSD 0.10	116		ns		ns		0.05		ns		1.6		0.9	
C.V.%	7.6		16.1		6.5		2.3		1.2		2.9		6.7	
R-sq x 100	68.1		61.5		68.6		68.2		40.7		90.0		81.3	

Table 20. Yield and related properties - 2011 1st-year Cotton Variety Test with irrigation on a Dundee silt loam at Judd Hill, Ark.

Variety	Lint yield ¹		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre ¹		Fibers/seed		Fiber density	
	lb/a	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
BX 1262 B2F	1471	1	37.5	13	122	22	51	5	11.6	2	7.0	5	10.250	4	14059	21	129	23
PX433906WRF	1432	2	38.9	4	129	13	55	2	10.3	18	6.6	11	10.520	3	16432	7	159	6
BCSX 1150 B2F	1401	3	35.4	21	124	21	60	1	10.9	11	6.0	19	10.710	1	13472	24	124	24
ST 5458 B2RF, ck.	1390	4	36.1	18	122	23	43	13	11.0	9	6.2	17	10.650	2	14753	17	136	20
DP 0912 B2RF, ck.	1373	5	38.1	10	125	19	50	7	10.0	22	6.2	18	9.155	6	14091	20	134	22
PHY 375 WRF, ck.	1341	6	38.5	5	125	17	53	3	10.7	14	6.8	9	8.456	14	17090	6	162	4
Ark 0620-48 B2RF	1332	7	40.0	1	133	9	51	5	11.0	8	7.4	1	8.604	10	18218	1	166	2
PX433915WRF	1312	8	38.4	7	137	7	50	7	11.2	7	7.1	2	8.555	11	15829	12	150	9
Ark 0619-20 B2RF	1294	9	37.6	11	142	3	46	10	10.6	15	6.4	13	9.888	5	15949	11	139	19
10R020B2R2	1226	10	37.6	12	136	8	45	11	11.4	4	6.9	6	8.400	15	16345	9	151	7
Ark 0619-25 B2RF	1219	11	37.2	15	127	14	53	3	9.7	24	5.9	21	8.990	7	16027	10	150	8
CT 11212 B2RF	1207	12	38.4	6	125	18	40	14	10.0	22	6.3	16	8.467	13	14931	15	141	15
AMX 003 B2RF	1188	13	38.3	9	131	10	48	9	10.0	21	6.3	14	8.663	9	13734	23	140	17
10R051B2R2	1179	14	39.2	2	140	6	31	19	10.3	19	6.8	10	7.418	17	17164	4	170	1
DP 1212 B2RF	1148	15	35.8	19	130	11	40	14	11.2	6	6.3	15	8.519	12	15722	13	141	16
BX 1261 B2F	1147	16	34.3	23	126	16	39	17	10.4	17	5.5	24	8.749	8	14688	18	143	14
CG 3787 B2RF	1116	17	39.2	3	142	4	40	14	10.8	12	7.1	3	7.634	16	16372	8	160	5
DP 1219 B2RF	918	18	35.7	20	150	1	21	23	10.2	20	5.6	22	6.949	18	13746	22	140	18
11R159B2R2	917	19	37.4	14	145	2	20	24	11.2	5	6.8	8	6.230	20	14320	19	148	11
CT 11622 B2RF	811	20	38.3	8	141	5	29	21	10.6	15	6.6	12	6.355	19	17180	3	165	3
Ark 0114-53			36.8	17	127	15	44	12	11.9	1	7.0	4			17432	2	145	13
BX 1252LLB2			34.7	22	119	24	38	18	10.9	10	5.9	20			14895	16	135	21
ST 5445 LLB2			37.1	16	124	20	28	22	11.5	3	6.9	7			17105	5	149	10
ST 4145LLB2			34.1	24	129	12	30	20	10.7	13	5.6	23			15526	14	145	12
Mean	1221		37.3		131		42		10.8		6.5		8.658		15628		147	
LSD 0.10	158		1.8		11		11		ns		ns		1.301		1494		16	
C.V.%	10.9		2.9		7.4		21.6		9.3		9.5		12.7		5.6		6.4	
R-sq x 100	74.7		82.0		52.9		67.5		39.3		60.1		71.4		82.6		76.1	

¹Due to possible glyphosate drift, lint yield and seed per acre only determined for varieties tolerant to glyphosate.

