

# Arkansas Cotton Variety Test

# 2018



Wet fall conditions in 2018 led to rutting of many Arkansas cotton fields

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Photo Credit: Wet fall conditions led to rutting of many Arkansas cotton fields like this one on Rick Bransford farm in 2018. Photo was taken by Bill Robertson, University of Arkansas System Division of Agriculture, Cotton Agronomist, Crop, Soil, and Environmental Sciences, Newport Ark.

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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 five University of Arkansas System Division of Agriculture research sites (Manila, Keiser, Judd Hill, Marianna, and Rohwer). Entries in the 2018 Arkansas Cotton Variety Test were evaluated in three groups—main transgenic (entries returning from the 2017 test), first-year transgenic, and conventional varieties. The 21 entries in the main transgenic test included 6 B2XF, 3 B3XF, 2 WRF, 8 W3FE, and 2 GLT; the 44 entries in the first-year transgenic test included 8 B2XF, 19 B3XF, 3 GLT, 6 GLTP, and 8 W3FE. The transgenic tests were evaluated at all 5 locations. The conventional test included 15 entries and was evaluated at all locations except Manila. Reported data include lint yield, lint percentage, plant height, percent open bolls, yield component variables, fiber properties, leaf pubescence, and bract trichome density. All entries in the experiments were evaluated for response to tarnished plant bug and bacterial blight in separate tests at Keiser. This 2018 report includes results of large-plot variety tests in 7 counties that were coordinated by Bill Robertson.

## Contents

Introduction.....	5
Materials and Methods.....	5
References.....	8
Acknowledgments.....	8
Participants and entries in the 2018 Arkansas Cotton Variety Test (Table 1).....	9
Production information for all locations (Table 2).....	10
Environmental conditions (Table 3).....	11
Results	
Main Transgenic Variety Test:	
All locations (Tables 4-5).....	12
Manila (Tables 6-7).....	14
Keiser (Tables 8-9).....	16
Judd Hill (Tables 10-11).....	18
Marianna (Tables 12-13).....	20
Rohwer (Tables 14-15).....	22
Morphological and host-plant resistance traits (Table 16).....	24
2-year and 3-year yield averages (Table 17).....	25
First-year Transgenic Variety Test	
All locations (Tables 18-19).....	26
Manila (Tables 20-21).....	28
Keiser (Tables 22-23).....	30
Judd Hill (Tables 24-25).....	32
Marianna (Tables 26-27).....	34
Rohwer (Tables 28-29).....	36
Morphological and host-plant resistance traits (Table 30).....	38

Conventional Variety Test:	
All locations (Tables 31-32) .....	39
Keiser (Tables 33-34) .....	40
Judd Hill (Tables 35-36) .....	41
Marianna (Tables 37-38) .....	42
Rohwer (Tables 39-40).....	43
Morphological and host-plant resistance traits (Table 41) .....	44
2-year and 3-year yield averages (Table 42).....	45
County Large-Plot, Replicated Variety Evaluation:	
Appendix Tables A1-A11 .....	47



# Arkansas Cotton Variety Test 2018

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## Introduction

The purpose of the University of Arkansas System Division of Agriculture's 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 the primary locations (Manila, Keiser, Judd Hill, Marianna, and Rohwer) of the variety test. No specialized production inputs were employed with respect to the various genetically enhanced varieties. All entries in the tests at Manila possessed the RF or G genes and were uniformly treated with Round-up. Since the plots were over-sprayed with Round-up, the conventional varieties were not evaluated at Manila.

## Materials and Methods

The 21 entries in the main transgenic test included 6 B2XF, 3 B3XF, 2 WRF, 8 W3FE and 2 GLT, all returning from the 2017 test (Table 1). The first-year transgenic test included 44 entries (8 B2XF, 19 B3XF, 3 GLT, 6 GLTP, and 8 W3FE) that were not in the 2017 test. The conventional test included 15 entries, 9 of which were in the 2017 test. All entries were replicated 4 times at each test site.

Test sites included the Northeast Research and Extension Center at Keiser; the Judd Hill Cooperative Research Station at Judd Hill (near Trumann); the Lon Mann Cotton Research Station at Marianna; the Manila Airport Cotton Research Farm at Manila; and the Rohwer Research Station at Rohwer. All tests were evaluated at each site,

except that the conventional test was not evaluated at Manila. Replications of the two transgenic tests were intermingled in the field at each site. The conventional tests were in the same fields as the transgenic tests but were offset to one side. Cultural practices and weather data (heat units and rainfall) associated with the test sites are listed in Table 2 and Table 3, respectively.

Originators of seed supplied double-treated (two fungicides) seed for all entries. Prior to planting, all seed were treated with imidacloprid (Gaucho®) at a rate of 6 oz/100 lb seed by the originator or the testing personnel. Plots were planted with a constant number of seed (about 4 seed/row ft). All varieties were planted in 2-row plots on 38-inch centers and ranged from 40 to 50 feet in length. Experiments were arranged in a randomized complete block. Although exact inputs varied across locations, cultural inputs at each location were generally based on University of Arkansas System Division of Agriculture Cooperative Extension Service recommendations for cotton production, including COTMAN rules for insecticide termination. All plots were machine-harvested with 2-row or 4-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 main-stem leaf located about 5-6 nodes from plant apex was rated for 6 plants per plot for all 5 replications during August.

**Stem Pubescence.** Due to the late harvest, stem pubescence was not visually rated in 2018.

**Bract Trichomes.** As all plants approached physiological cutout, a bract from a 1st position white flower was sampled from 6 random plants per plot (4 replications) in the Keiser experiments. Each bract was examined

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for marginal trichome density (no. of trichomes/cm) as described by Bourland and Hornbeck (2007). Means for the 6 bracts were evaluated as plot means.

**Tarnished Plant Bug (TPB).** Entries in the three variety tests were evaluated for response to TPB in a separate field at Keiser. The TPB test included 8 replications of 1-row plots (20-feet long on 38-inch wide rows). Four rows of a highly susceptible Frego-bract line were planted between the tests on May 1. The TPB tests were planted on May 29 and received no insecticide treatment for TPB infestations. Early flowering in the susceptible Frego-bract strips encouraged TPB populations to increase, then to migrate from the strips as the test plots began to flower. Response to TPB was determined by examining white flowers (6 flowers/plot/day for 6 days in late August) for presence of anther damage. Accumulative percentage of damaged flowers (“dirty flowers”) was determined for each plot.

**Bacterial Blight.** Entries in the three variety tests were planted in flats (3 replications, 13 seed/plot) in the greenhouse, and scratch inoculated with *Xanthomonas citri* pv. *malvacearum*. The inoculum was obtained from naturally infected leaves collected at the 2017 Keiser location. Scratches were examined for water-soaking, and percent of susceptible plants was determined.

**Verticillium Wilt.** 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 plants had cutout. 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. Plant height was not measured at Keiser in 2018.

**% Open Bolls.** Near the time of first application of defoliant, percentage of open bolls was estimated from the front and back of each plot, then averaged for each plot.

**Boll Samples and Lint Percentage.** Prior to mechanical harvest, hand-harvested samples were obtained from 2 replications at each location. Within each row of 2-row plots, a site having average or above average plant density was chosen and 20 bolls (5 bottom, 10 mid-canopy and 5 top bolls) were harvested and bulked to form a 40-boll sample. The 40-boll samples were ginned (lab gin without the use of lint cleaners) to determine lint fraction (the percentage of lint weight to seed cotton weight).

**Fiber Properties.** Fiber samples were taken from each boll sample and were evaluated using HVI classification. Parameters included micronaire, fiber length, length uniformity index (UI), 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 25 fuzzy seed from the ginned seed of each 40-boll sample were counted and weighed. If the two weights varied more than 0.2 g, a second set of samples was taken. Two consistent weights of 25 seed were used to calculate 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 seed cotton yield (lb/acre converted to g/acre) times average seed percentage (the percentage of seed weight to seed cotton 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 40-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 mm<sup>2</sup>, 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):  $SSA = 35.74 + 6.59 SI$ , where SI is equal to seed index associated with the sample.

**Lint Yield.** Seed cotton yield per plot (determined by mechanical cotton picker) was converted to seed cotton 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-test value from analysis of variance 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 test are listed in Table 1. Cultural inputs and production information for variety trials at Manila, Keiser, Judd Hill, Marianna, and Rohwer are reported in Table 2. Table 3 includes weather information for north, central, and south Arkansas locations during the 2018 production season.

Both heat units and rainfall in 2018 exceeded historical averages at each Arkansas location (Table 3). The warm temperatures in May provided excellent conditions for emergence and early growth of seedlings. Despite the high heat unit accumulations for the season, temperatures exceeding 95 °F were relatively rare—5 days at Keiser, 8 days at Marianna and zero days at Rohwer. Of the 13 days at about 95 °F, 9 were recorded at 96 °F, 3 at 97 °F, and 1 at 98 °F. Most of the days with temperatures above 95 °F occurred from July 12 through July 18. The absence of extremely high temperature and the occurrence of relatively high rainfall provided excellent growing conditions through the season.

Rainfall in 2018 exceeded historical average rainfall at each location (Table 3). The rainfall in October had detrimental effects on cotton harvest throughout much of the region. Wet conditions continuing through November and December often delayed harvest with ruts in fields and negated fall tillage operations.

Performance data of entries in the 2018 Main Transgenic Cotton Variety Test at Manila, Keiser, Judd Hill, Marianna and Rohwer are provided in Tables 4 through 15 with

yield and yield-related variables in the even-numbered tables and fiber properties in the odd-numbered tables. Performance data across all 5 locations are presented in Tables 4 and 5. Morphological and host-plant resistance measurements for the main transgenic test entries are in Table 16. Two- and three-year yield means for entries evaluated in previous years are in Table 17. Performance data of entries in the 2018 first-year Transgenic Cotton Variety Test at the 5 locations are provided in Tables 18 through 29 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 the first-year transgenic entries are in Table 30. Performance data for the 2018 Conventional Cotton Variety Test at Keiser, Judd Hill, Marianna and Rohwer are provided in Tables 31 through 40 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 the conventional entries are in Table 41. Two- and three-year yield means for the conventional entries evaluated in previous years are in Table 42.

Other observations associated with each test site include:

**Manila (Tables 6, 7, 20 and 21).** The tests at Manila were in the same field used since 2014, and in the same area of the field used since 2015. Plots were planted on May 15, and achieved good stands and high yields.

**Keiser (Tables 8, 9, 22, 23, 33 and 34).** The 2018 variety tests were moved from a field (N6) on the north end of the station to a field (S15) on the south end. Less pigweed pressure was anticipated in this field, though the lower end of the field drains poorly. Plots were planted on May 8, and achieved good stands, good early growth, and low pigweed pressure. Some plots were adversely affected by directed application of gramoxone on June 11, but good yields were obtained. Harvest began in the field on October 29, but stopped due to a hydraulic problem on the plot picker. Persistent rainy weather commenced by the time the picker was repaired. These wet conditions delayed harvest until January 31, 2019. Within this field, six strain tests from the UA Cotton Breeding Program (similar materials in each test) were evaluated—two were harvested in October, two harvested in January and two were partly harvested on the two dates. The October 29 harvested area (224 plots) yielded 557 lb/acre more seed cotton than the January 31 harvested area (256 plots). Thus, the delayed harvest likely reduced lint yields in the variety test by about 245 lb/acre (557 lb/acre times average lint fraction in Tables 8, 22, and 33 of 43.9%).

**Judd Hill (Tables 10, 11, 24, 25, 35 and 36).** Wet field conditions caused planting of the Judd Hill plots to be delayed until May 18. Excellent stands were achieved, and plants grew well and established excellent boll loads. Intensity of Verticillium wilt was moderate, and much lower than experienced in 2017.

**Marianna (Tables 12, 13, 26, 27, 37 and 38).** For the third consecutive year, a cereal rye cover crop was used in the tests at Marianna. The cover crop was planted on Oct 31, 2017, and terminated on March 15, 2018, using glyphosate (2 pt/acre). Pigweed pressure was very light in the tests. Average lint yields at Marianna were higher than at other test sites in 2018.

**Rohwer (Tables 14, 15, 28, 29, 39 and 40).** The Rohwer location was planted on May 3, and excellent stands were achieved. The plants grew well and produced good yields.

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**Table 1. Participants and entries in the 2018 Arkansas Cotton Variety Test.**

Institution/Contact person	Returning entries	Experimental no.	First-year entries	First-year entries
Americot, Inc./ Brad Littlefield			NG 2982 B3XF NG 3699 B2XF NG 3729 B2XF NG 3780 B2XF NG 3994 B3XF NG 3956 B3XF NG 4689 B2XF	NG 4777 B2XF NG 4936 B3XF NG 5007 B2XF NG 5711 B3XF AMX 1816 B3XF AMX 1818 B3XF
BASF/ Kyle Fontenot	ST 5020GLT ST 4949GLT	BX 1630GLT	ST 5122GLT ST 5471GLTP ST 5517GLTP ST 5818GLT	ST 4550GLTP BX 1974GLTP BX 1975GLTP BX 1976GLTP
Crop Production Services/ Frank Groves	DG 3385 B2XF DG 3214 B2XF		DG 3433 B2XF CPS 1702 GLT CPS 17228 NR B2XF CPS 18501-B CPS 18503-C	CPS 18504-C CPS 18504-D CPS 18506-D CPS 18507-D CPS 18817 B3XF
Monsanto/ David Albers	DP 1518 B2XF DP 1614 B2XF DP 1646 B2XF DP 1725 B2XF DP 1820 B3XF DP 1823 NR B2XF	14R925B2XF MON 15R515B2XF MON 15R551B2XF MON 15R535B2XF MON 16R324B3XF MON 16R225NRB2XF	17R818 B3XF 17R821 B3XR 17R931NR B3XF	
PhytoGen Seed Co./ Chad Brewer	PHY 300 W3FE PHY 312 WRF PHY 320 W3FE PHY 330 W3FE PHY 340 W3FE PHY 350 W3FE PHY 430 W3FE PHY 440 W3FE PHY 444 WRF PHY 480 W3FE	PX3122b-51WRF PX3A82W3FE PX3A99W3FE PX4A54 & PX4A57W3FE PX4A62W3FE PX4444-13WRF PX4A52W3FE	PX3B07W3FE PX3B09W3FE PX3C06W3FE PX4A64W3FE PX4A69W3FE PX5B73W3FE PX5C09W3FE PX5D28BW3FE	
WinField Solutions, LLC/ Robert Cossar	CROPLAN 9608 B3XF	WinField United 17XC8	CROPLAN 9178 WinField United 18XC9	
<b>Conventional entries</b>				
Americot Inc.	AM UA48	Ark 0102-48		
Premium Cotton Genetics/ Michael Gilbert			PCG 713	
Seed Source Genetics/ Edward Jungmann	SSG UA222 SSG UA107 SSG UA114	Ark 0222-12 Ark 0701-17 Ark 0614-49		
LSU Ag Center/ Gerald Myers			LA14063001 LA14063038	LA14063075 LA14063083
University of Arkansas/ Fred Bourland	UA212ne Ark 0818-23 Ark 0818-81 Ark 0822-48 Ark 0822-75	Ark 0812-87ne		
Conventional check			DP 393	

**Table 2. Cultural practices for locations of the 2018 Arkansas Cotton Variety Test.**

Input	Location			
	Manila	Keiser	Judd Hill	Marianna
Soil type	Routon-Dundee- Crevasse complex	Sharkey clay	Dundee silt loam	Callaway silt loam
N, P, K (lb)	100-65-150	100-0-0	100-0-0	92-46-60
Planting date	5/15	5/8	5/18	5/9
Irrigation method	furrow	furrow	furrow	furrow
Irrigation dates	6/15, 7/5, 7/12, 7/19 7/24, 8/2, 8/8, 8/15	6/18, 7/3, 7/10, 7/26	6/15, 7/5, 7.11, 7/26	5/14, 6/16, 6/30, 7/12, 7/20, 7/26, 8/11
Mepiquat chloride	50 oz.	none	46 oz	22 oz
Defoliation date	9/14, 10/12	9/26	10/2, 10/8	9/1, 9/13
Harvest date	10/19	1/31	10/30	9/30

**Table 3. Weather summary for the 2018 production season in north, central and south Arkansas.**

	Month	DD60s in 2018	Historical avg. <sup>a</sup> DD60s	Rainfall (in.) in 2018	Historical avg. <sup>a</sup> rainfall
Keiser (northeast)	May	563	314	6.6	5.2
	June	669	532	4.1	3.9
	July	718	644	1.6	3.7
	August	607	583	4.5	2.9
	September	488	363	6.1	3.7
	October	215	127	4.0	3.3
	Total	3259	2563	27.0	22.6
Marianna (central)	May	544	336	6.8	5.1
	June	626	538	6.8	3.9
	July	698	646	6.0	3.9
	August	590	601	7.1	2.8
	September	581	397	6.1	3.2
	October	214	154	4.8	3.5
	Total	3252	2672	37.5	22.4
Rohwer (southeast)	May	525	354	3.6	4.9
	June	618	551	2.5	3.6
	July	662	661	2.3	3.7
	August	586	618	8.9	2.6
	September	493	415	1.9	3.0
	October	241	167	4.6	3.4
	Total	3124	2766	23.8	21.3

<sup>a</sup> DD60 (growing degree days based on 60 °F) and rainfall from historical weather data from 1960 through 2007.

**Table 4. Yield and related properties–2018 Arkansas Transgenic Cotton Variety Test across five test sites.**

Variety	Lint		Lint		Ht.		Open		Seed		Lint		Seed/		Fibers/		Fiber	
	yield	r	frac.	r	cm	r	bolts	r	index	r	index	r	acre	r	seed	r	density	r
	lb/acre		%				%		g		g		mil.		no.		no.	
DP 1725 B2XF	1606	1	46.5	1	106	9	54	1	8.8	19	7.9	12	9.262	3	17369	14	185	3
DP 1646 B2XF	1580	2	44.2	8	115	1	49	8	8.8	20	7.2	20	9.936	1	15329	21	163	15
ST 4949GLT	1529	3	45.4	3	106	8	45	12	9.9	12	8.4	3	8.252	9	18443	5	183	4
PHY 312 WRF	1512	4	42.4	16	109	5	53	2	10.8	4	8.2	7	8.366	8	18204	7	170	14
DP 1518 B2XF	1491	5	42.1	19	111	3	49	8	9.5	16	7.1	21	9.566	2	15915	18	162	17
PHY 444 WRF	1481	6	43.8	11	106	10	37	20	11.2	2	8.8	1	7.607	16	19916	1	182	5
CROPLAN 9608	1477	7	45.6	2	108	7	40	17	8.7	21	7.5	18	8.951	4	17671	11	190	1
DG 3385 B2XF	1493	8	42.6	15	100	19	51	4	10.4	8	7.9	11	8.523	6	16788	16	161	18
PHY 430 W3FE	1438	9	44.5	6	103	14	42	16	10.2	9	8.4	4	7.818	14	19274	2	187	2
DP 1614 B2XF	1431	10	44.9	4	100	21	52	3	9.3	18	7.7	14	8.488	7	15607	19	161	19
DP 1823NR B2XF	1427	11	43.4	13	102	16	44	13	9.4	17	7.5	19	8.711	5	17844	9	182	6
PHY 340 W3FE	1409	12	44.3	7	104	13	44	13	9.9	13	8.0	9	7.967	13	17833	10	177	8
DP 1820 B3XF	1377	13	44.7	5	105	11	38	18	10.0	11	8.2	8	7.607	17	16430	17	162	16
PHY 320 W3FE	1376	14	41.5	20	100	20	49	7	10.4	7	7.6	16	8.177	10	18242	6	175	11
DG 3214 B2XF	1369	15	42.3	18	111	2	51	5	10.2	10	7.6	17	8.146	11	15447	20	151	21
PHY 350 W3FE	1364	16	42.4	17	108	6	45	11	11.1	3	8.3	5	7.416	18	18661	4	171	13
PHY 330 W3FE	1354	17	43.9	9	103	15	51	6	9.5	15	7.7	15	8.011	12	17308	15	176	10
PHY 440 W3FE	1316	18	43.5	12	101	18	38	19	10.6	5	8.3	6	7.216	20	19067	3	181	7
PHY 300 W3FE	1308	19	43.9	10	102	17	42	15	9.7	14	7.8	13	7.639	15	17532	12	176	9
PHY 480 W3FE	1296	20	42.7	14	105	12	33	21	10.5	6	8.0	10	7.351	19	18149	8	173	12
ST 5020GLT	1241	21	40.8	21	109	4	46	10	12.1	1	8.5	2	6.633	21	17455	13	151	20
Mean	1421		43.6		105		45		10.1		7.9		8.173		17547		172	
Var. LSD <sub>0.10</sub>	66		0.6		4		5		0.3		0.3		0.385		695		6.0	
Loc. LSD <sub>0.10</sub>	32		0.3		2		2		0.2		0.1		0.188		336		3.0	
C.V. %	8.9		1.7		6.4		19.0		4.4		4.9		9.0		5.3		4.5	
R <sup>2</sup> x 100	84.4		92.1		74.7		68.2		91.6		80.9		85.0		83.6		86.2	
Prob (var x loc)	<0.0001		0.019		0.435		<0.001		0.226		0.395		<0.0001		0.115		0.023	



**Table 5. Fiber properties–2018 Arkansas Transgenic Cotton Variety Test across five test sites.**

Variety	Lint		Quality		Fiber properties							
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r
	lb/acre						in.		%		g/tex	
DP 1725 B2XF	1606	1	55	18	4.5	7	1.20	14	84.1	20	29.4	19
DP 1646 B2XF	1580	2	82	2	4.3	13	1.28	2	85.0	11	29.6	17
ST 4949GLT	1529	3	50	20	4.6	5	1.18	20	84.5	16	29.8	16
PHY 312 WRF	1512	4	68	7	4.3	14	1.22	8	85.5	5	30.9	11
DP 1518 B2XF	1491	5	69	6	4.3	16	1.23	7	85.0	9	29.5	18
PHY 444 WRF	1481	6	88	1	4.0	21	1.29	1	86.5	1	30.8	13
CROPLAN 9608	1477	7	56	17	4.2	17	1.20	16	83.9	21	29.1	21
DG 3385 B2XF	1473	8	57	16	4.6	4	1.20	17	85.0	10	29.1	20
PHY 430 W3FE	1438	9	48	21	4.4	9	1.17	21	84.5	17	32.7	3
DP 1614 B2XF	1431	10	61	12	4.7	1	1.23	6	84.7	15	30.7	14
DP 1823NR B2XF	1427	11	65	8	4.0	20	1.22	8	84.9	12	31.7	7
PHY 340 W3FE	1409	12	58	14	4.4	8	1.20	15	84.7	14	30.4	15
DP 1820 B3XF	1377	13	74	4	4.7	3	1.26	3	85.3	8	32.3	5
PHY 320 W3FE	1376	14	61	11	4.1	19	1.20	12	85.8	4	32.5	4
DG 3214 B2XF	1369	15	63	9	4.7	2	1.22	10	85.9	3	30.8	12
PHY 350 W3FE	1364	16	58	15	4.4	11	1.20	13	84.8	13	31.4	10
PHY 330 W3FE	1354	17	62	10	4.3	14	1.20	11	85.3	7	31.5	9
PHY 440 W3FE	1316	18	69	5	4.2	18	1.24	5	84.2	19	33.9	1
PHY 300 W3FE	1308	19	55	19	4.4	9	1.19	19	84.4	18	31.5	8
PHY 480 W3FE	1296	20	59	13	4.3	12	1.19	18	85.4	6	31.9	6
ST 5020GLT	1241	21	78	3	4.5	6	1.26	4	86.2	2	32.8	2
Mean	1421		64		4.4		1.22		85.0		31.1	
Var. LSD <sub>0.10</sub>	66		7		0.1		0.02		0.8		0.7	
Loc. LSD <sub>0.10</sub>	32		4		0.1		0.01		0.4		ns	
C.V.%	8.9		15.5		4.2		2.2		1.2		3.0	
R <sup>2</sup> x 100	84.4		7.4		8.0		86.0		76.5		84.8	
Prob (var x loc)	<.0001		0.500		0.105		0.719		0.055		0.044	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 6. Yield and related properties–2018 Arkansas Cotton Transgenic Variety Test, with irrigation on a Routon-Dundee-Crevasse complex soil at Manila.**

Variety	Lint yield		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/acre	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
DP 1725 B2XF	1877	1	46.4	1	104	8	65	1	9.3	20	8.2	5	10.400	2	18597	10	192	1
DP 1646 B2XF	1655	2	43.9	4	110	3	50	5	8.6	21	6.9	21	10.940	1	16206	20	176	11
DG 3385 B2XF	1598	3	42.2	11	95	21	54	3	10.3	12	7.7	12	9.451	3	16901	18	163	17
ST 4949GLT	1574	4	44.5	2	103	11	48	9	10.4	11	8.5	2	8.439	11	19256	4	185	7
PHY 430 W3FE	1558	5	43.2	6	101	14	45	12	10.2	15	7.8	10	9.040	5	19332	3	188	4
PHY 444 WRF	1497	6	42.8	8	99	17	38	16	11.3	4	8.6	1	7.945	14	20559	1	186	6
CROPLAN 9608	1491	7	44.5	3	108	4	39	15	9.3	19	7.6	14	8.917	7	18592	11	191	2
PHY 312 WRF	1473	8	41.2	16	110	2	50	5	11.4	3	8.1	6	8.246	13	17765	13	160	19
PHY 440 W3FE	1446	9	43.0	7	100	15	34	19	10.5	8	7.9	9	8.282	12	19720	2	188	3
DG 3214 B2XF	1416	10	41.1	17	107	5	55	2	10.7	6	7.6	15	8.507	10	16156	21	152	21
DP 1614 B2XF	1412	11	42.5	10	99	17	46	11	9.4	18	7.1	19	9.038	6	16261	19	167	15
PHY 320 W3FE	1407	12	40.7	18	102	12	53	4	10.3	14	7.2	16	8.827	8	18869	8	182	9
DP 1823NR B2XF	1398	13	41.6	15	98	19	41	14	9.6	17	7.0	20	9.111	4	18534	12	187	5
PHY 350 W3FE	1387	14	40.4	19	106	7	43	13	11.7	2	8.1	7	7.792	15	18920	6	168	14
DP 1518 B2XF	1375	15	40.1	20	114	1	49	8	10.5	8	7.2	17	8.630	9	17390	15	166	16
PHY 340 W3FE	1357	16	43.6	5	102	13	48	9	10.3	13	8.0	8	7.693	17	18966	5	183	8
PHY 330 W3FE	1225	17	41.7	14	103	10	50	5	9.9	16	7.2	18	7.701	16	16927	17	168	13
PHY 480 W3FE	1198	18	42.0	12	100	16	34	19	10.4	10	7.6	13	7.138	18	17649	14	169	12
DP 1820 B3XF	1197	19	42.7	9	104	8	35	18	10.8	5	8.2	4	6.628	19	17358	16	162	18
ST 5020GLT	1122	20	39.2	21	106	6	36	17	12.9	1	8.5	3	6.023	20	18878	7	156	20
PHY 300 W3FE	1016	21	41.8	13	97	20	33	21	10.6	7	7.8	11	5.938	21	18641	9	176	10
Mean	1413		42.3		103		45		10.4		7.7		8.318		18166		175	
LSD <sub>0.10</sub>	119		1.7		9		10		0.6		0.6		0.706		1414		10	
C.V.%	7.1		2.4		7.0		18.6		3.4		4.8		7.2		4.5		3.6	
R <sup>2</sup> x 100	83.4		85.4		40.1		61.2		93.5		80.1		85.5		81.8		90.1	

**Table 7. Fiber properties—2018 Arkansas Transgenic Cotton Variety Test, with irrigation on a Roton-Dundee-Crevasse complex soil at Manila.**

Variety	Lint		Quality		Fiber properties							
	yield lb/acre	r	score	r	Micronaire	r	Length in.	r	UI <sup>a</sup> %	r	Strength g/tex	r
DP 1725 B2XF	1877	1	52	20	4.2	3	1.23	19	85.3	15	29.0	18
DP 1646 B2XF	1655	2	77	3	3.8	17	1.33	2	85.4	14	28.7	19
DG 3385 B2XF	1598	3	53	18	4.3	2	1.22	21	86.6	8	28.7	20
ST 4949GLT	1574	4	56	16	4.2	4	1.25	15	84.9	19	30.0	15
PHY 430 W3FE	1558	5	57	15	3.8	15	1.24	17	85.9	13	33.2	3
PHY 444 WRF	1497	6	84	1	3.5	19	1.34	1	88.8	1	30.4	13
CROPLAN 9608	1491	7	53	19	3.9	11	1.24	17	84.5	20	28.6	21
PHY 312 WRF	1473	8	75	4	4.1	6	1.29	5	87.5	4	30.9	12
PHY 440 W3FE	1446	9	64	8	3.7	18	1.28	6	85.0	18	33.9	1
DG 3214 B2XF	1416	10	63	9	4.3	1	1.26	14	86.8	7	29.9	16
DP 1614 B2XF	1412	11	63	9	4.1	6	1.28	6	84.4	21	30.2	14
PHY 320 W3FE	1407	12	58	14	3.5	19	1.26	11	87.1	5	31.4	9
DP 1823NR B2XF	1398	13	55	17	3.5	21	1.27	10	86.2	12	32.8	4
PHY 350 W3FE	1387	14	63	9	3.9	10	1.26	11	87.1	5	31.1	11
DP 1518 B2XF	1375	15	61	13	3.9	13	1.27	8	85.3	15	29.6	17
PHY 340 W3FE	1357	16	50	21	4.1	6	1.23	20	85.2	17	31.2	10
PHY 330 W3FE	1225	17	70	6	3.8	15	1.27	8	88.5	2	32.6	6
PHY 480 W3FE	1198	18	68	7	3.9	11	1.26	11	87.9	3	32.3	7
DP 1820 B3XF	1197	19	81	2	4.2	4	1.32	3	86.3	11	33.3	2
ST 5020GLT	1122	20	74	5	4.0	9	1.30	4	86.4	10	32.8	5
PHY 300 W3FE	1016	21	61	12	3.9	13	1.25	15	86.6	9	31.9	8
Mean	1413		64		3.9		1.27		85.0		31.1	
LSD <sub>0.10</sub>	119		13		0.3		0.04		1.7		1.5	
C.V.%	7.1		12.3		4.8		1.8		1.1		2.8	
R <sup>2</sup> x 100	83.4		76.0		78.6		80.5		72.1		87.9	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 8. Yield and related properties—2018 Ark. Cotton Transgenic Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint		Lint		Ht.	Open		Seed		Lint		Seed/		Fibers/		Fiber	
	yield	r	frac.	r		r	bolts	r	index	r	index	r	acre	r	seed	r	density
	lb/acre		%		cm	%		g		g		mil.		no.		no.	
PHY 312 WRF	1418	1	43.2	19		55	3	10.1	3	7.9	5	8.100	3	17699	10	173	14
DP 1518 B2XF	1382	2	44.0	15		48	10	8.2	18	6.7	21	9.410	1	14767	19	164	18
DG 3385 B2XF	1341	3	43.8	16		51	4	9.6	8	7.7	11	7.895	4	17234	12	174	13
PHY 330 W3FE	1323	4	45.4	8		58	1	8.4	16	7.2	17	8.403	2	16414	15	180	11
PHY 340 W3FE	1299	5	44.9	12		40	15	9.0	10	7.5	13	7.827	6	16263	16	171	16
PHY 300 W3FE	1297	6	46.0	6		51	4	8.9	14	7.7	10	7.637	7	18081	4	191	3
PHY 430 W3FE	1284	7	45.9	7		41	14	9.8	5	8.4	2	6.909	12	18743	2	187	7
DP 1823NR B2XF	1235	8	45.1	10		43	12	8.6	15	7.4	14	7.549	8	17341	11	187	8
DP 1646 B2XF	1230	9	45.1	9		50	9	8.4	17	7.1	18	7.835	5	15549	18	171	15
ST 4949GLT	1213	10	46.6	4		43	12	9.0	13	8.1	4	6.832	13	17963	6	190	4
PHY 444 WRF	1212	11	45.0	11		33	20	10.3	2	8.7	1	6.353	17	20766	1	201	1
PHY 480 W3FE	1207	12	43.3	18		31	21	9.6	6	7.6	12	7.179	10	17920	7	181	10
PHY 320 W3FE	1201	13	42.6	21		51	4	9.5	9	7.3	16	7.466	9	18057	5	184	9
CROPLAN 9608	1134	14	47.6	2		36	17	8.0	20	7.4	15	6.989	11	17704	9	201	2
DP 1820 B3XF	1111	15	46.1	5		35	19	9.0	12	7.9	8	6.401	16	16080	17	169	17
DP 1725 B2XF	1081	16	48.1	1		51	4	8.1	19	7.8	9	6.269	18	16845	14	189	5
DP 1614 B2XF	1062	17	46.7	3		58	1	7.9	21	7.1	19	6.828	14	13992	21	160	20
ST 5020GLT	1022	18	42.6	20		44	11	10.5	1	7.9	6	5.848	19	17032	13	162	19
PHY 350 W3FE	1020	19	44.8	13		36	17	9.9	4	8.1	3	5.694	21	17800	8	177	12
PHY 440 W3FE	1007	20	44.4	14		39	16	9.6	7	7.9	7	5.788	20	18653	3	188	6
DG 3214 B2XF	995	21	43.4	17		51	4	9.0	10	7.0	20	6.460	15	14760	20	155	21
Mean	1194		45.0			45		9.1		7.6		7.127		17127		179	
LSD <sub>0.10</sub>	181		1.1			14		0.6		0.4		1.116		1392		15	
C.V.%	12.8		1.5			26.2		3.7		3.3		13.3		4.7		5	
R <sup>2</sup> x 100	54.2		92.2			48.9		91.3		89.1		59.7		88.2		80.7	

**Table 9. Fiber properties–2018 Arkansas Transgenic Cotton Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	Strength	r	Elongation	r	
	lb/acre						in.		%	g/tex		%		
PHY 312 WRF	1418	1	61	13	4.6	9	1.17	12	83.2	19	30.2	13	8.0	10
DP 1518 B2XF	1382	2	77	4	4.4	14	1.21	5	85.2	3	29.8	16	7.6	15
DG 3385 B2XF	1341	3	59	14	4.6	9	1.15	17	84.6	8	28.2	20	7.9	12
PHY 330 W3FE	1323	4	59	14	4.5	12	1.17	14	83.2	20	31.1	8	8.1	8
PHY 340 W3FE	1299	5	73	6	4.6	11	1.19	8	85.2	4	30.1	14	8.2	6
PHY 300 W3FE	1297	6	45	21	4.7	7	1.13	20	81.2	21	30.6	10	8.9	2
PHY 430 W3FE	1284	7	52	18	4.7	6	1.14	18	84.1	11	32.1	3	7.9	11
DP 1823NR B2XF	1235	8	70	7	4.3	17	1.18	10	85.5	2	30.8	9	7.0	20
DP 1646 B2XF	1230	9	87	1	4.4	16	1.25	1	84.7	7	29.4	18	7.2	18
ST 4949GLT	1213	10	46	20	4.8	2	1.12	21	83.7	14	29.4	18	8.4	5
PHY 444 WRF	1212	11	79	2	4.1	21	1.23	2	84.2	10	30.5	11	8.2	6
PHY 480 W3FE	1207	12	58	16	4.4	14	1.15	15	83.9	13	29.9	15	7.1	19
PHY 320 W3FE	1201	13	53	17	4.3	17	1.14	19	84.0	12	31.2	6	8.1	8
CROPLAN 9608	1134	14	62	12	4.3	17	1.17	12	83.4	15	28.0	21	9.1	1
DP 1820 B3XF	1111	15	75	5	4.8	3	1.23	2	84.3	9	31.5	5	7.7	13
DP 1725 B2XF	1081	16	67	9	4.7	7	1.21	5	83.3	17	29.8	17	7.7	14
DP 1614 B2XF	1062	17	65	10	5.0	1	1.20	7	85.0	5	31.2	7	7.5	16
ST 5020GLT	1022	18	79	2	4.5	12	1.21	4	85.6	1	32.8	1	6.8	21
PHY 350 W3FE	1020	19	52	18	4.8	3	1.15	15	83.3	17	30.4	12	8.7	3
PHY 440 W3FE	1007	20	68	8	4.3	17	1.19	8	83.4	15	32.5	2	8.6	4
DG 3214 B2XF	995	21	63	11	4.8	3	1.18	10	84.8	6	31.9	4	7.5	16
Mean	1194		64		4.5		1.18		84.1		30.5		7.9	
LSD <sub>0.10</sub>	181		16		0.3		0.05		ns		1.8		ns	
C.V.%	12.8		14.5		3.6		2.6		1.3		3.3		8.9	
R <sup>2</sup> x 100	54.2		76.8		79.8		73.3		71.9		76.6		73.8	

<sup>a</sup>UI = Fiber length uniformity index.

**Table 10. Yield and related properties—2018 Arkansas Cotton Transgenic Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint yield		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/acre	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
DP 1725 B2XF	1396	1	45.8	1	115	3	43	4	8.9	20	7.7	15	8.203	1	17551	14	186	2
PHY 312 WRF	1367	2	42.1	18	112	11	41	6	10.4	8	7.9	12	7.907	3	17655	12	169	12
ST 4949GLT	1327	3	45.4	3	114	7	41	6	9.9	13	8.4	6	7.160	7	18976	3	189	1
DP 1823NR B2XF	1318	4	43.4	12	112	10	40	10	9.8	14	7.8	14	7.704	5	18377	7	183	4
PHY 444 WRF	1315	5	43.7	10	115	5	41	6	11.7	2	9.2	1	6.458	14	19783	1	175	9
PHY 430 W3FE	1291	6	44.5	6	105	16	43	4	10.0	12	8.3	9	7.052	8	18534	4	182	5
DP 1518 B2XF	1260	7	42.3	16	114	6	39	12	9.5	18	7.1	20	8.064	2	15278	20	156	19
DP 1614 B2XF	1236	8	45.6	2	104	18	44	2	10.4	9	8.9	3	6.332	16	18040	9	172	11
PHY 350 W3FE	1229	9	42.2	17	118	2	39	12	11.4	3	8.5	5	6.569	13	17724	11	160	15
DG 3385 B2XF	1220	10	42.9	15	100	21	44	2	10.9	5	8.4	8	6.597	12	17024	15	158	16
DP 1646 B2XF	1210	11	43.2	13	120	1	40	10	8.9	19	7.0	21	7.863	4	14646	21	155	20
CROPLAN 9608	1209	12	44.9	4	115	4	38	17	8.8	21	7.5	18	7.333	6	16633	16	177	8
PHY 300 W3FE	1176	13	43.7	9	111	13	33	21	9.6	16	7.7	16	6.956	10	16489	17	167	14
DP 1820 B3XF	1160	14	43.7	11	113	8	39	12	10.3	10	8.2	11	6.431	15	16207	18	157	18
PHY 440 W3FE	1160	15	43.8	8	102	20	39	12	11.0	4	8.8	4	6.006	20	19323	2	179	6
PHY 480 W3FE	1155	16	43.2	14	111	14	35	20	10.8	7	8.4	7	6.236	17	18508	5	173	10
PHY 320 W3FE	1146	17	40.1	21	102	19	39	12	10.9	6	7.6	17	6.862	11	18147	8	169	13
DG 3214 B2XF	1143	18	41.7	19	111	12	48	1	10.0	11	7.4	19	7.037	9	16026	19	157	17
PHY 340 W3FE	1124	19	44.8	5	105	16	41	6	9.8	15	8.3	10	6.162	18	18382	6	184	3
ST 5020GLT	1097	20	41.7	20	112	9	36	19	12.5	1	9.0	2	5.545	21	17871	10	152	21
PHY 330 W3FE	1039	21	43.9	7	106	15	38	17	9.6	17	7.8	13	6.070	19	17634	13	178	7
Mean	1218		43.5		110		40		10.2		8.1		6.883		17562		170	
LSD <sub>0.10</sub>	139		1.0		9		6		1.2		1.0		0.783		2164		13	
C.V.%	9.7		1.4		6.7		12.7		6.8		7.2		9.6		7.1		4.6	
R <sup>2</sup> x 100	50.0		92.2		46.8		67.4		78.5		69.3		65.3		69.8		82.7	



**Table 11. Fiber properties—2018 Arkansas Transgenic Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint		Quality		Fiber properties							
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	Strength	r	
	lb/acre						in.		%	g/tex		
DP 1725 B2XF	1396	1	50	17	4.5	11	1.17	16	83.8	18	28.5	21
PHY 312 WRF	1367	2	64	10	4.4	16	1.19	13	85.0	7	30.4	13
ST 4949GLT	1327	3	50	17	4.6	10	1.17	18	83.9	15	29.7	19
DP 1823NR B2XF	1318	4	68	7	4.2	19	1.21	8	84.5	11	30.4	14
PHY 444 WRF	1315	5	96	1	4.2	19	1.30	1	86.7	1	31.8	6
PHY 430 W3FE	1291	6	39	21	4.8	4	1.13	21	83.6	19	31.9	4
DP 1518 B2XF	1260	7	71	5	4.5	11	1.22	6	84.7	8	30.0	16
DP 1614 B2XF	1236	8	59	15	4.9	1	1.20	10	84.6	10	31.0	11
PHY 350 W3FE	1229	9	60	12	4.8	4	1.19	11	84.5	11	31.5	8
DG 3385 B2XF	1220	10	60	12	4.9	1	1.21	9	84.5	13	29.8	17
DP 1646 B2XF	1210	11	91	2	4.4	18	1.28	2	86.1	2	30.2	15
CROPLAN 9608	1209	12	62	11	4.5	11	1.19	11	83.9	15	29.8	18
PHY 300 W3FE	1176	13	60	12	4.7	9	1.19	13	84.1	14	31.6	7
DP 1820 B3XF	1160	14	68	8	4.9	1	1.23	5	85.2	6	31.8	5
PHY 440 W3FE	1160	15	72	4	4.4	16	1.23	4	83.9	15	33.2	2
PHY 480 W3FE	1155	16	48	19	4.7	6	1.16	19	83.4	20	31.2	10
PHY 320 W3FE	1146	17	65	9	4.1	21	1.19	13	85.6	4	33.9	1
DG 3214 B2XF	1143	18	71	5	4.5	14	1.21	7	85.2	5	30.8	12
PHY 340 W3FE	1124	19	45	20	4.7	6	1.15	20	83.3	21	29.6	20
ST 5020GLT	1097	20	80	3	4.7	8	1.25	3	86.0	3	32.4	3
PHY 330 W3FE	1039	21	57	16	4.5	14	1.17	16	84.6	9	31.4	9
Mean	1218		63		4.5		1.20		84.6		31.0	
LSD <sub>0.10</sub>	139		22		0.3		0.06		ns		1.5	
C.V.%	9.7		20.6		4.4		2.8		1.2		2.7	
R <sup>2</sup> x 100	50.0		70.4		72.6		74.0		63.2		82.4	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 12. Yield and related properties—2018 Arkansas Cotton Transgenic Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint yield		Lint frac.		Ht.		Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/acre	r	%	r	cm	r	%	r	g	r	g	r	mil.	r	no.	r	no.	r
DP 1646 B2XF	2013	1	45.1	6	108	1	49	5	9.2	19	7.7	18	11.900	1	15423	19	160	16
DP 1725 B2XF	1981	2	46.9	1	92	13	54	1	8.8	20	7.9	15	11.440	2	17271	10	185	2
ST 4949GLT	1837	3	45.2	5	96	7	43	11	10.6	11	8.8	2	9.444	11	17659	9	168	11
CROPLAN 9608	1826	4	46.0	3	97	5	43	11	8.6	21	7.5	19	11.020	3	17245	11	187	1
DP 1614 B2XF	1802	5	45.2	4	88	21	50	4	9.3	18	7.8	17	10.540	6	14763	21	153	18
PHY 312 WRF	1796	6	43.2	14	98	4	46	7	11.2	4	8.6	6	9.494	10	17817	8	163	14
DP 1820 B3XF	1796	7	46.3	2	91	16	38	14	9.9	16	8.5	7	9.551	9	16873	15	167	13
DP 1518 B2XF	1775	8	41.9	19	100	3	54	1	10.1	14	7.3	20	10.970	4	16253	16	158	17
DG 3385 B2XF	1746	9	41.6	20	92	12	46	7	10.7	9	7.8	16	10.130	7	16231	17	152	19
DP 1823NR B2XF	1738	10	43.3	13	91	15	44	10	9.3	17	7.3	21	10.810	5	16987	14	175	4
PHY 444 WRF	1706	11	43.4	12	96	8	25	20	11.2	5	8.7	4	8.877	15	18829	3	172	7
DG 3214 B2XF	1703	12	42.5	17	102	2	46	7	10.7	10	8.0	14	9.631	8	14993	20	142	20
PHY 330 W3FE	1687	13	45.1	7	94	10	41	13	10.2	13	8.4	10	9.139	12	17950	6	175	5
PHY 350 W3FE	1679	14	42.9	16	94	11	48	6	11.3	3	8.6	5	8.860	16	18785	4	171	9
PHY 340 W3FE	1627	15	43.9	10	96	9	33	17	10.5	12	8.4	9	8.777	17	16996	13	162	15
PHY 300 W3FE	1615	16	44.4	8	90	18	35	15	10.1	15	8.2	12	8.934	14	17186	12	168	12
ST 5020GLT	1604	17	40.3	21	97	6	51	3	12.3	1	8.5	8	8.609	18	16199	18	138	21
PHY 320 W3FE	1599	18	42.0	18	91	17	34	16	10.8	7	8.0	13	9.016	13	17945	7	168	10
PHY 440 W3FE	1453	19	43.7	11	88	20	26	18	11.4	2	8.9	1	7.406	19	19576	1	177	3
PHY 430 W3FE	1421	20	44.2	9	91	14	26	18	10.9	6	8.8	3	7.346	21	18875	2	175	6
PHY 480 W3FE	1348	21	43.1	15	89	19	24	21	10.8	7	8.3	11	7.350	20	18421	5	172	8
Mean	1702		43.8		94		41		10.4		8.1		9.487		17251		166	
LSD <sub>0.10</sub>	155		1.1		6		11		0.6		0.6		0.856		1111		10	
C.V.%	7.7		1.5		5.7		23.8		3.2		4.0		7.6		3.7		3.6	
R <sup>2</sup> x 100	73.2		93.5		74.7		64.4		94.2		82.3		83.0		89.1		90.1	