Table 21. Fiber properties - 2011 1st-year Cotton Variety Test with irrigation on a Dundee silt loam soil at Judd Hill, Ark.

Variety	Lint		Quality		Fiber properties									
	yield ¹	r	score	r	Micronaire	r	Length	r	Unif. ind.	r	Strength	r	Elongation	r
	lb/a						in.		%		g/tex		%	
BX 1262 B2F	1471	1	68	6	4.6	2	1.23	13	85.8	2	34.9	2	7.2	7
PX433906WRF	1432	2	62	12	3.9	14	1.22	15	85.0	12	31.3	18	6.9	10
BCSX 1150 B2F	1401	3	84	1	4.2	8	1.28	1	85.6	5	36.6	1	6.6	15
ST 5458 B2RF, ck.	1390	4	59	16	4.2	7	1.21	16	84.2	22	33.7	4	5.7	24
DP 0912 B2RF, ck.	1373	5	35	24	4.8	1	1.16	24	84.8	16	31.6	15	6.6	13
PHY 375 WRF, ck.	1341	6	54	22	3.9	14	1.20	22	84.1	23	29.4	23	6.5	17
Ark 0620-48 B2RF	1332	7	58	17	4.1	11	1.20	20	84.9	14	33.0	8	6.7	12
PX433915WRF	1312	8	65	9	4.2	8	1.23	11	84.5	19	31.7	13	6.9	11
Ark 0619-20 B2RF	1294	9	65	9	4.4	3	1.24	8	85.0	11	29.0	24	6.0	21
10R020B2R2	1226	10	53	23	4.1	10	1.19	23	84.3	20	30.1	22	6.0	21
Ark 0619-25 B2RF	1219	11	60	15	4.0	12	1.21	19	85.0	12	30.7	21	8.0	1
CT 11212 B2RF	1207	12	63	11	4.3	4	1.21	16	85.8	3	32.4	10	7.8	2
AMX 003 B2RF	1188	13	58	17	4.3	6	1.20	20	84.9	15	31.3	17	6.5	16
10R051B2R2	1179	14	62	12	3.7	19	1.24	8	84.6	18	31.8	12	7.7	3
DP 1212 B2RF	1148	15	71	5	3.9	16	1.25	7	85.7	4	33.4	6	7.3	6
BX 1261 B2F	1147	16	57	20	3.5	23	1.24	8	84.3	20	31.7	13	7.2	7
CG 3787 B2RF	1116	17	66	8	3.9	17	1.25	5	85.5	6	31.8	11	7.4	5
DP 1219 B2RF	918	18	68	6	3.6	22	1.26	4	85.2	9	32.8	9	6.6	14
11R159B2R2	917	19	76	2	3.6	20	1.28	1	85.5	6	33.5	5	6.2	20
CT 11622 B2RF	811	20	62	12	3.6	20	1.23	11	85.5	6	31.3	18	7.7	3
Ark 0114-53			58	17	4.3	4	1.21	16	84.0	24	31.0	20	7.0	9
BX 1252LLB2			76	3	3.8	18	1.28	1	85.9	1	33.2	7	6.4	18
ST 5445 LLB2			73	4	4.0	13	1.25	5	85.1	10	34.5	3	5.8	23
ST 4145LLB2			55	21	3.5	23	1.23	13	84.8	16	31.4	16	6.3	19
Mean	1221		63		4.0		1.23		85.0		32.1		6.8	
LSD 0.10	158		12		0.6		0.03		ns		1.6		0.7	
C.V.%	10.9		11.5		8.7		1.3		0.9		3.0		5.8	
R-sq x 100	74.7		79.4		65.4		88.7		60.1		87.0		85.2	

¹Due to possible glyphosate drift, lint yield was only determined for varieties tolerant to glyphosate.