**Table 13. Fiber properties–2018 Arkansas Transgenic Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint		Quality		Fiber properties							
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	Strength		r
	lb/acre						in.		%	g/tex		
DP 1646 B2XF	2013	1	72	4	4.7	8	1.27	2	83.9	18	29.9	19
DP 1725 B2XF	1981	2	59	13	4.5	13	1.21	12	83.5	20	30.5	15
ST 4949GLT	1837	3	57	15	4.9	3	1.21	14	85.7	5	31.3	10
CROPLAN 9608	1826	4	55	18	4.4	17	1.19	18	84.7	13	30.5	15
DP 1614 B2XF	1802	5	56	16	5.1	1	1.23	10	84.7	12	30.6	13
PHY 312 WRF	1796	6	73	3	4.6	12	1.24	6	85.5	7	30.7	12
DP 1820 B3XF	1796	7	67	9	4.8	5	1.25	4	84.7	13	32.5	6
DP 1518 B2XF	1775	8	67	8	4.4	17	1.23	9	84.2	15	29.0	20
DG 3385 B2XF	1746	9	55	18	4.8	6	1.19	16	85.0	11	28.9	21
DP 1823NR B2XF	1738	10	70	5	4.1	21	1.25	4	84.2	15	32.8	5
PHY 444 WRF	1706	11	91	1	4.2	20	1.30	1	86.3	3	30.0	18
DG 3214 B2XF	1703	12	68	6	5.0	2	1.24	6	87.2	1	31.0	11
PHY 330 W3FE	1687	13	66	10	4.5	13	1.21	12	85.5	7	30.5	15
PHY 350 W3FE	1679	14	47	20	4.7	11	1.17	20	83.9	17	32.4	7
PHY 340 W3FE	1627	15	68	6	4.7	8	1.24	6	85.1	10	30.6	14
PHY 300 W3FE	1615	16	55	17	4.7	10	1.19	17	85.4	9	32.0	8
ST 5020GLT	1604	17	80	2	4.8	6	1.27	2	87.0	2	33.2	4
PHY 320 W3FE	1599	18	63	12	4.4	17	1.21	14	85.7	5	33.6	2
PHY 440 W3FE	1453	19	64	11	4.5	15	1.23	11	83.5	21	35.6	1
PHY 430 W3FE	1421	20	36	21	4.9	3	1.15	21	83.6	19	32.0	9
PHY 480 W3FE	1348	21	58	14	4.5	15	1.18	19	86.1	4	33.4	3
Mean	1702		63		4.6		1.22		85.1		31.5	
LSD <sub>0.10</sub>	155		18		0.3		0.04		1.7		1.8	
C.V.%	7.7		16.3		4.1		2.1		1.1		3.2	
R <sup>2</sup> x 100	73.2		72.1		78.5		79.9		72.1		84.4	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 14. Yield and related properties—2018 Arkansas Cotton Transgenic Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	r	mil.	r	no.	r	no.	
DP 1646 B2XF	1791	1	43.7	9	123	2	54	12	9.1	20	7.3	20	11.150	1	14823	21	155	17
CROPLAN 9608	1723	2	45.1	2	112	16	46	19	8.9	21	7.4	19	10.500	3	18179	9	193	2
DP 1725 B2XF	1696	3	45.2	1	114	12	58	10	9.1	19	7.7	16	9.996	4	16583	15	173	11
ST 4949GLT	1695	4	45.1	3	112	15	49	18	9.7	15	8.2	6	9.385	6	18361	6	184	5
PHY 444 WRF	1676	5	43.9	8	115	8	50	16	11.4	2	9.1	1	8.403	17	19641	4	177	8
DP 1518 B2XF	1660	6	41.9	19	116	6	54	12	9.3	18	7.0	21	10.760	2	15885	17	163	15
DP 1614 B2XF	1642	7	44.5	6	108	20	63	4	9.4	17	7.7	17	9.706	5	14981	20	154	19
PHY 430 W3FE	1638	8	44.6	5	115	9	53	15	10.3	10	8.5	3	8.742	12	20888	1	202	1
PHY 340 W3FE	1635	9	44.4	7	114	11	60	8	9.7	13	7.9	12	9.377	7	18558	5	186	3
DP 1820 B3XF	1619	10	44.6	4	114	14	45	20	9.9	11	8.1	7	9.024	9	15632	18	155	18
DG 3214 B2XF	1588	11	42.6	14	124	1	56	11	10.4	8	7.9	11	9.092	8	15299	19	147	21
PHY 480 W3FE	1574	12	42.1	18	119	4	40	21	10.8	5	8.1	8	8.849	10	18246	7	170	14
PHY 320 W3FE	1528	13	42.5	16	103	21	69	2	10.6	6	8.0	10	8.715	14	18191	8	172	12
PHY 440 W3FE	1514	14	42.6	13	114	13	50	16	10.5	7	8.0	9	8.598	15	18065	10	172	13
PHY 312 WRF	1507	15	42.5	15	117	5	70	1	11.1	4	8.5	4	8.083	20	20085	2	185	4
PHY 350 W3FE	1506	16	41.6	20	115	9	61	5	11.3	3	8.4	5	8.166	19	20074	3	182	6
PHY 330 W3FE	1494	17	43.5	12	108	19	69	2	9.7	14	7.8	14	8.742	11	17617	12	177	9
DG 3385 B2XF	1460	18	42.4	17	115	7	61	5	10.4	9	7.8	15	8.547	16	16550	16	159	16
DP 1823NR B2XF	1446	19	43.6	10	109	18	54	12	9.9	12	7.8	13	8.380	18	17981	11	178	7
PHY 300 W3FE	1439	20	43.6	11	110	17	59	9	9.4	16	7.5	18	8.730	13	17264	14	176	10
ST 5020GLT	1361	21	40.3	21	122	3	61	5	12.4	1	8.7	2	7.138	21	17293	13	147	20
Mean	1581		43.3		114		56		10.2		8.0		9.051		17629		172	
LSD <sub>0.10</sub>	145		1.3		8		8		0.7		0.6		0.848		1778		15	
C.V. %	7.8		1.7		5.8		11.9		3.7		4.4		7.9		5.8		5	
R <sup>2</sup> x 100	55.2		86.4		45.7		67.7		91.9		79.8		71.4		85.0		85.7	

**Table 15. Fiber properties—2018 Arkansas Transgenic Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint		Quality		Fiber properties							
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	Strength		r
	lb/acre						in.		%	g/tex		
DP 1646 B2XF	1791	1	83	2	4.5	8	1.29	2	84.8	15	29.8	17
CROPLAN 9608	1723	2	52	18	4.2	15	1.19	17	83.3	21	28.7	20
DP 1725 B2XF	1696	3	50	20	4.7	4	1.19	19	84.5	19	29.5	18
ST 4949GLT	1695	4	40	21	4.6	5	1.15	21	84.6	17	28.7	21
PHY 444 WRF	1676	5	92	1	4.1	17	1.30	1	86.7	1	31.3	12
DP 1518 B2XF	1660	6	68	7	4.2	13	1.23	7	85.9	6	29.0	19
DP 1614 B2XF	1642	7	63	11	4.9	2	1.25	6	85.0	13	30.7	13
PHY 430 W3FE	1638	8	54	17	4.1	19	1.18	20	85.2	10	34.6	1
PHY 340 W3FE	1635	9	57	14	4.2	14	1.19	15	85.1	12	30.4	15
DP 1820 B3XF	1619	10	78	4	4.8	3	1.28	3	86.1	5	32.6	5
DG 3214 B2XF	1588	11	51	19	5.0	1	1.21	13	85.8	7	30.5	14
PHY 480 W3FE	1574	12	65	10	4.3	11	1.21	12	85.7	8	32.6	4
PHY 320 W3FE	1528	13	69	6	4.2	15	1.22	10	86.7	1	32.5	6
PHY 440 W3FE	1514	14	78	4	4.1	17	1.27	4	85.3	9	34.5	2
PHY 312 WRF	1507	15	67	8	4.0	20	1.23	7	86.4	3	32.3	7
PHY 350 W3FE	1506	16	66	9	4.0	20	1.23	7	85.2	11	31.8	8
PHY 330 W3FE	1494	17	57	15	4.4	9	1.19	15	84.9	14	31.7	9
DG 3385 B2XF	1460	18	59	13	4.6	5	1.21	14	84.6	17	30.1	16
DP 1823NR B2XF	1446	19	61	12	4.3	11	1.22	10	84.1	20	31.5	11
PHY 300 W3FE	1439	20	55	16	4.3	10	1.19	17	84.8	15	31.7	9
ST 5020GLT	1361	21	79	3	4.6	5	1.27	4	86.1	4	32.9	3
Mean	1581		61		4.4		1.22		85.2		31.3	
LSD <sub>0.10</sub>	145		13		0.3		0.04		ns		1.6	
C.V.%	7.8		12.2		4.5		1.7		1.3		3.0	
R <sup>2</sup> x 100	55.2		84.2		81.8		87.1		58.1		86.9	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 16. Morphological and host-plant resistance traits in the 2018 Arkansas Transgenic Cotton Variety Test.**

Institution	Variety	Leaf		Stem		Bract		Tarnished plant		Bacterial
		pubescence <sup>a</sup>	r	pubescence <sup>e</sup>	r	trichomes <sup>b</sup>	r	bug damage <sup>c</sup>	r	blight <sup>d</sup>
		rating		rating		no./cm		% dam. flowers		% sus
BASF	ST 4949GLT	6.6	19			36.5	12	49	21	98
BASF	ST 5020GLT	5.4	14			31.9	9	44	20	0
CPS	DG 3214 B2XF	4.2	9			43.3	19	38	14	36
CPS	DG 3385 B2XF	2.9	3			38.7	16	34	9	83
Monsanto	DP 1518 B2XF	6.6	19			45.1	21	30	2	0
Monsanto	DP 1614 B2XF	7.0	21			43.7	20	30	1	97
Monsanto	DP 1646 B2XF	1.6	1			32.0	10	37	12	17
Monsanto	DP 1725 B2XF	3.3	4			28.1	6	39	15	100
Monsanto	DP 1820 B3XF	4.6	11			26.3	2	43	19	0
Monsanto	DP 1823NR B2XF	6.0	17			39.6	17	39	16	100
PhytoGen	PHY 300 W3FE	3.8	6			31.8	8	34	8	0
PhytoGen	PHY 312 WRF	4.3	10			38.2	15	31	3	28
PhytoGen	PHY 320 W3FE	4.8	12			30.4	7	32	4	0
PhytoGen	PHY 330 W3FE	5.9	16			40.6	18	33	6	0
PhytoGen	PHY 340 W3FE	6.3	18			38.1	14	33	7	0
PhytoGen	PHY 350 W3FE	4.1	8			27.6	5	32	5	0
PhytoGen	PHY 430 W3FE	5.4	14			27.4	4	41	17	0
PhytoGen	PHY 440 W3FE	3.3	5			27.1	3	36	11	0
PhytoGen	PHY 444 WRF	2.1	2			32.9	11	37	13	60
PhytoGen	PHY 480 W3FE	4.0	7			23.4	1	35	10	0
WinField	CROPLAN 9608	5.1	13			37.9	13	41	18	93
	Ark 0628fg RF (sus.)							80	23	
	Ark 0628fg RF (sus.)							80	22	
Mean		4.6				34.3		40		34
LSD <sub>0.10</sub>		1.5				4.5		7		13
C.V.%		27.6				11.0		20.0		27.1
R <sup>2</sup> x 100		68.3				80.7		77.0		97.0

<sup>a</sup> Leaf pubescence rated at Keiser (6 plants per plots, 6 reps) using scale of 1 (smooth leaf) to 9 (pilose, very hairy). Stem pubescence was not rated in 2018.

<sup>b</sup> Marginal trichome density of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

<sup>c</sup> Response 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 8 times.

<sup>d</sup> Varieties/breeding lines were planted in flats (3 replications, 10 seed/plot) in greenhouse, and scratch inoculated with *Xanthomonas citris* pv. *malvacearum*. The inoculum was obtained from naturally infected leaves collected at the 2017 K location. Scratches were examined for water-soaking, and percent of susceptible plants were determined.



Table 17. Two-year and three-year average lint yields (lb/acre) for transgenic varieties at the five locations of the 2016–2018 Arkansas Cotton Variety Test.

Variety	Manila		Keiser		Judd Hill		Marianna		Rohwer		All locations	
	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r
	lb/acre		lb/acre		lb/acre		lb/acre		lb/acre		lb/acre	
<b>Two-year (2017–2018) means</b>												
DP 1646 B2XF	1793	2	1297	1	1359	9	1377	2	1602	1	1485	1
DP 1725 B2XF	1863	1	975	19	1353	10	1462	1	1448	7	1420	2
ST 4949GLT	1751	3	1170	11	1393	5	1270	6	1387	14	1394	3
PHY 444 WRF	1656	6	1115	12	1456	2	1193	11	1549	3	1394	4
PHY 430 W3FE	1717	4	1217	7	1380	7	1088	18	1529	4	1386	5
PHY 312 WRF	1570	11	1234	6	1422	4	1223	9	1433	8	1376	6
DG 3385 B2XF	1695	5	1254	4	1260	14	1281	5	1336	18	1365	7
DP 1823 NR B2XF	1628	9	1095	13	1461	1	1178	12	1329	19	1338	8
PHY 350 W3FE	1619	10	1068	17	1441	3	1155	13	1399	13	1336	9
CROPLAN 9608	1628	8	1077	15	1266	13	1215	10	1472	5	1331	10
DP 1518 B2XF	1500	16	1238	5	1252	15	1226	8	1402	12	1323	11
PHY 300 W3FE	1360	20	1294	2	1388	6	1116	15	1369	17	1305	12
PHY 340 W3FE	1513	15	1201	9	1244	17	1098	17	1460	6	1303	13
DP 1614 B2XF	1551	13	969	20	1301	11	1267	7	1423	10	1302	14
DP 1820 B3XF	1478	17	1031	18	1361	8	1324	3	1317	20	1302	15
PHY 440 W3FE	1644	7	1093	14	1274	12	1061	20	1428	9	1300	16
PHY 330 W3FE	1432	19	1289	3	1245	16	1105	16	1373	16	1289	17
PHY 320 W3FE	1557	12	1174	10	1223	19	1081	19	1384	15	1284	18
PHY 480 W3FE	1467	18	1203	8	1244	18	929	21	1553	2	1279	19
DG 3214 B2XF	1515	14	948	21	1210	20	1294	4	1408	11	1275	20
ST 5020GLT	1329	21	1076	16	1183	21	1144	14	1258	21	1198	21
Mean	1621		1149		1356		1231		1430		1357	
<b>Three-year (2016–2018) means</b>												
DP 1646 B2XF	1651	2	1414	1	1204	3	1345	2	1442	1	1442	1
PHY 444 WRF	1592	3	1220	3	1255	2	1231	7	1404	2	1404	2
PHY 312 WRF	1519	5	1268	2	1257	1	1255	4	1356	3	1356	3
DP 1725 B2XF	1683	1	1093	6	1138	4	1401	1	1318	4	1318	4
DP 1518 B2XF	1515	6	1175	4	1058	7	1275	3	1300	5	1300	5
DG 3385 B2XF	1575	4	1170	5	1137	5	1243	5	1243	7	1243	6
DP 1614 B2XF	1451	7	1027	7	1125	6	1236	6	1299	6	1299	7
Mean	1570		1195		1168		1284		1337		1337	

**Table 18. Yield and related properties—2018 Arkansas first-year Transgenic Cotton Variety Test across five test sites.**

Variety	Lint		Lint		Ht.	Open		Seed		Lint		Seed/		Fibers/		Fiber		
	yield	r	frac.	r		r	bolls	r	index	r	index	r	acre	r	seed	r	density	r
	lb/acre		%		cm		%		g		g		mil.		no.		no.	
ST 5471GLTP	1532	1	41.9	28	100	31	35	40	11.2	7	8.2	7	8.490	14	19350	3	177	12
PX3B07W3FE	1529	2	44.0	13	99	39	45	20	9.8	27	7.9	15	8.791	6	17886	16	179	10
CPS 18501-B	1520	3	39.8	41	105	24	37	37	11.8	1	8.0	12	8.611	10	19579	2	173	16
ST 4550GLTP	1504	4	45.6	1	112	9	53	6	9.1	40	7.8	16	8.720	8	17321	22	182	5
PX3B09W3FE	1501	5	44.5	8	100	32	46	19	9.5	34	7.8	18	8.743	7	17832	17	182	6
CPS 17228 NR B2XF	1500	6	44.3	10	112	11	43	26	9.3	39	7.5	27	9.026	4	17485	20	181	7
NG 3994 B3XF	1480	7	44.6	6	97	42	54	5	9.0	41	7.4	31	9.005	5	15459	36	163	28
CPS 18817 B3XF	1477	8	44.6	7	114	5	38	34	9.6	32	8.0	13	8.394	18	16552	26	167	21
PX3C06W3FE	1465	9	43.2	18	100	35	56	2	9.0	42	7.0	39	9.502	1	15792	31	166	22
CPS 1702 GLT	1457	10	41.9	25	105	25	44	24	11.1	8	8.2	8	8.089	23	19054	4	176	14
CROPLAN 9178	1442	11	44.1	11	110	14	47	18	9.7	29	7.8	17	8.400	17	16472	27	166	23
PX5D28BW3FE	1430	12	44.4	9	112	7	38	34	9.3	38	7.6	22	8.565	12	18200	13	189	2
NG 4936 B3XF	1429	13	41.4	31	98	41	56	2	9.7	28	7.0	41	9.256	3	14864	42	149	39
NG 3729 B2XF	1424	14	41.7	29	116	3	52	9	10.3	21	7.5	24	8.548	13	14991	40	145	40
ST 5818GLT	1402	15	41.0	34	108	19	41	28	11.4	5	8.0	11	7.915	25	18249	12	165	25
CPS 18506-D	1388	16	43.0	19	100	34	41	27	9.7	30	7.5	25	8.369	19	17463	21	176	13
17R821 B3XR	1387	17	45.5	2	109	16	44	25	9.5	33	8.1	9	7.703	30	17730	18	180	8
17R931NR B3XF	1385	18	41.2	32	102	29	57	1	10.4	15	7.5	28	8.424	16	16187	29	155	34
ST 5122GLT	1383	19	41.9	26	99	37	50	13	10.3	19	7.5	23	8.321	20	18454	9	178	11
CPS 18507-D	1375	20	43.6	15	101	30	51	11	9.7	31	7.6	20	8.142	22	15244	38	154	37
ST 5517GLTP	1365	21	39.9	40	108	21	36	38	11.8	2	7.9	14	7.783	28	18343	10	162	30
NG 5711 B3XF	1359	22	43.0	20	113	6	30	42	9.4	35	7.2	35	8.576	11	15585	33	160	32
PX5C09W3FE	1350	23	45.0	3	112	12	27	43	10.3	18	8.7	3	7.062	38	18950	6	183	4
PX4A64W3FE	1350	24	43.2	17	110	15	38	34	10.7	11	8.3	6	7.404	35	19013	5	180	9
NG 5007 B2XF	1338	25	43.3	16	112	8	50	13	9.0	43	7.0	40	8.638	9	15662	32	165	26
17R818 B3XF	1326	26	42.7	22	100	33	50	15	9.4	36	7.1	37	8.444	15	15178	39	156	33
PX4A69W3FE	1320	27	44.8	4	104	26	36	39	10.4	16	8.5	4	7.003	39	20740	1	200	1
NG 4689 B2XF	1286	28	40.8	37	111	13	52	10	10.6	13	7.5	30	7.809	27	15275	37	145	41
BX 1975GLTP	1285	29	43.9	14	108	18	45	20	10.1	23	8.1	10	7.211	37	16743	25	164	27
PX5B73W3FE	1272	30	42.5	24	112	10	38	33	10.1	24	7.6	19	7.593	33	17145	23	168	20
WinF. United 18XC9	1268	31	41.6	30	99	38	38	32	9.9	25	7.2	36	8.003	24	15498	35	154	36
NG 4777 B2XF	1250	32	40.9	36	114	4	51	12	10.5	14	7.4	32	7.620	32	16010	30	153	38
DG 3433 B2XF	1246	33	41.9	27	100	36	41	28	8.2	44	6.1	44	9.324	2	14813	43	165	24
CPS 18503-C	1233	34	42.8	21	116	2	22	44	11.6	4	8.9	2	6.307	42	18897	7	169	19
BX 1976GLTP	1218	35	44.0	12	104	27	33	41	11.3	6	9.0	1	6.125	44	17727	19	162	31
NG 3780 B2XF	1217	36	40.0	39	106	22	53	6	10.3	17	7.0	38	7.853	26	14938	41	144	43
NG 3699 B2XF	1207	37	39.3	42	108	17	56	4	10.9	10	7.2	33	7.625	31	15535	34	145	42
CPS 18504-C	1197	38	40.9	35	93	43	50	15	9.3	37	6.6	43	8.230	21	16408	28	170	18
AMX 1816 B3XF	1192	39	38.6	44	108	20	49	17	11.7	3	7.5	29	7.243	36	18322	11	163	29
NG 2982 B3XF	1187	40	39.1	43	98	40	53	8	10.6	12	6.9	42	7.744	29	18075	15	172	17
AMX 1818 B3XF	1186	41	41.1	33	117	1	44	23	10.1	22	7.2	34	7.474	34	14707	44	144	44
BX 1974GLTP	1154	42	44.7	5	106	23	40	30	10.3	20	8.5	5	6.200	43	18125	14	175	15
CPS 18504-D	1138	43	42.7	23	91	44	40	31	9.8	26	7.5	26	6.863	40	18467	8	184	3
NG 3956 B3XF	1132	44	40.2	38	103	28	45	20	11.1	9	7.6	21	6.771	41	16751	24	154	35
Mean	1343		42.5		106		44		10.1		7.6		8.000		17070		167	
Var. LSD <sub>0.10</sub>	78		0.6		5		5		0.3		0.3		0.465		781		7	
Loc. LSD <sub>0.10</sub>	26		0.2		1		2		0.1		ns		0.156		262		2	
C.V.%	11.1		2.0		7.3		20.3		4.4		4.6		11.1		6.2		5.8	
R <sup>2</sup> x 100	82.9		93.2		74.0		73.4		91.8		87.2		82.9		84.9		86.5	
Prob (var x loc)	<0.0001		0.217		0.571		<0.0001		0.000		0.088		<0.0001		0.902		0.055	

Table 19. Fiber properties–2018 Arkansas first-year Transgenic Cotton Variety Test across five test sites.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
	lb/acre						in.		%		g/tex		%	
ST 5471GLTP	1532	1	54	39	4.3	26	1.19	40	83.3	43	31.2	22	6.7	9
PX3B07W3FE	1529	2	68	11	4.2	33	1.23	12	85.1	17	32.0	14	6.1	34
CPS 18501-B	1520	3	81	1	3.7	44	1.28	1	86.2	1	31.5	18	6.4	21
ST 4550GLTP	1504	4	61	25	4.5	21	1.21	31	84.4	35	31.1	24	6.3	27
PX3B09W3FE	1501	5	64	20	4.3	32	1.21	21	84.8	22	31.7	16	6.4	20
CPS 17228 NR B2XF	1500	6	72	5	4.1	36	1.24	9	85.2	11	30.8	27	6.4	19
NG 3994 B3XF	1480	7	60	29	4.7	6	1.22	18	84.5	33	29.6	38	6.9	5
CPS 18817 B3XF	1477	8	48	43	4.8	3	1.18	42	84.6	28	31.3	20	7.1	3
PX3C06W3FE	1465	9	62	23	4.4	25	1.21	26	84.2	38	29.3	40	6.4	18
CPS 1702 GLT	1457	10	58	33	4.3	31	1.20	35	84.1	40	31.5	19	6.3	26
CROPLAN 9178	1442	11	64	20	4.6	10	1.22	19	85.1	14	32.7	4	6.0	38
PX5D28BW3FE	1430	12	61	24	4.1	36	1.20	33	84.9	21	33.7	1	5.7	42
NG 4936 B3XF	1429	13	69	7	4.5	14	1.23	14	85.8	4	29.5	39	6.3	25
NG 3729 B2XF	1424	14	70	6	4.7	5	1.25	4	85.9	3	29.8	35	6.5	17
ST 5818GLT	1402	15	67	13	4.3	29	1.23	13	84.4	34	31.8	15	6.1	33
CPS 18506-D	1388	16	59	31	4.3	29	1.20	36	85.0	20	29.8	34	6.7	10
17R821 B3XR	1387	17	52	42	4.6	8	1.18	43	84.5	30	29.6	36	7.4	1
17R931NR B3XF	1385	18	63	22	4.5	15	1.22	19	85.2	12	31.2	23	6.6	15
ST 5122GLT	1383	19	56	36	4.1	36	1.20	37	83.6	42	30.9	26	6.8	6
CPS 18507-D	1375	20	52	41	4.9	2	1.19	38	85.6	7	31.3	21	6.8	7
ST 5517GLTP	1365	21	65	18	4.2	34	1.22	17	84.3	37	32.0	13	6.2	30
NG 5711 B3XF	1359	22	72	4	4.4	23	1.25	5	84.6	29	30.8	27	6.6	14
PX5C09W3FE	1350	23	61	26	4.5	18	1.21	31	85.0	18	32.4	9	6.2	32
PX4A64W3FE	1350	24	68	12	4.2	35	1.21	22	85.8	5	33.3	2	5.9	40
NG 5007 B2XF	1338	25	58	33	4.4	22	1.21	30	83.8	41	28.2	42	7.1	2
17R818 B3XF	1326	26	69	9	4.5	15	1.23	11	85.1	15	31.5	17	6.0	36
PX4A69W3FE	1320	27	60	29	4.1	39	1.21	29	84.5	31	30.0	33	7.0	4
NG 4689 B2XF	1286	28	60	28	4.7	4	1.21	28	85.6	6	32.5	7	5.4	44
BX 1975GLTP	1285	29	66	15	4.6	7	1.22	15	85.3	10	30.4	31	6.5	16
PX5B73W3FE	1272	30	60	27	4.4	23	1.20	34	84.8	24	30.5	30	6.4	21
WinF. United 18XC9	1268	31	79	3	4.3	26	1.27	2	85.1	16	31.0	25	6.3	29
NG 4777 B2XF	1250	32	65	17	4.5	15	1.22	16	84.7	26	32.6	6	6.0	37
DG 3433 B2XF	1246	33	45	44	4.3	28	1.15	44	83.3	44	28.6	41	6.7	13
CPS 18503-C	1233	34	59	32	4.6	9	1.21	24	84.8	23	32.5	7	6.8	8
BX 1976GLTP	1218	35	56	36	5.0	1	1.21	26	85.4	9	32.7	5	5.5	43
NG 3780 B2XF	1217	36	66	14	4.5	11	1.24	10	84.5	31	32.1	11	6.3	28
NG 3699 B2XF	1207	37	69	8	4.5	20	1.24	6	84.4	36	32.1	12	6.2	31
CPS 18504-C	1197	38	66	16	3.8	43	1.24	8	85.0	19	27.3	43	6.7	11
AMX 1816 B3XF	1192	39	69	10	3.9	41	1.24	7	84.6	27	30.3	32	5.9	41
NG 2982 B3XF	1187	40	52	40	3.8	42	1.19	41	84.8	25	33.1	3	5.9	39
AMX 1818 B3XF	1186	41	80	2	4.5	12	1.27	3	85.9	2	32.2	10	6.1	35
BX 1974GLTP	1154	42	65	18	4.5	13	1.21	24	85.5	8	30.6	29	6.3	24
CPS 18504-D	1138	43	56	38	4.0	40	1.21	22	84.2	38	27.0	44	6.3	23
NG 3956 B3XF	1132	44	58	33	4.5	18	1.19	39	85.2	13	29.6	37	6.7	11
Mean	1343		63		4.4		1.22		84.8		31.0		6.4	
Var. LSD <sub>0.10</sub>	78		86		0.1		0.02		0.9		0.7		0.5	
Loc. LSD <sub>0.10</sub>	26		ns		0.1		0.01		ns		ns		0.2	
C.V.%	11.1		18.5		4.5		26.0		1.5		3.2		10.1	
R <sup>2</sup> x 100	82.9		69.0		88.2		79.3		69.0		87.3		92.2	
Prob (var x loc)	<0.0001		0.334		0.002		0.356		0.426		0.000		<0.0001	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 20. Yield and related properties—2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Roton-Dundee-Crevasse complex soil at Manila.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	mil.	r	no.	r	no.		
ST 4550GLTP	1766	1	45.0	1	109	11	56	9	9.0	43	7.6	22	10.540	1	17338	26	182	10
ST 5471GLTP	1705	2	41.4	20	98	34	48	26	11.0	13	7.9	12	9.787	5	19655	7	182	11
CPS 18817 B3XF	1645	3	43.4	8	112	6	45	29	9.8	33	7.7	17	9.648	8	17931	23	180	14
NG 3729 B2XF	1622	4	40.8	27	113	4	59	5	11.0	12	7.8	16	9.458	10	15213	42	140	41
CPS 18507-D	1614	5	43.3	11	97	36	53	16	10.2	27	8.0	11	9.205	14	15772	39	153	37
PX3B07W3FE	1612	6	42.3	18	95	38	40	36	9.9	31	7.6	26	9.675	7	18829	16	186	8
PX3C06W3FE	1601	7	42.4	17	98	32	56	9	9.2	40	6.9	39	10.500	2	16103	38	167	27
CROPLAN 9178	1599	8	43.5	4	105	22	55	12	10.1	28	8.0	10	9.128	16	17583	25	172	23
17R931NR B3XF	1582	9	40.7	32	99	29	53	16	10.5	22	7.3	32	9.823	3	16548	30	158	34
NG 3994 B3XF	1565	10	43.5	6	96	37	63	1	9.6	36	7.6	23	9.362	11	16327	33	165	29
NG 5007 B2XF	1563	11	43.4	10	108	14	58	7	9.4	39	7.3	30	9.679	6	17007	27	174	21
PX3B09W3FE	1550	12	43.3	12	99	29	54	14	9.6	34	7.6	21	9.234	13	18711	17	189	6
CPS 17228 NR B2XF	1537	13	43.2	13	107	16	43	32	9.6	35	7.5	28	9.295	12	19474	10	197	3
17R821 B3XR	1528	14	44.8	2	113	5	50	22	10.7	19	9.0	2	7.712	34	19967	4	187	7
ST 5818GLT	1510	15	40.8	29	109	13	51	19	10.9	14	7.7	18	8.879	19	18223	21	169	26
ST 5122GLT	1503	16	40.8	30	99	31	51	19	10.7	20	7.4	29	9.179	15	18702	18	176	19
NG 4936 B3XF	1491	17	40.7	31	98	35	55	12	10.1	30	7.1	36	9.568	9	15317	41	150	39
CPS 1702 GLT	1481	18	40.4	34	104	23	49	25	11.4	7	7.9	14	8.547	23	19598	8	176	17
CPS 18501-B	1477	19	38.9	40	100	28	48	26	12.1	3	7.9	13	8.493	26	20183	2	175	20
PX4A64W3FE	1467	20	43.0	14	105	18	50	22	10.5	21	8.1	7	8.204	28	19314	11	184	9
ST 5517GLTP	1454	21	38.7	41	105	18	43	32	12.6	1	8.1	8	8.165	29	18282	20	154	36
NG 4777 B2XF	1439	22	40.6	33	111	9	60	4	10.9	15	7.6	20	8.539	24	16293	34	151	38
PX5D28BW3FE	1434	23	43.6	3	114	3	40	36	9.2	41	7.3	33	8.935	18	18656	19	194	4
BX 1975GLTP	1431	24	43.4	9	106	17	44	31	10.4	25	8.1	9	8.061	32	16751	28	161	32
17R818 B3XF	1413	25	41.3	21	101	26	50	22	10.1	29	7.3	31	8.773	21	16626	29	162	30
NG 3780 B2XF	1409	26	40.0	37	103	24	61	3	10.4	23	7.0	38	9.125	17	14043	44	135	44
AMX 1816 B3XF	1362	27	37.9	43	105	18	54	14	11.6	6	7.2	34	8.607	22	18982	14	170	25
NG 3699 B2XF	1354	28	37.6	44	108	15	59	5	12.1	4	7.6	27	8.135	30	15740	40	136	42
NG 4689 B2XF	1352	29	39.6	38	111	10	56	9	11.3	11	7.6	24	8.103	31	16367	32	149	40
PX4A69W3FE	1348	30	43.5	5	105	21	34	42	10.8	17	8.5	5	7.247	37	21331	1	199	1
DG 3433 B2XF	1303	31	40.9	26	94	41	45	29	8.5	44	6.0	44	9.804	4	16112	37	176	18
PX5B73W3FE	1289	32	41.5	19	114	2	43	32	9.5	37	6.9	40	8.511	25	17819	24	181	13
AMX 1818 B3XF	1273	33	40.8	28	112	8	51	19	10.9	16	7.7	19	7.512	35	14578	43	136	43
PX5C09W3FE	1254	34	42.4	16	109	12	31	43	11.3	10	8.6	4	6.644	42	20024	3	182	12
CPS 18503-C	1242	35	41.2	23	112	6	30	44	11.4	8	8.1	6	6.947	41	19814	5	179	15
NG 2982 B3XF	1241	36	38.2	42	89	43	63	1	10.8	18	6.8	41	8.242	27	18901	15	177	16
CPS 18504-C	1228	37	40.1	36	92	42	58	7	9.1	42	6.3	43	8.867	20	16379	31	172	24
NG 3956 B3XF	1214	38	39.2	39	98	32	53	16	11.9	5	7.8	15	7.067	40	18192	22	160	33
NG 5711 B3XF	1208	39	41.3	22	120	1	36	40	9.8	32	7.0	37	7.801	33	16213	36	162	31
CPS 18506-D	1191	40	41.2	24	94	39	43	32	10.4	23	7.6	25	7.146	39	19670	6	189	5
WinF. United 18XC9	1132	41	40.1	35	101	27	40	36	10.4	25	7.2	35	7.201	38	16229	35	156	35
CPS 18504-D	1128	42	41.1	25	86	44	48	26	9.5	38	6.8	42	7.508	36	19493	9	198	2
BX 1974GLTP	1053	43	43.4	7	102	25	38	39	11.4	9	8.9	3	5.345	43	19283	12	174	22
BX 1976GLTP	1032	44	42.9	15	94	40	36	40	12.2	2	9.4	1	5.006	44	19261	13	166	28
Mean	1414		41.5		103		49		10.5		7.6		8.481		17792		170	
LSD <sub>0.10</sub>	142		1.5		9		10		0.8		0.7		0.847		1927		16	
C.V.%	8.6		2.2		7.3		17.6		4.8		5.4		8.5		6.4		5.6	
R <sup>2</sup> x 100	74.3		89.3		91.1		59.3		88.0		83.6		78.8		87.2		86.3	

Table 21. Fiber properties–2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Routon-Dundee-Crevasse complex soil at Manila.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire		Length		UI <sup>a</sup>		Strength		Elongation	
						r	in.	r	%	r	g/tex	r	%	
lb/acre														
ST 4550GLTP	1766	1	59	29	4.2	14	1.23	34	85.5	25	30.3	31	6.2	10
ST 5471GLTP	1705	2	46	42	4.1	23	1.19	42	83.4	43	30.4	30	5.7	15
CPS 18817 B3XF	1645	3	52	38	4.3	12	1.19	43	85.9	18	31.1	20	7.6	2
NG 3729 B2XF	1622	4	88	2	4.5	6	1.31	5	88.2	2	29.9	33	6.1	13
CPS 18507-D	1614	5	67	15	4.7	1	1.25	19	86.9	7	31.5	16	7.0	4
PX3B07W3FE	1612	6	66	16	3.7	36	1.26	14	86.5	11	33.8	2	4.3	38
PX3C06W3FE	1601	7	60	27	4.1	18	1.24	25	84.7	36	29.5	35	4.9	29
CROPLAN 9178	1599	8	58	30	4.4	8	1.24	25	84.2	37	32.3	11	4.8	31
17R931NR B3XF	1582	9	68	13	4.1	18	1.25	19	86.3	13	30.7	27	7.0	3
NG 3994 B3XF	1565	10	54	34	4.5	5	1.21	37	85.2	31	29.2	40	6.0	14
NG 5007 B2XF	1563	11	48	40	4.2	14	1.21	39	84.8	35	27.6	42	6.6	6
PX3B09W3FE	1550	12	66	18	3.8	33	1.26	14	86.8	8	32.4	10	4.5	35
CPS 17228 NR B2XF	1537	13	61	25	3.6	40	1.26	14	85.2	30	30.2	32	6.5	7
17R821 B3XR	1528	14	56	33	4.4	8	1.21	39	86.0	17	29.0	41	7.7	1
ST 5818GLT	1510	15	59	28	4.1	23	1.25	23	84.1	38	30.6	29	4.5	36
ST 5122GLT	1503	16	56	32	3.9	31	1.23	29	83.8	40	30.9	22	5.4	21
NG 4936 B3XF	1491	17	75	7	4.2	14	1.27	11	87.2	6	29.3	38	6.2	10
CPS 1702 GLT	1481	18	64	20	3.8	33	1.26	18	85.3	27	31.5	16	5.1	26
CPS 18501-B	1477	19	81	5	3.3	44	1.34	1	88.8	1	32.1	13	6.2	12
PX4A64W3FE	1467	20	70	11	3.9	30	1.25	19	87.3	4	33.3	6	4.7	32
ST 5517GLTP	1454	21	69	12	4.1	18	1.27	9	84.9	32	30.7	28	4.9	29
NG 4777 B2XF	1439	22	80	6	4.2	14	1.29	7	86.6	9	32.7	8	3.0	44
PX5D28BW3FE	1434	23	54	36	3.8	33	1.23	32	84.9	32	33.5	4	3.9	41
BX 1975GLTP	1431	24	73	8	4.4	7	1.27	11	86.5	10	30.9	22	5.6	19
17R818 B3XF	1413	25	66	16	4.1	18	1.25	19	85.9	21	32.0	14	4.7	32
NG 3780 B2XF	1409	26	68	13	4.6	2	1.26	14	86.2	15	31.6	15	5.0	27
AMX 1816 B3XF	1362	27	54	34	3.7	38	1.24	25	83.8	40	29.4	36	4.1	40
NG 3699 B2XF	1354	28	84	3	4.3	12	1.33	3	85.3	28	32.2	12	4.2	39
NG 4689 B2XF	1352	29	64	22	4.4	8	1.25	23	85.6	24	33.0	7	3.2	43
PX4A69W3FE	1348	30	65	19	3.7	38	1.27	11	85.9	18	31.3	18	5.5	20
DG 3433 B2XF	1303	31	40	43	4.0	26	1.15	44	83.1	44	29.3	38	4.5	34
PX5B73W3FE	1289	32	48	41	3.8	32	1.21	39	84.1	38	31.1	19	5.0	27
AMX 1818 B3XF	1273	33	91	1	4.6	4	1.33	2	87.5	3	30.8	26	6.4	8
PX5C09W3FE	1254	34	73	8	3.9	27	1.28	8	86.2	16	32.5	9	5.3	22
CPS 18503-C	1242	35	60	26	3.9	27	1.23	34	85.9	18	34.3	1	5.6	17
NG 2982 B3XF	1241	36	51	39	3.4	41	1.24	25	85.8	22	33.5	5	4.4	37
CPS 18504-C	1228	37	64	20	3.4	41	1.30	6	87.3	5	26.6	44	5.6	18
NG 3956 B3XF	1214	38	57	31	4.1	18	1.21	37	86.3	13	29.4	36	6.3	9
NG 5711 B3XF	1208	39	71	10	4.0	25	1.27	9	85.5	26	30.9	22	5.2	24
CPS 18506-D	1191	40	53	37	3.7	36	1.23	34	84.9	34	29.6	34	6.9	5
WinF. United 18XC9	1132	41	84	3	3.9	27	1.33	3	85.3	29	31.0	21	5.1	25
CPS 18504-D	1128	42	36	44	3.4	41	1.23	32	83.7	42	26.7	43	5.2	23
BX 1974GLTP	1053	43	63	23	4.4	8	1.23	29	86.4	12	30.9	25	5.7	15
BX 1976GLTP	1032	44	62	24	4.6	2	1.23	29	85.6	23	33.8	2	3.5	42
Mean	1414		63		4.0		1.25		85.6		31.0		5.3	
LSD <sub>0.10</sub>	142		2		0.3		0.06		NS		1.5		0.6	
C.V.%	8.6		19.1		5.1		2.8		1.8		2.9		6.5	
R <sup>2</sup> x 100	74.3		66.9		85.6		70.2		56.3		89.1		95.2	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 22. Yield and related properties–2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint yield		Lint frac.		Ht. cm	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/acre	r	%	r		%	r	g	r	g	r	mil.	r	no.	r	no.	
ST 5471GLTP	1491	1	44.1	27		26	40	10.2	6	8.1	6	8.371	1	20266	4	197	7
PX3B09W3FE	1356	2	46.6	9		45	17	8.8	29	7.7	19	7.996	4	17928	16	192	10
CPS 17228 NR B2XF	1344	3	46.9	7		46	15	8.4	38	7.6	24	8.044	3	16922	24	186	13
CPS 18501-B	1316	4	42.4	39		35	31	10.5	2	7.8	15	7.624	8	20055	5	191	11
PX5D28BW3FE	1313	5	47.0	5		44	18	8.2	40	7.7	22	7.778	5	19398	7	215	2
ST 5818GLT	1311	6	43.2	32		38	29	10.3	5	7.9	13	7.528	10	19139	10	185	14
PX3B07W3FE	1281	7	45.8	14		44	18	9.2	22	7.9	10	7.317	11	17802	17	184	16
PX4A64W3FE	1264	8	45.4	17		38	29	10.1	7	8.6	2	6.704	22	18782	12	183	19
CPS 18506-D	1264	9	45.3	20		40	25	8.8	30	7.5	26	7.649	7	18176	13	195	8
PX3C06W3FE	1241	10	44.9	21		60	3	8.7	31	7.5	28	7.568	9	16483	28	176	25
PX4A69W3FE	1238	11	47.1	3		34	32	9.5	17	8.5	4	6.646	25	21175	2	216	1
ST 5122GLT	1226	12	44.5	24		49	11	9.5	15	7.7	18	7.217	13	18961	11	192	9
CPS 1702 GLT	1212	13	44.0	28		31	36	9.9	11	7.9	11	6.929	19	20314	3	201	6
NG 5711 B3XF	1212	14	46.3	11		26	40	8.2	41	7.1	34	7.724	6	15931	33	177	24
NG 4689 B2XF	1163	15	42.9	34		51	8	10.0	10	7.6	23	6.934	18	15233	36	150	41
CPS 18504-C	1160	16	42.8	37		66	1	8.5	36	6.5	43	8.075	2	15985	32	175	29
BX 1976GLTP	1157	17	46.9	8		31	36	9.5	16	8.6	3	6.152	35	18043	14	183	18
PX5C09W3FE	1148	18	47.1	4		25	42	9.1	24	8.3	5	6.312	30	19535	6	205	3
CROPLAN 9178	1132	19	45.4	18		49	11	8.5	35	7.2	32	7.109	16	16708	26	182	20
ST 4550GLTP	1130	20	47.6	1		50	9	8.3	39	7.8	17	6.599	27	17059	22	189	12
ST 5517GLTP	1128	21	42.8	36		24	43	10.1	8	7.7	21	6.673	23	18001	15	176	26
CPS 18503-C	1123	22	45.6	15		11	44	10.4	4	8.9	1	5.752	39	21219	1	203	4
WinF. United 18XC9	1120	23	44.5	25		34	32	8.7	32	7.1	36	7.175	14	16068	30	173	32
NG 4777 B2XF	1113	24	42.8	35		49	11	9.2	21	7.1	35	7.129	15	15094	39	156	39
NG 3956 B3XF	1090	25	41.6	40		34	32	10.5	3	7.6	25	6.531	28	16618	27	159	38
NG 4936 B3XF	1082	26	43.2	31		53	7	9.1	25	7.0	37	7.011	17	15161	37	159	37
CPS 18507-D	1077	27	45.4	16		44	18	8.6	33	7.3	30	6.667	24	15129	38	163	35
PX5B73W3FE	1077	28	44.6	23		43	21	9.5	13	7.9	12	6.168	34	17197	20	174	30
NG 2982 B3XF	1071	29	40.8	43		55	5	9.5	13	6.7	41	7.235	12	17785	18	180	21
17R931NR B3XF	1065	30	44.0	29		61	2	10.0	9	8.0	7	6.061	36	16184	29	160	36
17R818 B3XF	1063	31	45.9	13		60	3	7.9	43	7.0	38	6.929	20	15457	34	176	28
NG 5007 B2XF	1033	32	44.4	26		46	15	8.4	37	6.8	40	6.855	21	15312	35	168	34
NG 3729 B2XF	1021	33	43.4	30		50	9	9.3	19	7.3	31	6.333	29	14023	44	144	44
NG 3994 B3XF	1018	34	46.5	10		54	6	8.2	42	7.3	29	6.299	31	16020	31	179	22
BX 1975GLTP	994	35	45.3	19		33	35	9.4	18	8.0	8	5.671	40	17126	21	176	27
NG 3699 B2XF	978	36	41.5	41		43	21	9.9	12	7.2	33	6.170	33	15066	40	149	42
AMX 1816 B3XF	977	37	40.0	44		40	25	11.4	1	7.7	20	5.769	38	19263	9	174	31
AMX 1818 B3XF	938	38	42.6	38		28	39	9.2	23	6.9	39	6.209	32	14337	43	149	43
BX 1974GLTP	909	39	47.0	6		41	24	8.8	28	8.0	9	5.195	41	17307	19	185	15
DG 3433 B2XF	906	40	43.1	33		43	21	7.9	44	6.2	44	6.610	26	14821	42	169	33
CPS 18504-D	854	41	44.8	22		49	11	9.0	26	7.5	27	5.192	42	19283	8	202	5
NG 3780 B2XF	851	42	41.2	42		40	25	9.3	20	6.6	42	5.863	37	15039	41	155	40
17R821 B3XR	804	43	47.3	2		39	28	8.6	34	7.8	16	4.676	43	16936	23	184	17
CPS 18817 B3XF	778	44	46.1	12		29	38	8.9	27	7.9	14	4.480	44	16915	25	179	23
Mean	1114		44.6			42		9.2		7.6		6.703		17256		179	
LSD <sub>0.10</sub>	173		1.5			13		0.7		0.6		1.056		2195		18	
C.V.%	13.3		2.1			27.4		4.3		4.9		13.4		7.6		6.0	
R <sup>2</sup> x 100	62.3		90.2			57.7		89.1		12.8		59.2		81.1		84.7	