Table 22. Yield and related properties - 2011 1st-year Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, Ark.

Variety	Lint yield		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/a	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
PX433906WRF	1641	1	39.4	6	144	9	73	1	10.0	18	6.6	12	11.580	2	15716	15	155	11
ST 5458 B2RF, ck.	1552	2	36.0	20	129	24	68	5	11.5	6	6.6	11	12.300	1	15459	18	139	23
Ark 0114-53	1538	3	38.6	10	146	7	66	7	13.1	1	8.3	1	10.900	3	18534	3	152	14
PX433915WRF	1536	4	38.2	12	139	12	69	4	10.2	16	6.4	14	10.160	7	15573	17	151	15
Ark 0620-48 B2RF	1487	5	41.1	1	152	1	66	7	11.2	7	7.9	2	9.709	10	17866	4	163	5
DP 0912 B2RF, ck.	1437	6	37.2	15	134	22	64	11	10.5	14	6.3	16	9.937	8	15838	12	151	16
CT 11212 B2RF	1430	7	39.1	8	135	20	70	3	9.7	21	6.3	17	9.829	9	15585	16	156	10
BX 1262 B2F	1426	8	36.5	19	134	21	66	7	9.8	20	5.7	20	9.699	11	15760	14	157	8
ST 5445 LLB2	1424	9	38.5	11	137	13	66	7	12.0	2	7.6	3	8.794	17	16440	10	143	19
AMX 003 B2RF	1420	10	40.0	3	136	18	71	2	9.0	24	6.1	18	10.260	6	14230	23	150	17
BCSX 1150 B2F	1321	11	34.5	23	136	17	68	5	10.8	12	5.7	22	10.340	5	13621	24	128	24
PHY 375 WRF, ck.	1318	12	38.7	9	136	16	64	11	10.9	10	7.0	7	8.778	18	19006	1	176	1
Ark 0619-20 B2RF	1315	13	37.6	13	151	2	54	19	12.0	3	7.3	4	8.817	15	17615	5	154	13
BX 1252LLB2	1306	14	34.6	22	129	23	63	13	10.8	11	5.8	19	10.630	4	14938	21	140	21
CG 3787 B2RF	1296	15	40.9	2	142	11	56	17	10.2	16	7.0	6	8.675	19	16853	9	164	4
10R020B2R2	1260	16	39.4	5	146	8	60	15	11.0	9	7.2	5	7.989	22	18592	2	172	2
ST 4145LLB2	1252	17	36.9	16	135	19	60	15	11.7	5	6.9	9	9.288	14	17437	6	154	12
10R051B2R2	1240	18	39.3	7	143	10	50	21	10.5	13	7.0	8	8.092	21	17146	8	163	6
DP 1212 B2RF	1221	19	35.0	21	136	15	56	17	11.9	4	6.5	13	9.625	12	15821	13	139	22
Ark 0619-25 B2RF	1201	20	36.5	18	150	4	63	13	11.0	8	6.4	15	9.451	13	15423	19	142	20
CT 11622 B2RF	1194	21	39.5	4	148	5	44	22	10.4	15	6.9	10	7.426	24	17219	7	165	3
DP 1219 B2RF	1161	22	36.5	17	150	3	39	24	9.5	23	5.5	23	8.260	20	15416	20	157	9
11R159B2R2	1150	23	37.3	14	146	6	43	23	9.5	22	5.7	21	7.688	23	14475	22	147	18
BX 1261 B2F	1114	24	33.6	24	137	13	54	19	9.9	19	5.1	24	8.814	16	15930	11	158	7
Mean	1343		37.7		140		60		10.7		6.6		9.460		16271		153	
LSD 0.10	171		1.4		7		7		0.7		0.4		1.201		1738		16	
C.V.%	10.8		2.1		4.4		9.8		3.6		3.8		10.8		6.2		6.0	
R-sq x 100	57.3		92.9		66.7		78.7		92.8		95.1		65.6		79.7		75.1	