**Table 23. Fiber properties–2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
	lb/acre						in.		%		g/tex		%	
ST 5471GLTP	1491	1	51	39	4.2	33	1.17	36	82.2	44	30.3	24	8.6	2
PX3B09W3FE	1356	2	59	30	4.4	21	1.18	31	83.7	31	29.7	31	8.1	10
CPS 17228 NR B2XF	1344	3	77	4	4.3	27	1.23	5	84.6	21	31.6	10	7.0	34
CPS 18501-B	1316	4	69	14	3.8	43	1.21	13	84.9	16	29.8	29	6.6	42
PX5D28BW3FE	1313	5	52	38	4.1	37	1.16	40	83.3	37	32.6	3	7.7	22
ST 5818GLT	1311	6	64	22	4.2	33	1.21	15	82.3	43	29.1	39	8.7	1
PX3B07W3FE	1281	7	76	6	4.3	27	1.23	7	84.7	20	30.0	28	7.7	22
PX4A64W3FE	1264	8	77	4	4.4	21	1.23	8	85.6	6	32.7	2	6.6	40
CPS 18506-D	1264	9	60	26	4.2	33	1.17	36	85.2	12	30.1	26	7.2	30
PX3C06W3FE	1241	10	60	26	4.6	13	1.19	27	84.0	29	28.3	40	8.4	7
PX4A69W3FE	1238	11	59	29	4.1	38	1.19	23	82.6	41	27.9	41	8.6	2
ST 5122GLT	1226	12	58	32	4.2	33	1.19	27	82.9	38	30.1	26	8.5	5
CPS 1702 GLT	1212	13	51	39	4.1	38	1.15	41	83.6	34	30.9	17	7.8	17
NG 5711 B3XF	1212	14	72	8	4.4	21	1.23	8	83.9	30	30.7	22	7.9	14
NG 4689 B2XF	1163	15	53	36	5.0	1	1.18	30	86.0	3	31.3	11	7.4	26
CPS 18504-C	1160	16	64	22	4.0	40	1.21	13	84.2	25	26.5	44	8.6	4
BX 1976GLTP	1157	17	56	34	4.8	4	1.17	33	84.9	15	30.7	21	7.1	32
PX5C09W3FE	1148	18	50	42	4.4	20	1.15	42	83.7	32	32.3	6	7.2	28
CROPLAN 9178	1132	19	66	18	4.3	27	1.20	22	84.7	19	30.9	16	8.0	11
ST 4550GLTP	1130	20	65	21	4.6	13	1.21	15	82.8	39	30.7	22	7.0	34
ST 5517GLTP	1128	21	68	17	4.2	31	1.21	17	84.4	22	31.0	13	7.7	20
CPS 18503-C	1123	22	53	36	4.3	27	1.17	39	83.4	35	31.7	9	8.5	5
WinF. United 18XC9	1120	23	60	28	4.5	17	1.19	27	83.6	33	31.2	12	8.3	8
NG 4777 B2XF	1113	24	72	9	4.6	10	1.22	11	84.8	17	30.8	19	7.7	20
NG 3956 B3XF	1090	25	70	11	4.5	17	1.21	17	85.1	13	29.2	38	7.1	32
NG 4936 B3XF	1082	26	66	18	4.6	10	1.19	23	85.2	11	29.7	31	6.8	37
CPS 18507-D	1077	27	55	35	4.9	3	1.18	31	85.0	14	31.0	13	6.8	37
PX5B73W3FE	1077	28	69	15	4.5	15	1.20	21	85.4	8	30.8	19	7.2	31
NG 2982 B3XF	1071	29	50	42	4.0	42	1.15	42	83.4	35	33.4	1	8.0	12
17R931NR B3XF	1065	30	73	7	4.7	5	1.23	8	85.7	5	30.9	17	6.5	43
17R818 B3XF	1063	31	63	24	4.5	15	1.19	26	84.1	27	31.0	15	7.8	17
NG 5007 B2XF	1033	32	70	11	4.4	21	1.22	11	84.3	23	27.8	42	7.8	17
NG 3729 B2XF	1021	33	68	16	5.0	2	1.23	5	85.4	8	30.3	24	6.7	39
NG 3994 B3XF	1018	34	58	32	4.7	6	1.19	23	82.5	42	29.5	35	8.2	9
BX 1975GLTP	994	35	65	20	4.6	8	1.21	17	84.1	28	29.7	30	8.0	12
NG 3699 B2XF	978	36	78	2	4.6	10	1.25	2	84.7	18	32.5	4	7.2	27
AMX 1816 B3XF	977	37	70	11	3.8	43	1.24	4	86.0	2	29.7	31	7.5	24
AMX 1818 B3XF	938	38	94	1	4.3	26	1.29	1	86.6	1	32.4	5	6.5	44
BX 1974GLTP	909	39	70	10	4.5	19	1.21	17	85.8	4	29.4	37	6.6	40
DG 3433 B2XF	906	40	51	39	4.4	21	1.17	36	82.7	40	29.6	34	7.9	16
CPS 18504-D	854	41	47	44	4.0	40	1.15	42	84.2	24	26.9	43	7.9	14
NG 3780 B2XF	851	42	78	2	4.2	32	1.25	2	84.2	25	31.8	8	7.2	28
17R821 B3XR	804	43	59	30	4.6	8	1.17	33	85.3	10	29.5	36	7.0	34
CPS 18817 B3XF	778	44	61	25	4.7	6	1.17	33	85.5	7	32.2	7	7.4	25
Mean	1114		64		4.4		1.20		84.3		30.4		7.5	
LSD <sub>0.10</sub>	173		19		0.3		0.05		2.0		1.9		ns	
C.V.%	13.3		17.8		3.5		2.6		1.4		3.7		10.7	
R <sup>2</sup> x 100	62.3		77.2		87.3		77.0		76.3		80.9		70.2	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 24. Yield and related properties–2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	mil.	r	no.	r	no.		
NG 4936 B3XF	1296	1	40.7	30	101	41	51	2	9.8	30	6.9	39	8.459	1	15695	37	156	36
NG 3994 B3XF	1282	2	44.5	8	102	39	49	5	8.9	43	7.4	26	7.926	2	15780	36	168	22
NG 3729 B2XF	1257	3	41.1	28	124	2	44	9	10.3	17	7.3	27	7.787	3	16576	27	160	33
CPS 18501-B	1234	4	39.5	42	109	23	38	36	12.1	1	8.2	8	6.875	13	19636	2	170	17
PX3B09W3FE	1226	5	44.4	9	105	34	43	14	9.1	41	7.4	25	7.519	4	17519	21	183	8
CPS 18506-D	1208	6	42.5	20	107	27	40	26	9.9	28	7.5	21	7.273	6	16928	25	168	21
PX3B07W3FE	1187	7	43.6	13	104	35	44	9	9.5	34	7.6	20	7.102	9	18118	10	185	5
ST 5122GLT	1180	8	42.0	25	101	41	41	18	10.2	22	7.5	23	7.171	8	18689	8	181	9
CPS 18817 B3XF	1168	9	44.2	10	114	10	40	26	9.7	31	7.8	14	6.779	14	16080	34	161	31
CPS 1702 GLT	1157	10	42.1	24	106	32	41	18	11.1	7	8.2	7	6.403	22	18619	9	172	16
PX5D28BW3FE	1132	11	44.6	6	113	15	39	31	9.4	35	7.7	18	6.716	15	18033	12	184	6
ST 5517GLTP	1126	12	40.5	34	115	9	41	18	11.1	6	7.6	19	6.710	16	19508	3	179	11
CPS 17228 NR B2XF	1117	13	43.6	12	118	5	41	18	9.0	42	7.1	37	7.185	7	17141	24	181	10
PX3C06W3FE	1112	14	43.3	15	106	29	44	9	9.2	38	7.1	31	7.078	10	15874	35	165	27
PX5C09W3FE	1112	15	45.7	1	113	13	34	43	10.0	26	8.7	3	5.782	33	18965	6	186	3
ST 5818GLT	1108	16	40.7	31	110	22	41	18	11.6	2	8.1	10	6.219	23	18934	7	169	18
ST 5471GLTP	1104	17	41.8	26	106	29	38	36	11.2	5	8.2	5	6.099	26	19443	4	177	12
NG 3699 B2XF	1087	18	39.6	41	111	21	50	3	10.8	10	7.1	32	6.930	11	16878	26	158	35
17R931NR B3XF	1075	19	40.6	32	103	38	54	1	10.1	24	7.1	34	6.888	12	17736	20	173	14
CPS 18507-D	1074	20	43.4	14	104	36	50	3	9.6	32	7.5	24	6.543	20	16255	33	165	26
PX4A64W3FE	1074	21	42.9	17	113	18	38	36	10.6	13	8.1	9	5.991	29	19424	5	184	7
ST 4550GLTP	1058	22	45.3	3	119	4	45	7	9.3	36	7.8	15	6.173	24	17997	14	186	4
BX 1975GLTP	1057	23	43.9	11	107	26	39	31	10.1	25	8.1	11	5.958	31	17243	23	169	20
17R821 B3XR	1048	24	45.7	2	113	16	38	36	9.2	39	7.8	16	6.135	25	17962	15	187	2
BX 1974GLTP	1048	25	44.8	5	113	14	38	36	10.2	18	8.5	4	5.613	36	17916	17	174	13
PX4A69W3FE	1018	26	44.6	7	107	27	41	18	10.0	27	8.2	6	5.623	35	22141	1	218	1
17R818 B3XF	1014	27	41.1	29	109	25	46	6	9.9	29	7.0	38	6.601	18	15355	40	152	41
WinF. United 18XC9	1002	28	40.5	36	102	40	38	36	10.2	18	7.1	36	6.432	21	15538	39	151	42
PX5B73W3FE	1001	29	43.0	16	111	20	40	26	10.3	15	7.9	13	5.721	34	17378	22	167	23
BX 1976GLTP	997	30	44.9	4	113	17	38	36	10.8	9	9.0	1	5.053	42	18090	11	169	19
NG 5711 B3XF	996	31	42.6	19	112	19	39	31	9.1	40	6.8	41	6.624	17	14737	43	154	40
CROPLAN 9178	985	32	42.4	21	114	11	40	26	10.6	12	8.0	12	5.599	37	16282	32	154	39
DG 3433 B2XF	973	33	41.5	27	105	33	39	31	8.3	44	6.0	44	7.354	5	14605	44	162	30
NG 3780 B2XF	970	34	40.2	39	106	31	43	14	10.6	14	7.3	29	6.053	27	16394	31	156	38
CPS 18504-C	956	35	40.3	38	89	44	45	7	9.6	32	6.6	43	6.547	19	16470	30	167	24
CPS 18504-D	944	36	42.2	22	98	43	44	9	10.2	23	7.7	17	5.552	38	17745	19	173	15
NG 4777 B2XF	927	37	40.0	40	116	7	43	14	10.3	16	7.1	33	5.945	32	16512	29	159	34
NG 5007 B2XF	906	38	42.2	23	120	3	40	26	9.2	37	6.9	40	5.976	30	15620	38	162	29
NG 2982 B3XF	905	39	38.0	44	103	37	44	9	11.0	8	6.8	42	6.033	28	17927	16	166	25
CPS 18503-C	895	40	42.9	18	117	6	33	44	11.3	4	8.8	2	4.616	44	18014	13	163	28
AMX 1816 B3XF	849	41	38.7	43	116	8	41	18	11.4	3	7.3	28	5.267	39	17843	18	161	32
NG 3956 B3XF	837	42	40.5	35	109	24	43	14	10.7	11	7.5	22	5.088	41	16550	28	156	37
NG 4689 B2XF	810	43	40.3	37	114	12	41	18	10.2	18	7.1	35	5.205	40	15111	42	146	44
AMX 1818 B3XF	763	44	40.6	33	124	1	39	31	10.2	18	7.1	30	4.844	43	15350	41	149	43
Mean	1052		42.2		108		42		10.1		7.6		6.351		17287		169	
LSD <sub>0.10</sub>	197		1.3		10		7		0.7		0.6		1.205		1790		19	
C.V. %	16.0		1.8		8.1		15.0		4.0		4.7		16.2		6.2		6.7	
R <sup>2</sup> x 100	53.3		93.3		49.0		47.4		89.2		86.2		56.1		80.9		74.4	

**Table 25. Fiber properties–2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint		Quality		Fiber properties									
	yield lb/acre	r	score	r	Micronaire		Length		UI <sup>a</sup>		Strength		Elongation	
					r	r	in.	r	%	r	g/tex	r	%	
NG 4936 B3XF	1296	1	72	8	4.3	26	1.21	15	85.4	5	29.5	31	7.2	39
NG 3994 B3XF	1282	2	64	22	4.6	14	1.21	11	85.1	9	29.6	30	7.4	30
NG 3729 B2XF	1257	3	65	21	4.4	22	1.21	10	83.7	34	27.0	43	7.5	29
CPS 18501-B	1234	4	90	1	3.8	43	1.28	1	85.4	6	31.6	14	7.2	39
PX3B09W3FE	1226	5	66	16	4.2	32	1.21	11	83.2	36	31.2	17	8.5	8
CPS 18506-D	1208	6	68	13	4.4	20	1.21	15	84.2	23	28.8	36	7.5	28
PX3B07W3FE	1187	7	69	11	4.1	35	1.21	11	84.8	12	32.2	7	7.8	25
ST 5122GLT	1180	8	61	29	4.1	36	1.19	26	82.7	43	31.2	17	8.8	6
CPS 18817 B3XF	1168	9	47	40	5.0	1	1.17	33	83.8	30	30.5	24	7.4	33
CPS 1702 GLT	1157	10	52	38	4.6	13	1.17	38	83.2	36	31.7	13	8.0	15
PX5D28BW3FE	1132	11	71	9	4.2	34	1.19	26	85.6	1	33.9	1	7.2	39
ST 5517GLTP	1126	12	64	22	3.9	41	1.19	26	83.9	27	31.5	15	7.9	20
CPS 17228 NR B2XF	1117	13	76	5	4.0	38	1.22	8	85.5	3	30.7	23	6.9	42
PX3C06W3FE	1112	14	66	16	4.5	18	1.20	21	84.2	21	29.1	34	7.9	20
PX5C09W3FE	1112	15	55	36	4.7	8	1.17	33	84.4	19	32.4	6	7.2	37
ST 5818GLT	1108	16	66	20	4.3	27	1.21	15	83.6	35	31.2	17	8.3	12
ST 5471GLTP	1104	17	57	33	4.4	22	1.17	37	83.7	32	30.8	21	8.4	10
NG 3699 B2XF	1087	18	64	22	4.3	27	1.21	15	82.8	41	29.7	29	9.0	3
17R931NR B3XF	1075	19	66	16	4.0	38	1.19	26	84.7	13	31.7	12	7.3	36
CPS 18507-D	1074	20	47	40	4.8	3	1.15	41	84.0	25	31.1	20	8.0	15
PX4A64W3FE	1074	21	62	27	4.2	32	1.18	32	84.6	15	32.5	4	7.4	30
ST 4550GLTP	1058	22	62	27	4.4	22	1.17	33	84.9	11	29.7	28	7.4	30
BX 1975GLTP	1057	23	57	32	4.7	6	1.19	31	83.9	26	28.3	38	7.8	23
17R821 B3XR	1048	24	44	42	4.7	8	1.13	43	82.8	42	28.6	37	9.2	2
BX 1974GLTP	1048	25	63	25	4.7	6	1.21	15	83.8	29	30.3	25	8.1	14
PX4A69W3FE	1018	26	43	43	3.9	41	1.15	41	82.9	39	28.0	39	9.9	1
17R818 B3XF	1014	27	73	6	4.4	20	1.23	5	84.4	17	30.7	22	7.3	34
WinF. United 18XC9	1002	28	81	3	4.3	27	1.26	2	85.2	8	29.2	33	7.3	35
PX5B73W3FE	1001	29	56	35	4.7	8	1.17	38	84.4	17	29.2	32	8.3	11
BX 1976GLTP	997	30	52	38	5.0	1	1.19	30	84.1	24	31.3	16	7.8	25
NG 5711 B3XF	996	31	77	4	4.5	18	1.25	4	83.7	32	29.9	26	8.6	7
CROPLAN 9178	985	32	67	15	4.8	3	1.21	11	85.5	4	33.5	2	7.2	37
DG 3433 B2XF	973	33	41	44	4.5	15	1.12	44	82.9	39	27.5	42	8.9	4
NG 3780 B2XF	970	34	63	26	4.5	15	1.20	21	83.1	38	32.5	5	8.5	8
CPS 18504-C	956	35	68	12	4.0	38	1.21	15	84.6	14	28.0	39	8.0	15
CPS 18504-D	944	36	67	14	4.3	27	1.22	8	84.4	19	26.4	44	7.7	27
NG 4777 B2XF	927	37	66	16	4.3	27	1.20	21	84.2	21	32.1	8	8.9	5
NG 5007 B2XF	906	38	60	31	4.5	15	1.20	21	82.5	44	28.0	39	8.2	13
NG 2982 B3XF	905	39	53	37	3.8	43	1.17	33	85.6	2	32.0	9	6.4	44
CPS 18503-C	895	40	70	10	4.7	5	1.23	5	85.0	10	31.9	10	7.9	22
AMX 1816 B3XF	849	41	72	7	4.0	37	1.23	5	83.8	30	29.8	27	8.0	15
NG 3956 B3XF	837	42	56	34	4.6	12	1.17	38	84.5	16	28.9	35	7.8	23
NG 4689 B2XF	810	43	61	29	4.7	8	1.20	21	83.9	27	32.6	3	8.0	15
AMX 1818 B3XF	763	44	86	2	4.4	22	1.26	3	85.4	6	31.7	11	6.5	43
Mean	1052		63		4.4		1.20		84.2		30.4		7.9	
LSD <sub>0.10</sub>	197		ns		0.4		0.06		NS		1.8		NS	
C.V. %	16.0		20.2		5.0		2.9		1.5		3.4		63.0	
R <sup>2</sup> x 100	53.3		60.4		81.4		65.3		50.1		85.2		19.0	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 26. Yield and related properties—2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint		Lint		Open		Seed		Lint		Seed/		Fibers/		Fiber			
	yield	r	frac.	r	Ht.	r	bolts	r	index	r	index	r	acre	r	seed	r	density	r
	lb/acre		%		cm		%		g		g		mil.		no.		no.	
CPS 18817 B3XF	1883	1	45.1	6	104	2	25	29	9.6	37	8.1	13	10.560	7	15819	26	160	19
CPS 17228 NR B2XF	1845	2	43.8	12	104	3	38	19	9.8	31	7.8	21	10.740	3	16415	20	163	12
NG 3994 B3XF	1813	3	45.4	2	84	42	45	11	9.1	41	7.7	25	10.730	4	14979	32	157	21
PX3B07W3FE	1780	4	44.4	9	90	30	36	20	9.8	33	7.9	19	10.190	11	16734	17	167	8
ST 4550GLTP	1774	5	45.1	3	97	17	45	11	9.3	40	8.0	18	10.130	12	17235	10	177	2
17R821 B3XR	1757	6	45.9	1	92	28	36	20	9.5	38	8.2	9	9.708	17	16897	14	172	4
CROPLAN 9178	1750	7	45.1	4	102	7	33	23	9.7	34	8.1	10	9.759	15	16031	22	161	17
CPS 1702 GLT	1741	8	42.1	23	95	22	45	11	11.2	8	8.2	8	9.594	19	17722	5	163	15
PX3C06W3FE	1736	9	43.0	18	89	35	48	9	9.0	42	7.0	41	11.290	2	14582	38	153	24
17R931NR B3XF	1731	10	40.7	34	93	24	50	6	10.5	23	7.3	34	10.700	5	14759	36	141	37
CPS 18501-B	1705	11	39.0	41	99	10	23	31	12.4	3	8.1	14	9.558	21	18059	3	154	23
CPS 18507-D	1690	12	43.6	16	96	20	43	17	10.0	28	7.8	20	9.789	13	14150	43	140	40
NG 4689 B2XF	1689	13	40.5	35	104	4	56	2	10.5	18	7.3	35	10.460	8	14507	40	138	43
NG 5007 B2XF	1679	14	44.4	11	99	10	50	6	8.8	43	7.2	37	10.620	6	15056	31	161	18
ST 5471GLTP	1651	15	40.8	32	87	38	21	34	11.6	7	8.1	12	9.257	27	17300	9	155	22
DG 3433 B2XF	1637	16	42.8	20	92	29	24	30	7.9	44	6.1	44	12.180	1	14688	37	167	7
PX3B09W3FE	1635	17	44.6	7	90	31	31	24	9.8	32	8.0	16	9.234	28	16818	15	168	6
NG 4936 B3XF	1614	18	41.1	30	86	40	54	4	9.9	30	7.0	40	10.440	9	13997	44	139	41
WinF. United 18XC9	1610	19	41.8	26	90	32	20	37	10.2	27	7.5	31	9.788	14	14821	34	144	33
CPS 18506-D	1607	20	43.7	13	89	36	21	34	9.6	36	7.6	28	9.585	20	15985	23	162	16
NG 3729 B2XF	1602	21	41.7	27	98	15	45	11	10.5	19	7.7	24	9.447	23	14812	35	141	36
17R818 B3XF	1570	22	43.6	14	87	37	31	24	9.4	39	7.4	33	9.682	18	14365	41	147	29
ST 5122GLT	1562	23	41.5	29	87	39	49	8	10.8	12	7.6	29	9.308	25	17420	7	164	11
AMX 1816 B3XF	1556	24	38.3	43	96	20	45	11	12.0	6	7.6	30	9.340	24	17543	6	153	25
ST 5818GLT	1552	25	40.1	37	98	14	23	31	12.3	5	8.4	7	8.419	34	17208	11	147	28
NG 3780 B2XF	1528	26	39.0	40	97	19	56	2	10.3	26	6.8	42	10.220	10	14888	33	144	32
PX4A69W3FE	1527	27	44.4	10	93	26	14	40	10.5	22	8.5	5	8.109	37	19023	1	182	1
NG 2982 B3XF	1523	28	40.0	38	90	32	46	10	10.6	15	7.1	38	9.710	16	18181	2	172	3
NG 5711 B3XF	1515	29	42.2	22	97	17	9	42	10.8	12	8.0	17	8.612	32	15453	30	145	30
AMX 1818 B3XF	1504	30	40.8	33	106	1	45	11	10.3	25	7.2	36	9.484	22	14518	39	140	38
PX5D28BW3FE	1499	31	43.6	15	102	6	21	34	9.7	35	7.6	26	8.919	30	16803	16	169	5
BX 1975GLTP	1469	32	42.9	19	99	12	43	17	10.5	21	8.0	15	8.284	35	15887	25	152	26
NG 4777 B2XF	1467	33	40.2	36	103	5	51	5	11.1	10	7.6	27	8.741	31	15775	27	145	31
PX4A64W3FE	1460	34	42.6	21	93	25	14	40	11.2	8	8.4	6	7.856	40	18049	4	165	9
PX5C09W3FE	1454	35	45.1	5	100	9	8	43	10.7	14	9.0	3	7.360	41	17307	8	163	14
PX5B73W3FE	1444	36	41.8	25	97	16	15	38	10.6	15	7.7	22	8.454	33	15748	28	149	27
CPS 18504-C	1435	37	41.1	31	83	43	26	27	9.9	29	7.1	39	9.232	29	15910	24	158	20
CPS 18504-D	1407	38	43.1	17	76	44	15	38	10.5	20	8.1	11	7.857	39	17143	13	164	10
ST 5517GLTP	1384	39	37.8	44	89	34	26	27	12.6	1	7.7	23	8.133	36	16633	18	140	39
NG 3699 B2XF	1378	40	39.0	42	98	13	60	1	10.4	24	6.8	43	9.265	26	14206	42	136	44
BX 1976GLTP	1336	41	42.0	24	85	41	23	31	12.4	2	9.2	1	6.604	43	16270	21	138	42
NG 3956 B3XF	1321	42	39.7	39	95	22	36	20	11.1	11	7.4	32	8.072	38	15561	29	143	34
BX 1974GLTP	1304	43	44.5	8	92	27	29	26	10.6	17	8.7	4	6.833	42	17207	12	163	13
CPS 18503-C	1263	44	41.6	28	100	8	5	44	12.3	4	9.0	2	6.379	44	16600	19	142	35
Mean	1577		42.3		94		34		10.4		7.8		9.288		16115		155	
LSD <sub>0.10</sub>	187		1.6		9		11		0.9		0.5		1.091		1264		13	
C.V.%	10.1		2.3		8.3		28.2		4.9		3.6		10.0		4.7		5.1	
R <sup>2</sup> x 100	61.6		90.7		50.7		77.0		89.1		90.8		72.9		85.5		82.4	

Table 27. Fiber properties—2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
	lb/acre						in.		%		g/tex		%	
CPS 18817 B3XF	1883	1	30	44	5.2	2	1.19	42	83.7	41	31.4	25	6.8	14
CPS 17228 NR B2XF	1845	2	78	5	4.3	35	1.28	7	86.6	9	30.8	33	5.8	43
NG 3994 B3XF	1813	3	43	42	5.0	5	1.23	34	83.7	41	29.2	40	8.1	2
PX3B07W3FE	1780	4	62	23	4.5	25	1.23	25	85.4	28	31.1	28	7.3	5
ST 4550GLTP	1774	5	61	28	4.4	27	1.23	25	85.0	31	32.5	10	6.3	35
17R821 B3XR	1757	6	48	40	4.8	9	1.21	41	84.8	34	30.5	35	6.1	37
CROPLAN 9178	1750	7	72	9	4.7	15	1.26	12	86.7	7	34.4	4	6.4	29
CPS 1702 GLT	1741	8	61	26	4.4	27	1.23	28	85.8	23	31.6	22	6.4	32
PX3C06W3FE	1736	9	69	12	4.5	26	1.26	12	85.3	29	29.4	38	7.0	11
17R931NR B3XF	1731	10	52	36	4.8	7	1.23	28	84.4	38	29.9	37	6.8	16
CPS 18501-B	1705	11	86	2	3.9	43	1.32	2	87.6	1	32.2	14	5.9	42
CPS 18507-D	1690	12	48	39	5.2	1	1.23	28	86.7	8	30.9	31	6.4	29
NG 4689 B2XF	1689	13	60	29	4.8	9	1.23	28	86.5	11	33.5	8	6.1	40
NG 5007 B2XF	1679	14	49	38	4.7	14	1.21	39	83.6	43	28.5	41	7.2	6
ST 5471GLTP	1651	15	66	18	4.4	27	1.26	19	84.8	34	31.6	22	6.5	26
DG 3433 B2XF	1637	16	36	43	4.3	36	1.17	44	83.2	44	28.0	43	7.8	3
PX3B09W3FE	1635	17	59	31	4.6	20	1.23	34	85.8	20	32.6	9	7.0	10
NG 4936 B3XF	1614	18	66	17	4.7	15	1.25	20	86.4	13	29.4	38	6.5	26
WinF. United 18XC9	1610	19	89	1	4.4	27	1.33	1	86.2	16	31.1	28	6.8	15
CPS 18506-D	1607	20	58	32	4.6	23	1.22	37	85.8	20	30.8	33	6.4	32
NG 3729 B2XF	1602	21	75	7	4.7	12	1.29	5	86.5	12	31.3	26	6.4	29
17R818 B3XF	1570	22	62	23	4.8	7	1.26	12	84.9	33	31.3	26	6.9	13
ST 5122GLT	1562	23	61	26	4.2	40	1.23	25	85.3	30	31.5	24	6.7	18
AMX 1816 B3XF	1556	24	70	11	4.0	41	1.26	12	85.6	26	30.9	31	7.0	12
ST 5818GLT	1552	25	81	3	4.4	31	1.29	5	87.1	3	33.7	6	6.0	41
NG 3780 B2XF	1528	26	69	12	4.3	36	1.26	12	85.5	27	32.2	14	6.6	22
PX4A69W3FE	1527	27	62	23	4.3	36	1.23	28	86.0	18	31.6	21	7.1	9
NG 2982 B3XF	1523	28	46	41	3.9	43	1.19	42	84.4	37	32.4	11	7.2	6
NG 5711 B3XF	1515	29	78	4	4.7	15	1.30	3	85.8	23	32.1	17	6.7	18
AMX 1818 B3XF	1504	30	72	9	4.6	20	1.28	7	85.9	19	32.2	14	6.1	37
PX5D28BW3FE	1499	31	65	20	4.3	36	1.23	28	86.9	5	34.5	3	6.6	25
BX 1975GLTP	1469	32	74	8	4.6	18	1.26	12	87.5	2	31.8	19	6.1	37
NG 4777 B2XF	1467	33	51	37	4.7	12	1.22	37	84.3	39	33.7	7	8.2	1
PX4A64W3FE	1460	34	68	15	4.4	31	1.24	23	86.7	6	34.6	2	6.2	36
PX5C09W3FE	1454	35	63	22	4.8	6	1.25	20	86.3	15	32.3	12	6.4	32
PX5B73W3FE	1444	36	66	18	4.6	18	1.25	22	85.8	20	30.2	36	6.6	22
CPS 18504-C	1435	37	76	6	4.0	41	1.30	3	85.8	23	28.1	42	6.7	21
CPS 18504-D	1407	38	68	14	4.4	31	1.27	10	86.2	17	27.6	44	6.5	26
ST 5517GLTP	1384	39	68	15	4.4	31	1.27	10	84.5	36	33.7	5	6.6	22
NG 3699 B2XF	1378	40	58	32	4.6	20	1.24	23	84.3	40	32.1	17	7.4	4
BX 1976GLTP	1336	41	65	20	5.1	3	1.28	9	87.0	4	34.7	1	5.8	44
NG 3956 B3XF	1321	42	59	30	4.6	23	1.21	39	86.4	13	31.7	20	6.8	16
BX 1974GLTP	1304	43	58	32	4.8	9	1.23	34	86.6	10	31.1	30	6.7	18
CPS 18503-C	1263	44	55	35	5.1	4	1.26	12	85.0	32	32.3	12	7.1	8
Mean	1577		63		4.5		1.25		85.6		31.5		6.7	
LSD <sub>0.10</sub>	187		19		0.3		0.05		2.0		1.6		1.0	
C.V.%	10.1		18.3		4.3		2.3		1.4		3.1		9.1	
R <sup>2</sup> x 100	61.6		70.0		83.9		71.9		63.6		86.8		61.3	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 28. Yield and related properties—2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre	Fibers/seed		Fiber density			
	lb/acre	r	%	r		cm	%	r	g	r	g		mil.	r	no.	r	no.	
CPS 18817 B3XF	1912	1	44.1	5	125	7	49	32	10.2	23	8.3	10	10.500	7	16016	28	155	28
CPS 18501-B	1869	2	39.5	41	113	26	41	39	11.9	7	8.1	15	10.510	6	19961	3	175	11
NG 5711 B3XF	1865	3	42.6	15	123	10	38	41	9.1	41	7.0	39	12.120	1	15590	33	162	21
17R821 B3XR	1797	4	43.9	9	119	18	55	24	9.7	34	7.9	17	10.280	10	16889	23	169	16
ST 4550GLTP	1793	5	45.1	1	123	11	70	2	9.5	38	8.0	16	10.160	13	16976	21	173	13
PX3B07W3FE	1785	6	44.0	6	107	40	59	16	10.4	22	8.4	8	9.669	18	17946	15	172	14
PX5C09W3FE	1785	7	44.7	2	125	8	36	42	10.6	18	8.8	4	9.212	22	18921	7	180	6
PX5D28B3FE	1772	8	43.1	14	120	16	44	37	9.8	31	7.7	21	10.480	8	18111	13	180	5
CROPLAN 9178	1745	9	43.9	7	122	13	60	13	9.5	35	7.6	26	10.410	9	15755	31	160	25
PX3B09W3FE	1738	10	43.7	11	108	38	59	16	10.2	26	8.1	14	9.734	16	18186	12	177	10
ST 5517GLTP	1733	11	39.6	40	122	12	45	36	12.6	2	8.5	7	9.235	21	19294	5	163	20
NG 3994 B3XF	1719	12	43.2	13	108	36	59	16	9.3	40	7.3	34	10.710	4	14188	41	146	36
ST 5471GLTP	1709	13	41.3	26	110	29	41	39	12.1	3	8.7	5	8.935	25	20084	1	174	12
CPS 1702 GLT	1695	14	41.2	28	114	25	53	28	11.9	5	8.6	6	8.972	24	19015	6	166	18
CPS 18506-D	1671	15	42.4	17	110	31	60	13	9.8	33	7.4	32	10.190	12	16554	26	165	19
NG 4936 B3XF	1662	16	41.2	27	107	39	66	4	9.8	32	7.0	38	10.800	3	14148	42	141	42
CPS 17228 NR B2XF	1658	17	43.7	10	118	19	49	32	9.5	35	7.6	25	9.865	15	17472	19	178	7
CPS 18503-C	1641	18	42.4	18	136	1	29	44	12.7	1	9.5	1	7.843	37	18840	9	158	26
PX3C06W3FE	1633	19	42.3	19	106	41	71	1	8.8	43	6.7	42	11.070	2	15917	29	170	15
NG 3729 B2XF	1617	20	41.3	25	129	2	64	9	10.2	23	7.6	28	9.716	17	14330	39	139	43
17R818 B3XF	1571	21	41.7	23	104	44	63	10	9.5	37	7.0	40	10.230	11	14087	43	143	39
BX 1976GLTP	1569	22	43.5	12	126	6	36	42	11.6	8	9.1	2	7.809	38	16972	22	152	33
PX5B73W3FE	1549	23	41.6	24	125	9	49	32	10.5	19	7.7	19	9.111	23	17581	17	167	17
ST 5818GLT	1531	24	40.1	37	117	22	50	30	11.9	6	8.1	13	8.530	28	17741	16	155	29
NG 5007 B2XF	1508	25	42.3	20	121	14	58	20	9.0	42	6.8	41	10.060	14	15317	34	161	24
PX4A64W3FE	1485	26	42.1	22	128	3	49	32	10.9	15	8.2	12	8.267	32	19496	4	182	3
WinF. United 18XC9	1478	27	40.9	31	104	42	60	13	9.9	30	7.1	36	9.419	19	14836	37	147	35
BX 1975GLTP	1474	28	44.1	4	121	15	65	7	10.2	25	8.3	9	8.080	34	16706	25	162	23
17R931NR B3XF	1474	29	40.1	36	112	28	68	3	11.2	9	7.7	18	8.646	27	15709	32	143	40
PX4A69W3FE	1469	30	44.2	3	113	26	55	24	11.1	12	9.0	3	7.391	42	20030	2	184	1
BX 1974GLTP	1457	31	43.9	8	117	21	56	22	10.5	20	8.2	11	8.016	35	18910	8	181	4
AMX 1818 B3XF	1453	32	40.6	34	126	5	59	16	10.0	28	7.1	37	9.321	20	14753	38	145	37
ST 5122GLT	1442	33	40.7	32	110	32	61	12	10.4	21	7.5	31	8.731	26	18495	11	177	8
CPS 18507-D	1418	34	42.5	16	110	32	65	7	9.9	29	7.6	27	8.508	29	14917	36	147	34
NG 4689 B2XF	1414	35	41.0	30	118	20	55	24	10.9	17	7.7	20	8.340	31	15155	35	141	41
DG 3433 B2XF	1413	36	41.1	29	109	35	53	28	8.3	44	6.0	44	10.670	5	13838	44	153	31
CPS 18504-D	1357	37	42.1	21	104	43	44	37	10.1	27	7.5	30	8.208	33	18674	10	183	2
NG 3780 B2XF	1329	38	39.6	39	119	17	66	4	11.2	9	7.5	29	7.999	36	14325	40	131	44
NG 4777 B2XF	1306	39	40.7	33	128	4	50	30	10.9	16	7.7	23	7.744	39	16374	27	152	32
NG 3699 B2XF	1238	40	39.0	42	117	23	66	4	11.2	11	7.4	33	7.624	40	15784	30	144	38
AMX 1816 B3XF	1218	41	38.2	44	116	24	63	10	12.1	4	7.6	24	7.231	43	17977	14	156	27
CPS 18504-C	1205	42	40.0	38	108	37	55	24	9.4	39	6.5	43	8.431	30	17299	20	177	9
NG 3956 B3XF	1197	43	40.2	35	110	32	58	20	11.1	13	7.7	22	7.098	44	16836	24	154	30
NG 2982 B3XF	1195	44	38.7	43	110	30	56	22	11.0	14	7.2	35	7.499	41	17579	18	162	22
Mean	1558		41.9		41.9		11.6		10.5		7.8		9.168		16900		161	
LSD <sub>0.10</sub>	168		1.1		1.1		8		0.7		0.5		0.991		1570		13.8	
C.V.%	9.2		9.2		1.6		5.6		3.9		4.2		9.2		5.5		5.1	
R <sup>2</sup> x 100	72.1		72.1		93.2		67.1		92.9		90.8		73.6		88.5		86.0	

Table 29. Fiber properties—2018 Arkansas first-year Transgenic Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
	lb/acre						in.		%		g/tex		%	
CPS 18817 B3XF	1912	1	52	39	5.2	3	1.19	18	84.3	25	31.7	26	6.4	2
CPS 18501-B	1869	2	78	4	3.9	43	1.23	5	84.6	21	31.8	24	6.0	4
NG 5711 B3XF	1865	3	63	16	4.5	27	1.19	23	84.0	30	30.4	36	4.6	22
17R821 B3XR	1797	4	53	38	4.8	12	1.17	36	83.7	36	30.7	31	6.9	1
ST 4550GLTP	1793	5	59	27	4.8	15	1.19	23	83.9	31	32.6	18	4.7	20
PX3B07W3FE	1785	6	70	7	4.6	21	1.21	8	84.1	29	33.0	11	3.6	35
PX5C09W3FE	1785	7	63	19	4.7	18	1.18	30	84.8	15	32.5	19	4.8	16
PX5D28BW3FE	1772	8	65	13	4.3	38	1.19	18	83.9	31	34.1	5	3.4	38
CROPLAN 9178	1745	9	56	33	4.9	10	1.18	30	84.6	19	32.7	16	3.5	37
PX3B09W3FE	1738	10	69	9	4.4	30	1.20	12	84.6	19	32.9	12	3.9	32
ST 5517GLTP	1733	11	55	36	4.6	23	1.16	40	83.7	35	33.4	8	4.1	29
NG 3994 B3XF	1719	12	81	3	4.8	11	1.25	2	86.0	2	30.3	37	5.0	12
ST 5471GLTP	1709	13	49	41	4.6	23	1.15	43	82.7	43	33.0	10	4.5	24
CPS 1702 GLT	1695	14	63	19	4.6	23	1.19	13	83.0	41	31.8	24	4.4	26
CPS 18506-D	1671	15	58	29	4.6	23	1.17	39	84.9	12	30.0	38	5.6	8
NG 4936 B3XF	1662	16	70	8	4.8	12	1.21	6	85.1	9	29.5	39	5.0	11
CPS 17228 NR B2XF	1658	17	66	11	4.4	34	1.19	13	84.1	27	30.7	33	5.8	6
CPS 18503-C	1641	18	57	31	5.0	6	1.19	18	84.7	17	32.5	19	4.8	17
PX3C06W3FE	1633	19	55	35	4.4	34	1.17	36	82.9	42	30.6	35	4.1	30
NG 3729 B2XF	1617	20	57	30	5.2	3	1.19	13	85.7	4	30.7	33	5.7	7
17R818 B3XF	1571	21	81	2	4.7	18	1.23	3	86.3	1	32.9	12	3.6	36
BX 1976GLTP	1569	22	46	42	5.4	1	1.18	30	85.2	8	33.2	9	3.3	39
PX5B73W3FE	1549	23	64	14	4.4	30	1.19	23	84.3	26	31.0	30	4.8	17
ST 5818GLT	1531	24	66	11	4.6	22	1.19	23	85.3	6	34.8	1	3.3	39
NG 5007 B2XF	1508	25	64	14	4.5	29	1.19	18	83.9	31	29.3	40	5.9	5
PX4A64W3FE	1485	26	63	16	4.2	39	1.18	33	85.1	10	33.7	6	4.7	19
WinF. United 18XC9	1478	27	84	1	4.5	27	1.26	1	85.3	6	32.8	15	3.8	34
BX 1975GLTP	1474	28	63	19	4.9	8	1.21	9	84.5	22	31.5	27	4.9	13
17R931NR B3XF	1474	29	58	28	4.9	8	1.19	23	84.9	12	32.8	14	5.4	10
PX4A69W3FE	1469	30	72	6	4.4	30	1.21	9	85.0	11	31.4	28	4.1	30
BX 1974GLTP	1457	31	69	10	4.3	37	1.19	13	84.9	12	31.4	28	4.7	20
AMX 1818 B3XF	1453	32	60	26	4.8	12	1.19	23	84.4	24	34.1	3	4.9	15
ST 5122GLT	1442	33	46	43	4.3	36	1.13	44	83.5	38	30.7	31	4.9	13
CPS 18507-D	1418	34	45	44	5.2	3	1.15	42	85.4	5	32.1	22	6.1	3
NG 4689 B2XF	1414	35	63	16	5.0	7	1.19	13	86.0	2	32.3	21	2.6	43
DG 3433 B2XF	1413	36	60	25	4.4	30	1.17	36	84.5	23	28.8	42	4.2	28
CPS 18504-D	1357	37	61	24	4.1	42	1.21	9	82.6	44	27.3	44	4.5	24
NG 3780 B2XF	1329	38	55	36	5.2	2	1.21	6	83.5	38	32.7	16	4.3	27
NG 4777 B2XF	1306	39	56	34	4.8	15	1.17	34	83.8	34	33.7	7	2.2	44
NG 3699 B2XF	1238	40	62	23	4.7	18	1.19	18	84.7	18	34.1	3	3.2	41
AMX 1816 B3XF	1218	41	78	4	4.1	41	1.23	3	84.1	27	31.8	23	2.7	42
CPS 18504-C	1205	42	57	31	3.8	44	1.19	23	83.3	40	27.4	43	4.6	22
NG 3956 B3XF	1197	43	49	40	4.7	17	1.16	40	83.6	37	29.0	41	5.4	9
NG 2982 B3XF	1195	44	63	19	4.2	40	1.17	34	84.7	16	34.3	2	3.8	33
Mean	1558		62		4.6		1.19		84.4		31.7		4.5	
LSD <sub>0.10</sub>	168		17		0.4		0.05		NS		1.5		0.5	
C.V.%	9.2		16.7		4.6		2.3		13.0		2.9		7.0	
R <sup>2</sup> x 100	72.1		66.8		84.8		69.2		57.5		88.6		95.6	

<sup>a</sup> UI = Fiber length uniformity index.



Table 30. Morphological and host-plant resistance traits in the 2018 Arkansas first-year Transgenic Cotton Variety Test.

Institution	Variety	Leaf pubescence <sup>a</sup>		Stem pubescence <sup>a</sup>		Bract trichomes <sup>b</sup>		Tarnished plant bug damage <sup>c</sup>		Bacterial blight <sup>d</sup>
		r	r	r	r	r	r	r	% sus.	
Americot	AMX 1816 B3XF	3.9	15			32.2	30	41	11	100
Americot	AMX 1818 B3XF	5.7	33			32.8	31	50	37	0
Americot	NG 2982 B3XF	6.6	41			38.5	41	32	2	4
Americot	NG 3699 B2XF	4.2	18			30.3	27	47	29	0
Americot	NG 3729 B2XF	6.3	40			37.1	39	44	23	38
Americot	NG 3780 B2XF	4.4	23			33.0	32	54	43	32
Americot	NG 3956 B3XF	6.1	38			35.6	36	41	13	0
Americot	NG 3994 B3XF	6.8	43			41.7	44	37	6	100
Americot	NG 4689 B2XF	3.8	14			29.9	26	49	35	3
Americot	NG 4777 B2XF	3.6	11			32.1	29	45	25	0
Americot	NG 4936 B3XF	1.5	1			23.2	3	45	26	70
Americot	NG 5007 B2XF	2.4	4			22.7	2	41	12	100
Americot	NG 5711 B3XF	2.4	4			25.8	12	50	36	7
BASF	BX 1974GLTP	4.5	26			27.3	15	51	41	92
BASF	BX 1975GLTP	5.9	35			31.2	28	38	7	78
BASF	BX 1976GLTP	3.1	8			27.9	20	40	10	22
BASF	ST 4550GLTP	6.0	36			33.7	33	42	17	100
BASF	ST 5122GLT	4.3	19			28.4	21	45	27	40
BASF	ST 5471GLTP	4.4	23			29.0	24	49	34	0
BASF	ST 5517GLTP	3.3	9			25.6	10	43	21	0
BASF	ST 5818GLT	3.9	15			27.8	19	43	19	48
CPS	CPS 1702 GLT	4.8	28			27.4	16	50	38	0
CPS	CPS 17228 NR B2XF	6.2	39			41.0	43	44	24	97
CPS	CPS 18501-B	6.8	43			36.7	38	50	39	0
CPS	CPS 18503-C	5.7	33			37.8	40	47	33	0
CPS	CPS 18504-C	3.6	11			27.5	17	42	16	0
CPS	CPS 18504-D	3.7	13			28.7	23	43	20	7
CPS	CPS 18506-D	4.4	23			25.3	9	38	9	100
CPS	CPS 18507-D	1.8	2			23.7	6	47	30	100
CPS	CPS 18817 B3XF	5.0	29			25.6	11	43	22	97
CPS	DG 3433 B2XF	6.6	41			35.4	35	29	1	100
Monsanto	17R818 B3XF	2.8	6			36.0	37	50	40	0
Monsanto	17R821 B3XR	3.0	7			23.3	4	42	15	100
Monsanto	17R931NR B3XF	6.0	36			38.7	42	36	4	17
Phytogen	PX3B07W3FE	4.7	27			26.3	14	41	14	0
Phytogen	PX3B09W3FE	4.3	19			24.6	8	37	5	0
Phytogen	PX3C06W3FE	4.3	19			24.2	7	34	3	0
Phytogen	PX4A64W3FE	5.0	30			28.6	22	42	18	0
Phytogen	PX4A69W3FE	3.9	15			27.5	18	51	42	0
Phytogen	PX5B73W3FE	5.0	30			21.0	1	46	28	0
Phytogen	PX5C09W3FE	5.4	32			25.8	13	38	8	0
Phytogen	PX5D28BW3FE	4.3	19			23.6	5	47	32	0
WinField	CROPLAN 9178	1.8	2			29.5	25	55	44	83
WinField	WinF. United 18XC9	3.5	10			35.3	34	47	31	0
	Ark 0628fg RF (sus.)							74	45	
	Ark 0628fg RF (sus.)							74	46	
Mean		4.4				30.0		45		35
LSD <sub>0.10</sub>		0.8				4.5		8		11
C.V.%		14.5				12.7		22.4		23.9
R <sup>2</sup> x 100		87.7				75.8		66.8		97.5

<sup>a</sup> Leaf pubescence rated at Keiser (6 plants per plots, 6 reps) using scale of 1 (smooth leaf) to 9 (pilose, very hairy).

Stem pubescence was not rated in 2018.

<sup>b</sup> Marginal trichome density of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

<sup>c</sup> Response 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 8 times.

<sup>d</sup> Varieties/breeding lines were planted in flats (3 replications, 10 seed/plot) in greenhouse, and scratch inoculated with *Xanthomonas citris* pv. *malvacearum*. The inoculum was obtained from naturally infected leaves collected at the 2017 Keiser Scratches were examined for water-soaking, and % of susceptible plants were determined.



Table 31. Yield and related properties—2018 Arkansas Conventional Cotton Variety Test across four test sites.

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	mil.	r	no.	r	no.	r	
LA14063001	1385	1	42.4	2	100	3	49	13	10.1	13	7.6	10	8.348	2	16712	3	164	2
LA14063075	1252	2	41.3	3	97	5	51	11	9.3	15	6.7	15	8.505	1	13968	13	144	8
LA14063083	1233	3	40.9	5	100	2	46	14	10.9	10	7.7	6	7.279	5	15861	5	148	4
UA212ne	1231	4	42.9	1	93	9	52	10	10.4	12	7.9	3	6.987	8	17114	1	165	1
LA14063038	1226	5	40.4	9	100	1	54	8	9.8	14	6.7	14	8.246	3	13700	14	137	13
Ark 0822-48	1212	6	41	4	91	12	54	9	11.7	2	8.3	1	6.634	12	15729	6	139	11
DP 393	1196	7	39.7	12	94	7	63	4	11.6	4	7.8	4	7.046	7	15391	9	138	12
SSG UA114	1177	8	39.7	13	94	8	59	6	11.3	6	7.5	11	7.106	6	14146	12	129	14
Prem.Cot.Gen. 713	1163	9	39.3	14	99	4	49	12	10.5	11	6.9	13	7.676	4	14938	11	143	9
SSG UA222	1129	10	40.4	8	97	6	46	14	11.1	7	7.6	9	6.756	10	15687	8	145	6
AM UA48	1124	11	38	15	93	11	58	7	12.2	1	7.6	8	6.759	9	13304	15	115	15
Ark 0822-75	1119	12	40	10	93	10	61	5	11.3	5	7.7	5	6.592	13	15943	4	145	7
Ark 0818-23	1106	13	39.7	11	89	14	65	3	11.1	8	7.4	12	6.748	11	15709	7	145	5
Ark 0818-81	1041	14	40.6	6	88	15	70	2	11.0	9	7.7	7	6.186	14	15235	10	141	10
SSG UA107	1031	15	40.6	7	91	13	73	1	11.7	3	8.2	2	5.794	15	17023	2	151	3
Mean	1176		40.4		95		57		10.9		7.6		7.120		15364		143	
Var. LSD <sub>0.10</sub>	92		0.6		6		5		0.4		0.3		0.561		740		7	
Loc. LSD <sub>0.10</sub>	46		0.3		3		3		0.2		0.1		0.283		382		3	
C.V.%	13.1		1.7		9.2		14.7		4.3		5.0		13.4		5.8		5.7	
R <sup>2</sup> x 100	79.4		91.6		75.8		84.5		91.0		80.4		81.7		82.8		87.3	
Prob (var x loc)	0.016		0.082		0.494		0.008		0.037		0.495		0.001		0.108		0.367	

Table 32. Fiber properties—2018 Arkansas Conventional Cotton Variety Test across four test sites.