Table 23. Fiber properties - 2011 1st-year Cotton Variety Test with irrigation on a Calloway silt loam soil at Marianna, Ark.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire		Length		Unif. ind.		Strength		Elongation	
					lb/a			r	in.	r	%	r	g/tex	r
PX433906WRF	1641	1	65	12	4.1	8	1.20	13	85.3	9	32.5	17	7.6	13
ST 5458 B2RF, ck.	1552	2	68	10	4.2	5	1.21	8	84.6	18	32.8	15	6.4	23
Ark 0114-53	1538	3	58	18	4.5	1	1.17	21	85.3	9	31.7	23	7.3	14
PX433915WRF	1536	4	66	11	4.1	10	1.21	11	84.5	20	32.2	22	7.6	12
Ark 0620-48 B2RF	1487	5	65	13	4.4	3	1.19	16	86.0	3	33.7	9	6.8	19
DP 0912 B2RF, ck.	1437	6	48	22	4.2	5	1.15	23	84.3	22	32.4	19	7.9	9
CT 11212 B2RF	1430	7	56	20	4.1	8	1.17	21	84.6	18	33.3	10	8.8	1
BX 1262 B2F	1426	8	57	19	3.6	22	1.19	15	84.9	15	34.3	6	8.7	2
ST 5445 LLB2	1424	9	78	3	4.4	2	1.24	2	85.5	6	33.8	8	6.9	17
AMX 003 B2RF	1420	10	60	17	4.3	4	1.18	18	84.9	14	32.4	21	7.9	9
BCSX 1150 B2F	1321	11	83	1	3.9	15	1.25	1	86.1	2	35.6	2	8.2	5
PHY 375 WRF, ck.	1318	12	56	21	3.7	21	1.18	20	84.8	16	33.1	13	6.7	20
Ark 0619-20 B2RF	1315	13	80	2	3.9	15	1.24	2	86.2	1	30.9	24	6.6	21
BX 1252LLB2	1306	14	73	5	3.8	20	1.23	5	85.3	9	34.9	4	7.3	15
CG 3787 B2RF	1296	15	62	16	4.2	5	1.19	16	85.6	5	32.7	16	8.2	5
10R020B2R2	1260	16	46	23	4.1	10	1.13	24	85.5	6	32.5	18	7.2	16
ST 4145LLB2	1252	17	70	7	3.9	18	1.21	8	85.4	8	33.1	11	6.5	22
10R051B2R2	1240	18	64	14	4.0	12	1.20	13	85.0	13	33.1	12	8.6	3
DP 1212 B2RF	1221	19	72	6	4.0	12	1.23	5	84.5	20	34.6	5	8.1	7
Ark 0619-25 B2RF	1201	20	75	4	4.0	14	1.23	5	85.7	4	32.4	19	8.5	4
CT 11622 B2RF	1194	21	68	9	3.9	15	1.21	11	85.2	12	34.1	7	7.8	11
DP 1219 B2RF	1161	22	63	15	3.5	23	1.23	4	84.3	23	36.0	1	6.9	18
11R159B2R2	1150	23	69	8	3.9	18	1.21	8	84.8	16	35.3	3	6.3	24
BX 1261 B2F	1114	24	40	24	3.3	24	1.18	18	83.5	24	33.0	14	8.0	8
Mean	1343		64		4.0		1.20		85.1		33.3		7.5	
LSD 0.10	171		12		0.5		0.03		1.1		1.7		0.7	
C.V.%	10.8		10.7		6.6		1.2		0.7		3.0		5.7	
R-sq x 100	57.3		82.8		70.6		89.2		71.6		76.0		86.9	

Table 24. Yield and related properties - 2010 1st-year Cotton Variety Test with irrigation on a Hebert silt loam at Rohwer, Ark.