Variety	Lint yield		Quality score		Fiber properties									
	lb/acre	r	r	r	Micronaire		Length		UI <sup>a</sup>		Strength		Elongation	
						r	in.	r	%	r	g/tex	r	%	r
LA14063001	1385	1	60	10	4.4	15	1.22	12	85.3	10	32.3	8	4.4	8
LA14063075	1252	2	76	2	4.4	14	1.28	3	86.2	3	33.4	3	3.5	14
LA14063083	1233	3	61	8	4.6	7	1.25	7	85.2	14	32.2	9	4.9	5
UA212ne	1231	4	60	11	4.4	13	1.23	11	85.6	8	30.1	15	5.4	3
LA14063038	1226	5	75	3	4.5	10	1.28	2	85.8	5	32.4	6	3.6	13
Ark 0822-48	1212	6	66	5	4.9	4	1.27	4	85.2	12	31.7	11	5.6	2
DP 393	1196	7	44	15	4.9	3	1.20	15	85.2	11	31.4	13	4.6	7
SSG UA114	1177	8	59	12	5.0	2	1.24	8	87.0	2	32.7	5	5.0	4
Prem.Cot.Gen. 713	1163	9	48	14	4.6	6	1.21	14	83.9	15	30.8	14	4.3	9
SSG UA222	1129	10	65	6	4.5	8	1.26	6	85.7	7	32.4	7	5.8	1
AM UA48	1124	11	78	1	5.0	1	1.31	1	87.2	1	36.2	1	2.6	15
Ark 0822-75	1119	12	71	4	4.5	12	1.27	5	85.2	12	32.0	10	4.9	5
Ark 0818-23	1106	13	62	7	4.5	11	1.23	10	85.7	6	33.2	4	4.1	10
Ark 0818-81	1041	14	53	13	4.8	5	1.22	13	85.5	9	33.5	2	4.0	12
SSG UA107	1031	15	61	8	4.5	8	1.24	9	85.9	4	31.4	12	4.1	11
Mean	1176		62		4.6		1.25		85.6		32.4		4.5	
Var. LSD <sub>0.10</sub>	92		9		0.6		0.03		1.0		1.1		0.4	
Loc. LSD <sub>0.10</sub>	46		NS		0.1		NS		0.5		NS		NS	
C.V.%	13.1		17.7		4.2		2.6		1.5		3.9		10.0	
R <sup>2</sup> x 100	79.4		70.0		82.7		74.6		61.5		75.9		89.3	
Prob (var x loc)	0.016		0.812		0.383		0.966		0.899		0.837		0.614	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 33. Yield and related properties–2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint yield		Lint frac.		Ht. cm	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density	
	lb/acre	r	%	r		%	r	g	r	g	r	mil.	r	no.	r	no.	r
LA14063001	1198	1	43.8	1		35	10	9.2	12	7.4	9	7.373	2	16279	4	169	1
LA14063038	1141	2	42.3	5		41	8	8.8	15	6.6	14	7.789	1	14059	13	150	10
LA14063083	1053	3	43.6	3		25	15	9.2	13	7.3	10	6.546	5	15823	6	164	3
SSG UA114	1047	4	40.7	13		48	5	10.7	5	7.4	8	6.385	6	13986	14	132	14
LA14063075	1046	5	42.9	4		33	12	8.8	14	6.9	13	6.865	3	15330	9	163	4
DP 393	1034	6	41.4	11		55	3	10.5	6	7.6	4	6.164	9	15233	10	145	12
Ark 0818-23	1016	7	41.1	12		48	5	10.3	7	7.4	7	6.195	8	16882	2	163	5
AM UA48	1009	8	38.9	15		50	4	11.1	1	7.3	11	6.311	7	13560	15	125	15
Ark 0822-75	966	9	41.4	10		48	5	10.7	4	7.9	3	5.573	11	16218	5	152	8
Prem.Cot.Gen. 713	945	10	39.9	14		39	9	9.6	10	6.5	15	6.552	4	14139	12	143	13
SSG UA107	927	11	41.9	8		66	1	10.9	2	8.1	2	5.227	14	17199	1	160	6
SSG UA222	917	12	42.3	6		28	14	9.7	9	7.2	12	5.756	10	15090	11	152	9
Ark 0822-48	915	13	42.0	7		34	11	10.8	3	8.1	1	5.150	15	15803	7	148	11
UA212ne	907	14	43.7	2		33	12	9.4	11	7.5	5	5.476	12	16401	3	168	2
Ark 0818-81	879	15	41.4	9		64	2	10.2	8	7.5	6	5.326	13	15759	8	153	7
Mean	1000		41.8			43		10.0		7.4		6.179		15451		152	
LSD <sub>0.10</sub>	149		1.1			9		0.8		0.5		0.938		1150		10	
C.V.%	12.5		1.6			18.1		4.3		3.9		12.8		4.2		3.6	
R <sup>2</sup> x 100	55.3		90.2			81.4		86.9		83.2		64.8		85.4		91.6	

**Table 34. Fiber properties–2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Sharkey clay soil at Keiser.**

Variety	Lint yield		Quality score		Fiber properties									
	lb/acre	r	r	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
							in.		%		g/tex		%	
LA14063001	1198	1	62	10	4.4	14	1.21	11	85.1	8	32.8	5	4.5	9
LA14063038	1141	2	69	2	4.5	10	1.23	6	85.6	4	32.0	8	3.8	13
LA14063083	1053	3	58	12	4.6	8	1.21	10	83.6	15	32.0	7	5.0	5
SSG UA114	1047	4	67	6	5.0	1	1.23	4	87.1	1	33.6	3	4.8	7
LA14063075	1046	5	69	2	4.3	15	1.23	4	85.1	7	34.1	2	3.7	14
DP 393	1034	6	47	15	5.0	1	1.19	14	84.6	10	31.5	11	4.7	8
Ark 0818-23	1016	7	51	14	4.5	11	1.19	15	83.7	14	33.3	4	4.4	10
AM UA48	1009	8	85	1	4.8	4	1.29	1	86.5	2	34.8	1	2.7	15
Ark 0822-75	966	9	66	7	4.7	5	1.24	3	84.2	12	31.7	9	5.1	3
Prem.Cot.Gen. 713	945	10	55	13	4.6	6	1.20	13	84.0	13	29.5	14	4.8	6
SSG UA107	927	11	68	5	4.5	11	1.22	8	86.3	3	31.6	10	4.2	12
SSG UA222	917	12	69	2	4.6	8	1.23	6	85.6	4	31.4	13	6.4	1
Ark 0822-48	915	13	64	8	4.9	3	1.25	2	84.2	11	31.5	12	5.1	4
UA212ne	907	14	62	10	4.5	11	1.21	11	85.2	6	29.4	15	5.5	2
Ark 0818-81	879	15	63	9	4.6	6	1.22	8	84.9	9	32.6	6	4.4	10
Mean	1000		63		4.6		1.22		85.0		32.1		4.6	
LSD <sub>0.10</sub>	149		ns		0.2		ns		1.5		1.6		0.6	
C.V.%	12.5		17.7		2.2		2.6		1.0		2.9		7.9	
R <sup>2</sup> x 100	55.3		57.7		88.8		57.3		74.6		84.4		91.9	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 35. Yield and related properties—2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	r	mil.	r	no.	r	no.	
Ark 0822-48	1222	1	42.1	3	94	12	43	11	11.3	6	8.2	2	6.730	1	15352	8	139	8
LA14063001	1137	2	42.6	2	98	8	45	8	10.6	12	7.9	5	6.507	4	18114	2	172	1
UA212ne	1069	3	42.8	1	101	4	48	4	10.2	13	7.8	7	6.250	5	16802	3	164	2
Ark 0822-75	1006	4	40.1	9	101	5	46	5	11.2	7	7.5	11	6.069	6	16189	4	148	5
LA14063075	976	5	41.1	4	104	2	44	9	9.6	15	6.8	14	6.509	3	14261	13	144	7
SSG UA222	961	6	40.7	5	102	3	43	11	11.1	8	7.8	6	5.600	7	14965	10	137	11
LA14063038	958	7	40.3	7	99	6	44	9	9.7	14	6.7	15	6.526	2	13551	14	136	12
LA14063083	917	8	40.5	6	108	1	43	11	10.9	11	7.7	9	5.427	8	15678	7	145	6
AM UA48	900	9	38.2	15	94	10	41	14	12.7	2	8.0	3	5.098	12	13455	15	113	15
DP 393	892	10	39.6	13	98	7	49	3	12.0	3	8.0	4	5.076	13	15922	6	139	10
SSG UA114	862	11	39.9	11	94	11	46	5	11.3	5	7.7	10	5.107	11	14687	12	133	14
Prem.Cot.Gen. 713	860	12	39.8	12	98	9	41	14	11.1	9	7.5	12	5.202	10	16166	5	149	4
Ark 0818-23	825	13	38.7	14	93	13	46	5	11.0	10	6.9	13	5.397	9	15045	9	139	9
SSG UA107	688	14	40	10	92	14	53	1	12.7	1	8.6	1	3.634	15	18524	1	155	3
Ark 0818-81	684	15	40.1	8	90	15	51	2	11.4	4	7.8	8	3.992	14	14936	11	135	13
Mean	935		40.4		98		45		11.1		7.7		5.598		15576		143	
LSD <sub>0.10</sub>	201		1.1		ns		ns		0.8		0.8		1.184		2002		18	
C.V.%	16.6		1.5		11.2		15.8		4.2		6.0		16.3		7.3		7.0	
R <sup>2</sup> x 100	60.7		90.3		27.8		47.9		88.1		72.4		62.8		77.9		80.7	

**Table 36. Fiber properties—2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint yield		Quality score		Fiber properties									
	lb/acre	r	r	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
							in.		%		g/tex		%	
Ark 0822-48	1222	1	73	4	4.9	5	1.29	3	85.9	5	31.3	12	6.3	1
LA14063001	1137	2	63	8	4.3	14	1.21	13	85.1	11	32.3	7	4.5	7
UA212ne	1069	3	65	7	4.4	13	1.24	8	85.8	6	31.1	13	5.1	4
Ark 0822-75	1006	4	71	6	4.3	15	1.27	5	85.1	11	31.5	9	4.8	6
LA14063075	976	5	74	3	4.4	11	1.28	4	85.0	13	33.6	2	3.2	14
SSG UA222	961	6	62	9	4.9	5	1.26	7	85.6	8	32.1	8	5.7	2
LA14063038	958	7	83	1	4.4	11	1.31	2	85.8	7	32.4	6	3.7	13
LA14063083	917	8	72	5	4.5	8	1.26	6	86.5	3	32.6	4	4.8	5
AM UA48	900	9	75	2	5.2	1	1.31	1	87.5	1	36.0	1	2.8	15
DP 393	892	10	40	15	5.0	2	1.19	15	85.6	8	31.4	10	4.3	8
SSG UA114	862	11	53	13	5.0	2	1.22	11	86.5	2	32.5	5	5.3	3
Prem.Cot.Gen. 713	860	12	43	14	4.7	7	1.19	14	84.3	15	30.6	14	4.1	10
Ark 0818-23	825	13	57	10	4.5	10	1.21	12	85.5	10	31.3	11	4.2	9
SSG UA107	688	14	54	12	4.5	8	1.23	10	84.4	14	30.6	15	4.1	10
Ark 0818-81	684	15	57	10	4.9	4	1.23	9	86.5	4	32.7	3	4.1	12
Mean	935		62		4.6		1.25		85.6		32.1		4.4	
LSD <sub>0.10</sub>	201		ns		0.3		ns		ns		ns		0.8	
C.V.%	16.6		25.2		42.0		3.9		1.6		4.7		9.6	
R <sup>2</sup> x 100	60.7		58.2		81.4		61.3		45.1		62.0		90.3	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 37. Yield and related properties–2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint yield		Lint frac.		Ht.	Open bolls		Seed index		Lint index		Seed/acre		Fibers/seed		Fiber density		
	lb/acre	r	%	r		cm	%	r	g	r	g	mil.	r	no.	r	no.	r	
LA14063001	1676	1	42.3	2	85	2	63	12	10.0	14	7.5	8	10.210	1	16967	3	167	2
DP 393	1541	2	39.5	8	79	10	74	5	11.3	6	7.4	9	9.402	5	15070	10	137	11
LA14063083	1535	3	39.4	10	80	8	59	13	11.6	2	7.6	5	9.164	7	16414	5	147	5
SSG UA114	1487	4	39.3	12	78	11	74	5	11.1	8	7.3	10	9.285	6	13620	13	125	14
UA212ne	1460	5	42.9	1	76	12	65	9	10.5	12	8.0	2	8.252	11	18315	1	174	1
Ark 0818-81	1445	6	40.8	3	75	14	83	3	10.9	10	7.6	6	8.660	9	15334	9	143	7
LA14063075	1439	7	40.5	4	81	6	64	11	9.2	15	6.4	15	10.190	2	13450	14	139	9
Prem.Cot.Gen. 713	1412	8	38.0	14	86	1	58	14	10.9	11	6.8	13	9.459	4	14329	11	133	13
LA14063038	1402	9	39.4	11	79	9	65	9	10.1	13	6.7	14	9.566	3	14075	12	138	10
SSG UA222	1387	10	39.1	13	81	7	51	15	11.1	9	7.2	11	8.722	8	17021	2	157	3
SSG UA107	1338	11	40.3	5	81	4	84	1	11.5	3	8.0	3	7.588	13	16654	4	149	4
AM UA48	1323	12	37.6	15	81	4	76	4	11.5	3	7.0	12	8.546	10	12146	15	109	15
Ark 0818-23	1279	13	40.2	6	74	15	84	1	11.1	7	7.5	7	7.689	12	15523	8	142	8
Ark 0822-48	1269	14	39.9	7	82	3	66	8	12.6	1	8.4	1	6.821	15	16000	6	135	12
Ark 0822-75	1261	15	39.5	9	75	13	74	5	11.5	5	7.6	4	7.523	14	15919	7	143	6
Mean	1417		39.9		79		69		11.0		7.4		8.738		15389		142	
LSD <sub>0.10</sub>	ns		1.2		ns		11		0.9		0.6		1.468		1465		14	
C.V.%	13.9		1.7		7.4		13.4		4.9		4.7		14.1		5.4		5.5	
R <sup>2</sup> x 100	50.6		89.2		55.1		64.6		81.9		83.1		59.3		88.6		89.0	

**Table 38. Fiber properties–2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint yield		Quality score		Fiber properties									
	lb/acre	r	r	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
							in.		%		g/tex		%	
LA14063001	1676	1	48	14	4.3	11	1.21	15	85.5	11	32.5	6	4.3	9
DP 393	1541	2	49	13	4.7	5	1.22	14	86.2	6	31.2	14	5.2	5
LA14063083	1535	3	58	10	4.4	9	1.26	9	84.9	14	31.7	13	5.1	7
SSG UA114	1487	4	64	8	4.8	2	1.27	8	88.1	1	31.9	10	5.4	3
UA212ne	1460	5	58	10	4.1	13	1.25	11	85.8	8	30.1	15	5.9	2
Ark 0818-81	1445	6	44	15	4.8	3	1.23	13	85.0	13	34.8	3	4.1	10
LA14063075	1439	7	86	1	4.1	13	1.33	2	87.5	2	32.5	5	4.1	11
Prem.Cot.Gen. 713	1412	8	54	12	4.5	6	1.25	11	84.6	15	32.5	6	4.4	8
LA14063038	1402	9	77	3	4.2	12	1.31	3	86.0	7	32.2	9	4.0	13
SSG UA222	1387	10	66	7	3.9	15	1.29	5	85.5	11	33.0	4	6.2	1
SSG UA107	1338	11	64	8	4.4	7	1.26	9	87.2	4	32.5	6	4.0	14
AM UA48	1323	12	79	2	5.0	1	1.34	1	87.5	3	36.9	1	2.8	15
Ark 0818-23	1279	13	70	4	4.4	7	1.28	7	86.9	5	34.8	2	4.1	11
Ark 0822-48	1269	14	67	6	4.8	3	1.30	4	85.7	9	31.9	11	5.3	4
Ark 0822-75	1261	15	69	5	4.4	9	1.29	6	85.7	10	31.9	11	5.2	5
Mean	1417		63		4.4		1.27		86.1		32.7		4.7	
LSD <sub>0.10</sub>	ns		11		0.4		0.04		ns		2.2		0.9	
C.V.%	13.9		10.2		4.7		1.6		1.4		3.8		10.7	
R <sup>2</sup> x 100	50.6		88.3		83.3		88.2		61.6		78.9		86.3	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 39. Yield and related properties—2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint		Lint		Open		Seed		Lint		Seed/		Fibers/		Fiber			
	yield	r	frac.	r	Ht.	r	bolts	r	index	r	index	r	acre	r	seed	r	density	r
	lb/acre		%		cm		%		g		g		mil.		no.		no.	
LA14063075	1547	1	40.4	3	107	6	63	10	9.7	15	6.7	15	10.460	1	12831	15	129	12
UA212ne	1489	2	42.3	1	104	10	61	11	11.3	11	8.5	1	7.971	5	16938	1	154	1
LA14063001	1468	3	41.0	2	116	2	54	15	10.5	12	7.5	12	8.840	4	15490	6	147	2
Ark 0822-48	1442	4	40.1	5	99	13	74	5	12.3	4	8.3	2	7.836	6	15760	2	135	7
Prem.Cot.Gen. 713	1433	5	39.5	10	114	3	60	13	10.3	14	6.9	14	9.490	2	15116	10	145	3
LA14063038	1401	6	39.6	8	123	1	68	8	10.4	13	7.0	13	9.105	3	13115	14	126	13
LA14063083	1347	7	40.2	4	112	4	56	14	11.7	8	8.1	5	7.517	9	15529	5	138	5
SSG UA114	1313	8	38.7	13	110	5	70	7	12.0	5	7.8	8	7.646	8	14290	12	124	14
Ark 0818-23	1304	9	39.0	11	100	12	83	2	11.8	7	7.7	11	7.710	7	15387	8	136	6
DP 393	1240	10	38.4	14	106	8	73	6	12.5	2	8.0	6	7.051	11	15340	9	130	11
Ark 0822-75	1214	11	38.9	12	104	9	75	4	12.0	6	7.8	9	7.072	10	15444	7	135	9
AM UA48	1208	12	37.3	15	103	11	64	9	13.5	1	8.2	4	6.665	12	14056	13	113	15
SSG UA222	1208	13	39.5	9	107	6	61	11	12.4	3	8.2	3	6.659	13	15671	4	134	10
SSG UA107	1087	14	40.1	6	98	14	89	1	11.7	8	8.0	7	6.186	15	15713	3	140	4
Ark 0818-81	1067	15	40.1	7	98	15	81	3	11.4	10	7.8	10	6.220	14	14912	11	135	8
Mean	1318		39.7		107		69		11.6		7.8		7.762		15039		135	
LSD <sub>0.10</sub>	152		1.3		10		11		0.8		0.7		0.897		1499		15	
C.V.%	9.7		1.9		8.2		13.0		3.8		5.2		9.7		5.7		6.2	
R <sup>2</sup> x 100	66.2		83.2		51.2		67.8		91.5		78.2		79.3		76.6		74.4	

**Table 40. Fiber properties—2018 Arkansas Conventional Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint		Quality		Fiber properties									
	yield	r	score	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Elongation	r
	lb/acre						in.		%		g/tex		%	
LA14063075	1547	1	74	2	4.7	11	1.28	4	87.0	2	33.3	3	3.2	13
UA212ne	1489	2	56	11	4.8	9	1.23	12	85.7	9	29.7	15	5.4	2
LA14063001	1468	3	68	6	4.5	15	1.27	5	85.7	9	31.8	11	4.2	9
Ark 0822-48	1442	4	58	9	5.0	5	1.26	7	84.9	13	32.2	10	5.7	1
Prem.Cot.Gen. 713	1433	5	40	14	4.6	12	1.19	15	82.9	15	30.6	14	4.1	10
LA14063038	1401	6	70	5	4.9	7	1.29	3	85.8	7	33.2	4	3.2	13
LA14063083	1347	7	58	9	4.9	6	1.25	9	85.7	9	32.4	9	4.5	5
SSG UA114	1313	8	54	12	5.1	2	1.24	11	86.5	4	32.9	8	4.7	4
Ark 0818-23	1304	9	72	4	4.6	13	1.27	5	86.8	3	33.2	4	4.0	11
DP 393	1240	10	39	15	5.1	2	1.21	14	84.7	14	31.4	12	4.4	7
Ark 0822-75	1214	11	78	1	4.6	13	1.30	2	85.8	8	33.0	7	4.4	6
AM UA48	1208	12	73	3	5.2	1	1.30	1	87.5	1	37.0	1	2.1	15
SSG UA222	1208	13	63	7	4.9	7	1.26	7	86.0	5	33.1	6	5.0	3
SSG UA107	1087	14	60	8	4.8	9	1.25	9	85.9	6	31.1	13	4.2	8
Ark 0818-81	1067	15	48	13	5.0	4	1.22	13	85.6	12	33.9	2	3.7	12
Mean	1318		61		4.8		1.25		85.8		32.6		4.2	
LSD <sub>0.10</sub>	152		15		ns		0.04		ns		2.4		0.9	
C.V.%	9.7		13.9		5.1		1.7		1.6		4.1		11.7	
R <sup>2</sup> x 100	66.2		80.4		61.6		82.0		54.0		75.9		87.3	

<sup>a</sup> UI = Fiber length uniformity index.

**Table 41. Morphological and host-plant resistance traits in the 2018 Arkansas Conventional Cotton Variety Test.**

Variety	Leaf pubescence <sup>a</sup>		Stem pubescence <sup>a</sup>		Bract trichomes <sup>b</sup>		Tarnished plant bug damage <sup>c</sup>		Bacterial blight <sup>d</sup>
	r	r	r	r	r	r	r	% sus.	
Americot	AM UA48	2.7	12		26.7	7	51	12	0
Ark AES	Ark 0818-23	3.2	7		23.8	14	49	9	2
Ark AES	Ark 0818-81	3.0	9		28.0	4	55	15	0
Ark AES	Ark 0822-48	2.6	13		27.7	5	50	10	0
Ark AES	Ark 0822-75	3.4	6		25.1	12	46	7	0
Monsanto	DP 393	4.0	4		23.9	13	53	14	56
LA AES	LA14063001	4.9	1		25.6	11	48	8	59
LA AES	LA14063038	3.6	5		27.2	6	51	13	9
LA AES	LA14063075	3.0	8		22.4	15	50	11	40
LA AES	LA14063083	2.9	11		25.7	10	45	6	18
PCG	Prem.Cot.Gen. 713	2.4	14		29.0	1	45	5	100
SSG	SSG UA107	1.9	15		28.3	2	42	3	0
SSG	SSG UA114	4.5	3		26.7	8	41	2	3
SSG	SSG UA222	4.9	2		25.9	9	44	4	3
Ark AES	UA212ne	3.0	9		28.1	3	29	1	2
	Ark 0628fg RF (sus.)						84	16	
Mean		3.3			26.3		49		19
LSD <sub>0.10</sub>		ns			ns		9		12
C.V.%		50.1			22.9		22.5		44.7
R <sup>2</sup> x 100		29.0			12.7		58.9		94.8

<sup>a</sup> Leaf pubescence rated at Keiser (6 plants per plots, 6 reps) using scale of 1 (smooth leaf) to 9 (pilose, very hairy). Stem pubescence was not rated in 2018.

<sup>b</sup> Marginal trichome density of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

<sup>c</sup> Response 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 8 times.

<sup>d</sup> Varieties/breeding lines were planted in flats (3 replications, 10 seed/plot) in greenhouse, and scratch inoculated with *citris* pv. *malvacearum*. The inoculum was obtained from naturally infected leaves collected at the 2017 Keiser location. Scratches were examined for water-soaking, and % of susceptible plants were determined.

Table 42. Two-year and three-year average lint yields (lb/acre) for conventional varieties at the four locations of the 2016–2018 Arkansas Cotton Variety Test.

Variety	Keiser		Judd Hill		Marianna		Rohwer		All	
	Irrigated	r	Irrigated	r	Irrigated	r	Irrigated	r	locations	r
	lb/acre		lb/acre		lb/acre		lb/acre		lb/acre	
<b>Two-year (2017–2018) means</b>										
Ark 0822-48	878	5	1354	1	1038	4	1285	2	1139	1
UA212ne	885	4	1129	3	1126	1	1348	1	1122	2
Ark 0822-75	871	6	1168	2	1032	5	1139	5	1052	3
SGS UA114	863	7	1011	6	1114	2	1164	3	1038	4
SGS UA222	905	2	1055	4	997	7	1145	4	1025	5
AM UA48	905	1	1031	5	971	9	1098	7	1001	6
Ark 0818-23	885	3	983	7	997	8	1131	6	999	7
Ark 0818-81	851	9	892	8	1085	3	1058	8	971	8
SGS UA107	855	8	853	9	1002	6	1044	9	938	9
Mean										
<b>Three-year (2016–2018) means</b>										
SSG UA 114	898	4	1023	2	1150	2	1014	1	1021	1
SSG UA222	957	1	1034	1	1107	3	985	3	1021	2
SSG UA 107	903	3	945	4	1153	1	960	4	990	3
AM UA48	919	2	1002	3	1004	7	992	2	979	4
Mean										





**Appendix Table A1. Lint yield and fiber properties—Ashley county transgenic variety test.**

<b>Cooperator:</b>	Bruce Bond				<b>Date Planted:</b>	5/10/2018				
<b>Soil Type:</b>	Hebert Silt Loam				<b>Date of Harvest:</b>	11/2/2018				
<b>Irrigation:</b>	Furrow				<b>Replications:</b>	4				
<b>Agent:</b>	Kevin Norton									
Variety	Lint		Fiber properties							
	yield	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r
	lb/acre				in.		%		g/tex	
DP 1646 B2XF	1378	1	4.78	5	1.26	1	83.2	7	29.3	8
DG 3385 B2XF	1271	2	4.90	3	1.17	9	83.9	2	28.1	11
NG 3729 B2XF	1221	3	4.85	4	1.22	3	83.8	4	30.2	6
DG 3214 B2XF	1205	4	5.05	1	1.20	4	83.9	3	30.3	5
NG 5007 B2XF	1193	5	4.60	8	1.19	5	82.5	10	29.0	10
ST 5471 GLTP	1189	6	4.68	6	1.18	8	83.1	8	30.8	3
PHY 350 W3FE	1142	7	4.33	11	1.19	6	83.4	6	30.4	4
DP 1820 B3XF	1126	8	5.03	2	1.25	2	83.1	9	32.1	1
ST 5122 GLT	1102	9	4.40	10	1.15	11	81.9	11	30.2	7
DP 1518 B2XF	1096	10	4.63	7	1.19	7	83.5	5	29.2	9
PHY 430 W3FE	1093	11	4.58	9	1.17	10	84.2	1	31.2	2
Mean	1183		4.7		1.19		83.3		30.1	
Var. LSD <sub>0.05</sub>	85		0.3		0.03		1.0		1.4	
C.V.%	5.0		3.8		1.9		0.9		3.2	
Prob (var)	0.0001		0.0001		0.001		0.0028		0.0002	

<sup>a</sup>UI = Fiber length uniformity index.**Appendix Table A2. Lint yield and fiber properties—Clay county transgenic variety test.**

<b>Cooperator:</b>	David Cagle				<b>Date Planted:</b>	5/3/2018						
<b>Soil Type:</b>	Fountain Silt Loam				<b>Date of Harvest:</b>	10/9/2018						
<b>Irrigation:</b>	Furrow				<b>Replications:</b>							
<b>Agent:</b>	Allison Howell											
Variety	Lint		Fiber properties									
	yield	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r	Leaf grade	r
	lb/acre				in.		g/tex		g/tex			
ST 5471 GLTP	1606	1	4.6	8	1.16	4	81.8	7	31.3	1	3.5	5
NG 3729 B2XF	1567	2	5.1	1	1.19	2	82.6	4	29.3	8	3.8	2
DG 3385 B2XF	1565	3	5.1	2	1.16	5	83.1	2	27.9	10	3.1	7
DP 1725 B2XF	1558	4	4.8	5	1.16	6	81.8	8	29.4	7	2.9	9
DG 3214 B2XF	1497	5	5.0	3	1.19	3	83.2	1	29.9	5	4.3	1
DP 1646 B2XF	1473	6	4.7	6	1.22	1	82.5	5	29.7	6	3.3	6
PHY 320 W3FE	1458	7	4.6	9	1.16	7	83.1	3	31.2	3	3.6	3
PHY 300 W3FE	1366	8	4.9	4	1.15	9	82.4	6	31.3	2	3.6	4
ST 5122 GLT	1362	9	4.7	7	1.13	10	81.0	10	30.6	4	3.1	8
NG 5007 B2XF	1357	10	4.5	10	1.16	8	81.8	9	28.1	9	2.8	10
Mean	1481		4.8		1.17		82.3		29.9		3.4	

<sup>a</sup>UI = Fiber length uniformity index.