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/a	r	%	r		cm	%	r	g	r	g	r	mil.	r	no.	r	no.	
PX433915WRF	1522	1	41.3	1	104	24	61	6	10.4	15	7.5	6	9.423	3	15851	13	152	11
PX433906WRF	1517	2	41.2	4	108	18	66	1	10.3	18	7.3	9	8.921	8	16104	10	156	5
CG 3787 B2RF	1453	3	40.8	6	119	7	58	12	10.3	16	7.3	10	8.605	9	15140	16	146	15
ST 5445 LLB2	1448	4	39.8	10	104	23	55	14	11.3	5	7.6	4	8.983	7	15772	14	143	17
Ark 0620-48 B2RF	1380	5	41.2	3	114	12	61	6	11.0	7	7.9	2	8.065	18	17395	4	161	3
DP 1219 B2RF	1379	6	39.8	9	122	4	48	23	10.0	22	6.7	16	9.131	5	14483	22	143	18
AMX 003 B2RF	1365	7	41.0	5	112	15	63	2	9.2	23	6.4	20	9.345	4	14759	18	154	7
10R051B2R2	1354	8	41.3	2	123	2	50	21	10.7	10	7.7	3	8.288	15	17036	5	161	2
CT 11212 B2RF	1354	9	40.3	7	107	20	63	2	10.9	8	7.5	7	8.469	10	16021	11	149	14
DP 0912 B2RF, ck.	1345	10	39.4	13	107	21	63	2	10.5	12	7.0	14	9.428	2	15009	17	143	20
PHY 375 WRF, ck.	1332	11	40.0	8	113	13	61	6	10.6	11	7.2	11	9.027	6	19084	1	180	1
ST 5458 B2RF, ck.	1330	12	38.1	19	108	19	50	21	11.9	2	7.4	8	9.886	1	16257	8	143	19
BX 1262 B2F	1241	13	39.2	14	105	22	63	2	10.5	14	6.9	15	7.455	21	16138	9	154	6
Ark 0114-53	1218	14	39.5	12	119	6	61	6	13.2	1	8.7	1	8.113	17	18572	2	151	12
10R020B2R2	1197	15	38.6	17	117	9	59	11	11.3	6	7.2	12	7.389	22	16707	6	152	10
CT 11622 B2RF	1176	16	39.1	15	116	10	55	14	10.5	13	7.0	13	7.266	23	15862	12	151	13
11R159B2R2	1154	17	39.7	11	127	1	48	23	9.1	24	6.1	21	6.262	24	14588	21	152	9
BX 1252LLB2	1143	18	37.7	20	111	17	54	17	10.9	9	6.7	17	7.724	19	16300	7	152	8
Ark 0619-20 B2RF	1143	19	38.8	16	121	5	58	12	11.8	3	7.6	5	8.454	11	18009	3	159	4
Ark 0619-25 B2RF	1131	20	38.4	18	117	8	61	6	10.3	17	6.6	19	8.415	13	14757	19	142	21
BX 1261 B2F	1099	21	34.7	23	113	14	53	18	10.3	18	5.5	23	8.416	12	14319	23	138	23
ST 4145LLB2	1074	22	36.2	21	111	16	55	14	10.2	20	5.9	22	8.408	14	14743	20	144	16
BCSX 1150 B2F	1029	23	34.2	24	122	3	53	18	10.0	21	5.4	24	8.258	16	13696	24	135	24
DP 1212 B2RF	997	24	35.7	22	115	11	53	18	11.7	4	6.6	18	7.559	20	15498	15	138	22
Mean	1266		39.0		114		57		10.7		7.0		8.387		15921		150	
LSD 0.10	121		2.1		9		7		0.9		0.9		0.784		1323		14	
C.V.%	8.1		3.1		6.7		10.1		5.0		7.8		7.9		4.9		5.8	
R-sq x 100	75.0		84.8		57.7		62.5		84.7		80.9		68.3		86.8		73.8	

Table 25. Fiber properties - 2011 1st-year Cotton Variety Test with irrigation on a Hebert silt loam at Rohwer, Ark.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire		Length		Unif. ind.		Strength		Elongation	
						r		r		r		r		r
	lb/a						in.		%		g/tex		%	
PX433915WRF	1522	1	67	8	4.8	4	1.18	8	84.3	8	33.2	9	6.0	21
PX433906WRF	1517	2	75	3	4.5	11	1.19	4	84.7	4	32.9	11	6.6	9
CG 3787 B2RF	1453	3	77	1	4.7	8	1.21	1	85.6	1	32.5	13	7.3	6
ST 5445 LLB2	1448	4	62	14	4.9	2	1.19	4	83.1	20	33.6	6	6.3	15
Ark 0620-48 B2RF	1380	5	53	21	4.8	4	1.14	21	83.7	16	32.2	14	6.2	16
DP 1219 B2RF	1379	6	76	2	4.6	9	1.21	1	83.7	16	34.4	4	6.4	13
AMX 003 B2RF	1365	7	62	14	4.5	11	1.15	19	84.2	9	31.5	21	6.8	7
10R051B2R2	1354	8	69	5	4.5	11	1.18	8	85.1	3	32.2	15	8.2	2
CT 11212 B2RF	1354	9	61	16	4.8	4	1.15	19	85.5	2	32.0	16	8.3	1
DP 0912 B2RF, ck.	1345	10	42	24	5.0	1	1.12	23	83.6	18	31.7	18	6.0	21
PHY 375 WRF, ck.	1332	11	50	22	4.1	21	1.13	22	82.2	24	31.9	17	6.1	20
ST 5458 B2RF, ck.	1330	12	55	19	4.8	4	1.16	16	82.6	22	32.8	12	5.9	23
BX 1262 B2F	1241	13	66	10	4.4	16	1.17	13	83.9	12	35.0	2	6.7	8
Ark 0114-53	1218	14	55	19	4.9	3	1.16	17	83.9	12	31.2	22	5.9	23
10R020B2R2	1197	15	47	23	4.6	9	1.12	24	84.1	10	29.5	24	6.2	17
CT 11622 B2RF	1176	16	67	8	4.5	15	1.18	10	84.5	7	31.7	19	7.8	4
11R159B2R2	1154	17	60	17	4.4	16	1.17	12	82.3	23	33.1	10	6.3	14
BX 1252LLB2	1143	18	57	18	4.3	18	1.16	17	82.6	21	33.6	7	6.5	10
Ark 0619-20 B2RF	1143	19	74	4	4.2	20	1.20	3	84.0	11	31.0	23	6.1	19
Ark 0619-25 B2RF	1131	20	63	13	4.5	11	1.17	13	84.7	4	33.3	8	7.5	5
BX 1261 B2F	1099	21	66	10	4.0	23	1.17	13	83.9	12	34.6	3	6.5	10
ST 4145LLB2	1074	22	68	6	4.1	22	1.18	10	83.9	12	31.6	20	6.2	17
BCSX 1150 B2F	1029	23	64	12	4.0	23	1.19	4	83.3	19	37.4	1	6.5	10
DP 1212 B2RF	997	24	68	6	4.3	19	1.19	4	84.7	6	33.8	5	7.9	3
Mean	1266		62		4.5		1.17		83.9		32.7		6.7	
LSD 0.10	121		ns		ns		ns		1.3		2.3		1.0	
C.V.%	8.1		17.1		8.2		2.4		89.0		4.0		8.6	
R-sq x 100	75.0		59.2		56.2		61.5		75.2		75.3		77.5	

Table 26. Morphological and host plant resistance traits in the 2011 Main Arkansas Cotton Variety Tests.