**Appendix Table A3. Lint yield and fiber properties–Craighead county transgenic variety test.**

<b>Cooperator:</b> Brannon Qualls		<b>Date Planted:</b> 5/7/2018								
<b>Soil Type:</b> Fountain Silt Loam		<b>Date of Harvest:</b> 10/30/2018								
<b>Irrigation:</b> Furrow		<b>Replications:</b> 2								
<b>Agent:</b> Branon Thiesse, Chris Grimes										
<b>Variety</b>	<b>Lint</b>		<b>Fiber properties</b>							
	<b>yield</b>	<b>r</b>	<b>Micronaire</b>	<b>r</b>	<b>Length</b>	<b>r</b>	<b>UI<sup>a</sup></b>	<b>r</b>	<b>Strength</b>	<b>r</b>
	<b>lb/acre</b>				<b>in.</b>		<b>%</b>		<b>g/tex</b>	
DP 1646 B2XF	1886	1	4.85	6	1.25	2	82.4	9	29.8	8
DG 3385 B2XF	1843	2	5.25	2	1.17	9	83.7	6	27.4	12
ST 5471 GLTP	1826	3	4.85	7	1.19	7	83.8	5	30.7	4
PHY 430 W3FE	1800	4	5.05	3	1.16	12	84.2	1	29.6	9
ST 5122 GLT	1786	5	4.70	11	1.17	10	82.4	10	30.3	5
DP 1518 B2XF	1758	6	4.75	10	1.18	8	81.9	12	29.2	10
NG 3729 B2XF	1751	7	5.30	1	1.20	3	83.3	8	29.9	7
PHY 320 W3FE	1746	8	4.85	8	1.20	4	84.2	2	31.8	3
NG 5007 B2XF	1713	9	4.60	12	1.17	11	82.2	11	28.1	11
DP 1820 B3XF	1710	10	5.05	4	1.27	1	84.1	3	33.4	1
DG 3214 B2XF	1681	11	5.05	5	1.20	5	84.1	4	30.0	6
PHY 330 W3FE	1533	12	4.85	9	1.20	6	83.7	7	32.1	2
Mean	1753		4.9		1.19		83.3		30.2	
Var. LSD <sub>0.05</sub>	157		0.5		0.03		1.5		2.0	
C.V.%	4.1		4.4		1.1		0.8		3.0	
Prob (var)	0.0313		0.1481		0.0001		0.0319		0.002	

<sup>a</sup>UI = Fiber length uniformity index.

**Appendix Table A4. Lint yield and fiber properties—Jefferson county transgenic variety test.**

<b>Cooperator:</b> David Sites		<b>Date Planted:</b> 5/8/2018								
<b>Soil Type:</b> Rilla Silt Loam		<b>Date of Harvest:</b> 11/21/2018								
<b>Irrigation:</b> Furrow		<b>Replications:</b> 1								
<b>Agent:</b> Kurt Beaty										
<b>Variety</b>	<b>Lint</b>		<b>Fiber properties</b>							
	<b>yield</b>	<b>r</b>	<b>Micronaire</b>	<b>r</b>	<b>Length</b>	<b>r</b>	<b>UI<sup>a</sup></b>	<b>r</b>	<b>Strength</b>	<b>r</b>
	<b>lb/acre</b>				<b>in.</b>		<b>%</b>		<b>g/tex</b>	
DP 1646 B2XF	2038	1	4.5	5	1.24	1	81.7	7	29.8	7
ST 5471 GLTP	1784	2	4.5	6	1.19	5	83.1	1	31.6	2
ST 5122 GLT	1730	3	4.5	7	1.17	10	81.7	8	29.7	8
NG 5007 B2XF	1684	4	4.5	8	1.18	8	81.5	9	28.4	11
DG 3385 B2XF	1662	5	4.6	4	1.18	9	82.9	3	28.7	10
NG 3729 B2XF	1658	6	4.9	1	1.21	3	83.0	2	30.9	3
DP 1820 B3XF	1652	7	4.8	2	1.23	2	82.3	4	31.7	1
PHY 350 W3FE	1649	8	4.1	11	1.20	4	82.0	6	30.7	4
PHY 430 W3FE	1639	9	4.3	9	1.16	11	81.1	10	30.4	6
DP 1518 B2XF	1584	10	4.3	10	1.19	6	81.1	11	29.1	9
DG 3214 B2XF	1572	11	4.7	3	1.19	7	82.2	5	30.4	5
Mean	1696		4.5		1.19		82.0		30.1	

<sup>a</sup> UI = Fiber length uniformity index.

**Appendix Table A5. Lint yield and fiber properties—Lee county transgenic variety test.**

<b>Cooperator:</b> Trent Felton		<b>Date Planted:</b> 5/7/2018								
<b>Soil Type:</b> Henry Silt Loam		<b>Date of Harvest:</b> 10/29/2018								
<b>Irrigation:</b> Furrow		<b>Replications:</b> 4								
<b>Agent:</b> Stan Baker										
<b>Variety</b>	<b>Lint</b>		<b>Fiber properties</b>							
	<b>yield</b>	<b>r</b>	<b>Micronaire</b>	<b>r</b>	<b>Length</b>	<b>r</b>	<b>UI<sup>a</sup></b>	<b>r</b>	<b>Strength</b>	<b>r</b>
	<b>lb/acre</b>				<b>in.</b>		<b>%</b>		<b>g/tex</b>	
ST 5122 GLT	1386	1	4.5	10	1.16	9	81.8	10	30.5	1
DP 1646 B2XF	1385	2	4.8	5	1.23	1	82.3	7	28.9	9
ST 5471 GLTP	1377	3	4.6	8	1.17	7	81.9	9	29.6	5
DG 3385 B2XF	1325	4	5.1	2	1.15	10	83.4	2	27.6	10
DP 1518 B2XF	1316	5	4.7	7	1.20	3	82.6	4	29.9	3
NG 3729 B2XF	1299	6	5.0	3	1.21	2	82.8	3	29.8	4
NG 5007 B2XF	1255	7	4.6	9	1.17	8	82.1	8	27.4	11
PHY 350 W3FE	1201	8	4.5	11	1.19	5	82.6	5	30.0	2
DG 3214 B2XF	1195	9	5.2	1	1.19	6	83.5	1	29.4	6
PHY 430 W3FE	1192	10	4.8	6	1.11	11	82.6	6	29.4	7
DP 1820 B3XF	1104	11	4.9	4	1.20	4	81.6	11	29.3	8
Mean	1276		4.8		1.18		82.5		29.2	
Var. LSD <sub>0.05</sub>	157		0.2		0.04		1.5		1.4	
C.V.%	8.5		2.9		2.1		1.3		3.3	
Prob (var)	0.0098		0.0001		0.0001		0.2447		0.0014	

<sup>a</sup> UI = Fiber length uniformity index.

**Appendix Table A6. Lint yield and fiber properties—Lonoke county transgenic variety test.**

<b>Cooperator:</b> Rick Bransford		<b>Date Planted:</b> 5/11/2018								
<b>Soil Type:</b> Hebert Silt Loam		<b>Date of Harvest:</b> 11/3/2018								
<b>Irrigation:</b> Furrow		<b>Replications:</b> 1								
<b>Variety</b>	<b>Lint</b>		<b>Fiber properties</b>							
	<b>yield</b>	<b>r</b>	<b>Micronaire</b>	<b>r</b>	<b>Length</b>	<b>r</b>	<b>UI<sup>a</sup></b>	<b>r</b>	<b>Strength</b>	<b>r</b>
	<b>lb/acre</b>				<b>in.</b>		<b>%</b>		<b>g/tex</b>	
DP 1646 B2XF	1206	1	3.6	9	1.28	1	82.8	10	28.8	12
ST 5471 GLTP	1087	2	3.8	5	1.24	4	83.9	7	30.8	4
ST 5122 GLT	1058	3	3.8	6	1.20	9	82.4	11	31.5	1
DG 3385 B2XF	1043	4	4.0	1	1.24	5	84.9	1	29.2	8
DP 1725 B2XF	1033	5	3.9	3	1.22	7	84.8	2	30.3	6
DP 1820 B3XF	1004	6	3.4	11	1.18	10	83.2	8	30.9	2
NG 5007 B2XF	1000	7	.	.	.	.	.	.	.	.
PHY 430 W3FE	978	8	4.0	2	1.28	2	84.0	6	30.9	3
DG 3214 B2XF	970	9	3.9	4	1.21	8	84.7	3	28.8	13
NG 3729 B2XF	969	10	3.8	7	1.24	6	84.2	5	28.9	10
PHY 350 W3FE	914	11	3.4	12	1.16	13	82.3	12	29.1	9
CPS 18827 B3XF	909	12	3.7	8	1.17	11	81.0	13	29.3	7
DP 1518 B2XF	861	13	3.4	13	1.28	3	84.3	4	30.5	5
DG 3433 B2XF	814	14	3.6	10	1.17	12	82.9	9	28.9	11
Mean	989		3.7		1.22		83.5		29.8	

<sup>a</sup> UI = Fiber length uniformity index.**Appendix Table A7. Lint yield and fiber properties—Mississippi county transgenic variety test.**

<b>Cooperator:</b> Jason Bennett		<b>Date Planted:</b> 5/10/2018								
<b>Soil Type:</b> Dundee Silt Loam		<b>Date of Harvest:</b> 10/29/2018								
<b>Irrigation:</b> Furrow		<b>Replications:</b> 1								
<b>Agent:</b> Ray Benson, Shawn Lancaster										
<b>Variety</b>	<b>Lint</b>		<b>Fiber properties</b>							
	<b>yield</b>	<b>r</b>	<b>Micronaire</b>	<b>r</b>	<b>Length</b>	<b>r</b>	<b>UI<sup>a</sup></b>	<b>r</b>	<b>Strength</b>	<b>r</b>
	<b>lb/acre</b>				<b>in.</b>		<b>%</b>		<b>g/tex</b>	
ST 5471 GLTP	1975	1	3.9	8	1.19	6	83.0	10	30.9	5
ST 5122 GLT	1858	2	4.5	2	1.19	7	84.6	1	31.5	2
DP 1820 B3XF	1747	3	4.4	3	1.28	1	83.4	7	32.8	1
PHY 430 W3FE	1716	4	3.8	11	1.19	8	84.3	3	30.8	7
DP 1646 B2XF	1701	5	4.4	4	1.27	2	83.4	8	30.7	8
PHY 330 W3FE	1682	6	4.1	7	1.18	10	81.6	11	29.9	10
NG 3729 B2XF	1569	7	4.2	6	1.23	3	84.1	4	31.1	4
DP 1518 B2XF	1436	8	4.3	5	1.19	9	84.4	2	30.8	6
NG 5007 B2XF	1427	9	3.9	9	1.20	5	83.3	9	29.9	9
DG 3385 B2XF	1427	10	4.8	1	1.17	11	83.9	5	28.5	11
DG 3214 B2XF	1373	11	3.9	10	1.23	4	83.9	6	31.1	3
Mean	1628		4.2		1.21		83.6		30.7	

<sup>a</sup> UI = Fiber length uniformity index.

**Appendix Table A8. Lint yield and fiber properties—Mississippi county transgenic variety test.**

<b>Cooperator:</b>	David Wildy				<b>Date Planted:</b>	5/16/2018				
<b>Soil Type:</b>	Routon-Dundee-Crevasse Com				<b>Date of Harvest:</b>	10/30/2018				
<b>Irrigation:</b>	Pivot				<b>Replications:</b>	4				
<b>Agent:</b>	Ray Benson, Shawn Lancaster									
Variety	Lint		Fiber properties							
	yield	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r
	lb/acre				in.		%		g/tex	
DP 1614 B2XF	1857	1	4.6	3	1.20	4	83.9	4	29.7	6
NG 3729 B2XF	1855	2	4.6	4	1.22	2	84.3	2	30.7	4
ST 5471 GLTP	1838	3	4.0	12	1.20	5	83.0	11	30.9	3
DP 1820 B3XF	1832	4	4.9	2	1.22	3	84.1	3	31.9	1
DG 3214 B2XF	1817	5	5.1	1	1.18	8	83.5	6	29.1	9
ST 5122 GLT	1791	6	4.2	9	1.20	6	83.3	9	29.1	8
DP 1646 B2XF	1740	7	4.3	6	1.25	1	83.1	10	29.0	10
NG 5007 B2XF	1702	8	4.3	7	1.18	9	82.2	12	27.4	12
PHY 430 W3FE	1671	9	4.3	8	1.17	11	83.6	5	30.0	5
DP 1518 B2XF	1651	10	4.2	10	1.18	10	83.5	7	29.5	7
DG 3385 B2XF	1644	11	4.6	5	1.17	12	83.5	8	28.8	11
PHY 330 W3FE	1496	12	4.1	11	1.20	7	84.6	1	31.5	2
Mean	1741		4.4		1.20		83.5		29.8	
Var. LSD <sub>0.05</sub>	237		0.5		0.04		1.0		1.4	
C.V.%	9.5		7.4		2.4		0.8		3.3	
Prob (var)	0.0902		0.0004		0.0056		0.0016		0.0001	

<sup>a</sup>UI = Fiber length uniformity index.

**Appendix Table A9. Lint yield and fiber properties—Poinsett county transgenic variety test.**

<b>Cooperator:</b>	Marty White and Jesse Flye				<b>Date Planted:</b>	5/2/2018				
<b>Soil Type:</b>	Hayti Soil				<b>Date of Harvest:</b>	10/3/2018				
<b>Irrigation:</b>	Furrow				<b>Replications:</b>	4				
<b>Agent:</b>	Craig Allen, Jeffery Works									
Variety	Lint		Fiber properties							
	yield	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r
	lb/acre				in.		%		g/tex	
DP 1646 B2XF	1781	1	4.0	10	1.25	1	83.2	6	30.7	4
ST 5471 GLTP	1652	2	4.2	7	1.16	9	82.3	9	30.5	7
DG 3214 B2XF	1575	3	4.7	1	1.21	5	83.4	4	30.7	5
ST 5122 GLT	1558	4	4.4	4	1.16	10	81.6	11	30.6	6
DG 3385 B2XF	1507	5	4.3	6	1.17	8	83.0	7	28.3	11
DP 1518 B2XF	1488	6	4.0	11	1.22	4	83.6	3	30.1	9
NG 3729 B2XF	1463	7	4.6	2	1.23	3	83.4	5	30.4	8
DP 1820 B3XF	1447	8	4.6	3	1.25	2	83.8	1	33.7	1
PHY 330 W3FE	1365	9	4.2	8	1.21	6	83.8	2	33.7	2
PHY 430 W3FE	1349	10	4.4	5	1.15	11	82.8	8	30.8	3
NG 5007 B2XF	1339	11	4.1	9	1.20	7	82.0	10	29.0	10
Mean	1502		4.3		1.20		83.0		30.8	
Var. LSD <sub>0.05</sub>	193		0.5		0.10		1.1		1.6	
C.V. %	8.9		8.8		1.7		0.9		3.6	
Prob (var)	0.0015		0.0998		0.0001		0.0062		0.0001	

<sup>a</sup> UI = Fiber length uniformity index.

**Appendix Table A10. Lint yield and fiber properties—St Francis county transgenic variety test.**

<b>Cooperator:</b>	Joe Whittenton				<b>Date Planted:</b>	5/6/2018				
<b>Soil Type:</b>	Loring silt loam				<b>Date of Harvest:</b>	10/29/2018				
<b>Irrigation:</b>	Furrow				<b>Replications:</b>	4				
<b>Agent:</b>	Cody Griffin									
Variety	Lint		Fiber properties							
	yield	r	Micronaire	r	Length	r	UI <sup>a</sup>	r	Strength	r
	lb/acre				in.		%		g/tex	
DP 1646 B2XF	2002	1	4.9	4	1.24	1	83.2	6	29.5	8
ST 5122 GLT	1976	2	4.9	5	1.15	10	82.6	10	31.2	3
ST 5471 GLTP	1872	3	4.7	11	1.18	5	82.3	11	30.7	5
NG 3729 B2XF	1754	4	5.3	1	1.21	3	84.3	2	31.1	4
DP 1820 B3XF	1742	5	5.1	3	1.23	2	83.5	4	32.2	1
PHY 430 W3FE	1701	6	4.9	6	1.13	11	83.0	8	29.7	7
DP 1518 B2XF	1684	7	4.8	7	1.18	6	83.1	7	29.4	10
DG 3214 B2XF	1680	8	5.2	2	1.18	7	84.6	1	29.7	6
PHY 330 W3FE	1675	9	4.8	8	1.19	4	83.9	3	32.0	2
DG 3385 B2XF	1620	10	4.8	9	1.17	8	83.5	5	29.4	11
NG 5007 B2XF	1167	11	4.8	10	1.17	9	82.9	9	29.4	9
Mean	1716		4.9		1.18		83.3		30.4	
Var. LSD <sub>0.05</sub>	347		0.3		0.02		1.0		1.6	
C.V.%	14.0		4.8		1.3		0.8		3.6	
Prob (var)	0.0045		0.0277		0.0001		0.0013		0.0018	

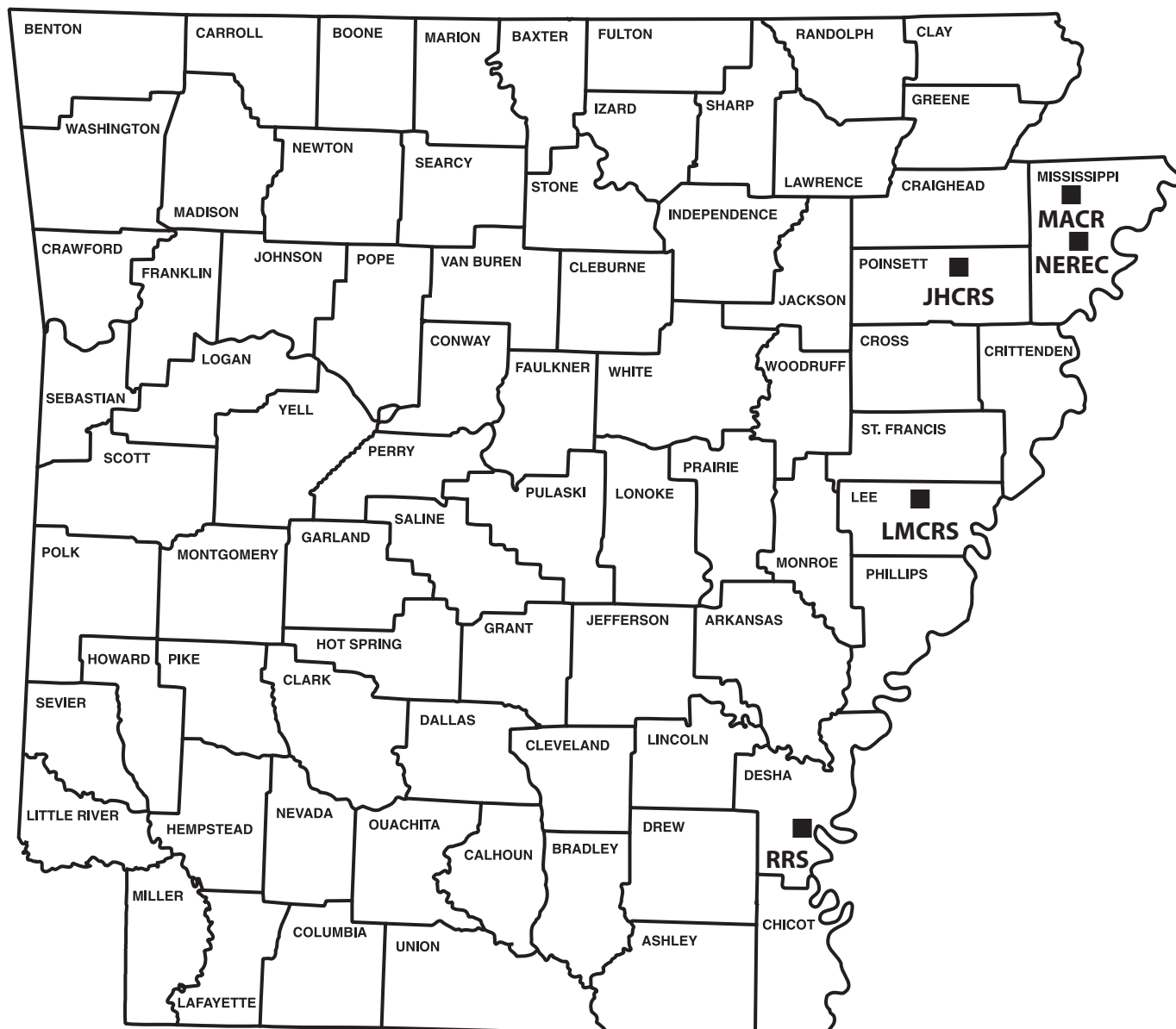
<sup>a</sup> UI = Fiber length uniformity index.

**Appendix Table A11. Leaf Grade—Percent of bales in a full-sized module ginned in a commercial gin for Clay county transgenic variety test.**

Variety	Leaf Grade 1–2 (%)	Leaf Grade 3 (%)	Leaf Grade 4 (%)	Leaf Grade 5 (%)
DG 3214 B2XF	0	0	73	27
DG 3385 B2XF	0	87	13	0
DP 1646 B2XF	0	73	27	0
DP 1725 B2XF	6	94	0	0
NG 3729 B2XF	0	19	81	0
NG 5007 B2XF	21	79	0	0
PHY 300 W3FE	0	36	64	0
PHY 320 W3FE	7	27	66	0
ST 5122 GLT	7	79	14	0
ST 5471 GLTP	0	53	41	6



# COTTON VARIETY TEST LOCATIONS



- JHCRS** - Judd Hill Cooperative Research Station, near Trumann
- LMCRS** - Lon Mann Cotton Research Station, Marianna
- MACR** - Manila Airport Cotton Research Farm, Manila
- NEREC** - Northeast Research and Extension Center, Keiser
- RRS** - Rohwer Research Station, Rohwer

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