Variety	Leaf pubescence ¹		Stem pubescence ¹		Bract trichomes ²		Tarnished plant bug damage ³		Bacterial blight	
	rating	r	rating	r	no./cm	r	%	r	Rating ⁴	Response
AM 1511 B2RF	5.3	2	5.5	6	32.4	7	38	6	9.0	Susceptible
AM 1550 B2RF	1.0	21	3.7	19	20.3	20	43	12	9.0	Susceptible
Ark 0219-15	4.1	4	4.2	14	32.4	8	49	19	5.5	Susceptible
UA222	5.3	3	3.9	17	31.6	9	35	3	0.8	Resistant
UA48	1.4	17	3.8	18	20.9	19	52	22	0.5	Resistant
FM 1740 B2F	1.8	14	4.8	9	31.2	10	51	21	0.3	Resistant
ST 4288B2F	3.6	7	6.0	3	30.5	12	40	10	7.0	Susceptible
ST 5288B2F	6.9	1	6.7	1	43.9	1	32	1	0.5	Resistant
ST 5458 B2RF	3.8	6	5.7	4	24.1	15	50	20	9.0	Susceptible
CG 3220 B2RF	1.3	18	3.3	23	18.8	22	45	14	7.3	Susceptible
DG 2595 B2RF	2.5	12	6.6	2	33.7	5	39	8	5.0	Susceptible
DG 2450 B2RF	1.2	19	4.9	8	33.1	6	54	23	6.0	Susceptible
DG 2570 B2RF	1.0	21	3.3	21	21.3	18	43	13	9.0	Susceptible
DP 1252 B2RF	1.0	21	3.0	24	15.4	24	35	4	7.5	Susceptible
DP 0912 B2RF	2.8	11	5.6	5	34.1	3	37	5	6.8	Susceptible
DP 0920 B2RF	2.4	13	4.1	15	33.8	4	38	7	0.0	Resistant
DP 1028 B2RF	1.1	20	3.7	19	19.1	21	45	15	9.0	Susceptible
DP 1133 B2RF	1.7	15	3.3	21	21.8	17	42	11	0.0	Resistant
PHY 367 WRF	3.5	9	4.6	11	27.1	14	32	2	9.0	Susceptible
PHY 375 WRF	3.5	9	4.7	10	30.9	11	61	24	0.0	Resistant
PHY 499 WRF	3.6	8	4.3	12	29.0	13	45	16	9.0	Susceptible
PHY 565 WRF	3.9	5	5.1	7	35.7	2	39	9	9.0	Susceptible
SSG HQ210CT	1.0	21	4.1	15	15.6	23	47	18	9.0	Susceptible
SST HQ110CT	1.6	16	4.3	12	23.5	16	46	17	2.8	Intermediate
Frego bract, ck.	.	.	.	.	.	.	91	25	0.0	Resistant
Mean	2.7		4.5		27.5		47		5.0	
LSD 0.10	0.8		1.0		4.7		9.6		2.4	
C.V.%	24.1		19.2		14.5		30.3		41.4	
R-sq x 100	89.5		67.6		81.8		54.8		82.4	

¹Leaf and stem pubescence rated at Keiser irrigated test (6 plants per plots, 4 reps) using scale of 1 (smooth leaf) to 9 (pilose, very hairy).

²Marginal trichome density and length of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

³Response to tarnished plant bug was determined by examining white flowers (6 flowers/plot/day for 6 days) for presence of anther damage. Plots were 1-row, replicated 12 times.

⁴Varieties/breeding lines were planted in 20 ft x 1 row plots on May 31, then inoculated with 4 races of *X. campestris* pv. *malvacearum* on June 22. Number of susceptible plants per plot were counted. If more than four susceptible plants per plot were found, the plots was designated as blight susceptible, and given a score of "9".

Table 27. Morphological and host plant resistance traits for the 1st-year 2011 Arkansas Cotton Variety Test.

Variety	Leaf pubescence ¹		Stem pubescence ¹		Bract trichomes ²		Tarnished plant bug damage ³		Bacterial blight	
	rating	r	rating	r	no./cm	r	%	r	Rating ⁴	Response
AMX 003 B2RF	7.1	1	7.0	1	40.6	1	55	24	4.5	Susceptible
Ark 0114-53	2.2	15	1.8	24	18.0	20	51	20	2.3	Resistant
Ark 0619-20 B2RF	1.0	24	2.4	23	17.7	21	42	10	0.3	Resistant
Ark 0619-25 B2RF	3.2	10	2.9	20	25.6	15	47	17	0.0	Resistant
Ark 0620-48 B2RF	2.3	13	2.6	22	22.0	17	52	21	0.0	Resistant
BCSX 1150 B2F	5.6	3	4.6	7	29.7	10	36	5	0.0	Resistant
BX 1252LLB2	3.8	8	4.9	4	29.6	11	34	3	5.5	Susceptible
ST 5445 LLB2	5.8	2	4.6	7	31.5	6	54	23	0.0	Resistant
BX 1261 B2F	1.3	18	3.4	16	24.9	16	42	11	5.0	Susceptible
BX 1262 B2F	4.0	7	4.1	13	30.5	7	43	13	7.8	Susceptible
ST 4145LLB2	4.9	6	5.2	3	35.4	3	36	6	9.0	Susceptible
ST 5458 B2RF, ck.	5.1	4	4.8	5	27.6	12	45	15	6.3	Susceptible
CG 3787 B2RF	1.1	20	3.6	15	16.3	24	39	8	7.5	Susceptible
CT 11212 B2RF	1.1	20	4.3	11	18.2	19	46	16	9.0	Susceptible
CT 11622 B2RF	1.2	19	3.4	16	16.7	22	34	4	9.0	Susceptible
DP 1219 B2RF	1.3	17	4.2	12	31.8	5	47	18	5.3	Susceptible
DP 1212 B2RF	5.0	5	5.8	2	35.8	2	38	7	1.8	Resistant
10R020B2R2	1.1	20	2.8	21	20.2	18	44	14	0.0	Resistant
10R051B2R2	1.1	20	3.1	19	16.7	23	26	1	9.0	Susceptible
11R159B2R2	1.6	16	3.3	18	29.8	8	41	9	2.3	Resistant
DP 0912 B2RF, ck.	3.0	12	4.7	6	32.5	4	33	2	9.0	Susceptible
PX433906WRF	3.1	11	4.3	9	29.7	9	47	19	0.5	Resistant
PX433915WRF	2.3	14	4.3	9	26.3	14	42	12	1.8	Resistant
PHY 375 WRF, ck.	3.7	9	3.7	14	27.6	13	52	22	2.8	Resistant
Frego bract, ck.	.	.	.	.	.	.	91	25	0.0	Resistant
Mean	3.0		4.0		26.4		46		3.8	
LSD 0.10	0.8		0.9		3.8		8		2.9	
C.V.%	23.9		18.3		12.3		26.2		63.7	
R-sq x 100	90.0		77.8		85.8		63.3		74.1	

¹Leaf and stem pubescence rated at Keiser irrigated test (6 plants per plots, 4 reps) using scale of 1 (smooth leaf) to 9 (pilose, very hairy).

²Marginal trichome density and length of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

³Response to tarnished plant bug was determined by examining white flowers (6 flowers/plot/day for 6 days) for presence of anther damage. Plots were 1-row, replicated 12 times.

⁴Varieties/breeding lines were planted in 20 ft x 1 row plots on May 31, then inoculated with 4 races of *X. campestris* pv. *malvacearum* on June 22. Number of susceptible plants per plot were counted. If more than four susceptible plants per plot were found, the plots was designated as blight susceptible, and given a score of "9".

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