

Arkansas Cotton Variety Tests 2024

F. Bourland • J. Gann • B. Lovelady
B. Guest Jr. • J. McAlee • L. Martin
Z. Treadway • C. Henderson

U of A
DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System



ARKANSAS AGRICULTURAL EXPERIMENT STATION

April 2025

Research Series 711

This publication is available on the internet at: <https://aaes.uada.edu/communications/publications/> and at <https://aaes.uada.edu/variety-testing/>

Technical editing and cover design by Gail Halleck.

Photo Credit: Judd Hill cotton plots in 2024 showing excellent crop growth prior to the effects of Verticillium wilt (U of A System Division of Agriculture photo by Jerri Gann).

Arkansas Agricultural Experiment Station (AAES), University of Arkansas System Division of Agriculture, Fayetteville. Deacue Fields, Vice President for Agriculture; Jean-François Meullenet, AAES Director and Senior Associate Vice-President for Agriculture–Research. WWW/CC2025.

Pursuant to 7 CFR § 15.3, the University of Arkansas System Division of Agriculture offers all its Extension and Research programs and services (including employment) without regard to race, color, sex, national origin, religion, age, disability, marital or veteran status, genetic information, sexual preference, pregnancy or any other legally protected status, and is an equal opportunity institution.

ISSN: 1941-1537 CODEN: AKAMA6

**Arkansas
Cotton
Variety Tests
2024**

**F. Bourland
J. Gann
B. Lovelady
B. Guest Jr.
J. McAlee
L. Martin
Z. Treadway
C. Henderson**

**Arkansas Agricultural Experiment Station
University of Arkansas System
Division of Agriculture
Fayetteville, Arkansas 72704**

Summary

The primary goal of the Arkansas Cotton Variety Tests 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). The 2024 tests at Keiser were adversely affected by excessive rain and subsequent slow drainage, which hindered plant development and insect control. Yields from the Keiser tests are reported but not included in the overall location means. Entries in the 2024 Arkansas Cotton Variety Tests were evaluated in two groups—transgenic and conventional varieties. The 44 entries in the transgenic test included 15 B3XF, 18 B3TXF, and 11 B3TXF lines, which were evaluated at all five locations. Five of ten varieties having the ThryvOn® technology (B3TXF), which were evaluated in the 2023 Arkansas Cotton Variety Tests, were also tested in 2024. The conventional test included 12 entries, which were 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, stem 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 2024 report includes results of large-plot variety tests in 7 counties that were coordinated by Zachary Treadway.

Contents

Introduction	3
Materials and Methods	3
Results	4
Literature Cited	5
Acknowledgments	5
Participants and entries in the 2024 Arkansas Cotton Variety Tests (Table 1)	7
Production information for all locations (Table 2)	8
Environmental conditions (Table 3)	9

Tables

Transgenic Variety Test:

All locations (Tables 4–5)	10
Keiser (Tables 6–7)	12
Judd Hill (Tables 8–9)	14
Marianna (Tables 10–11)	16
Rohwer (Tables 12–13)	18
Manila (Tables 14–15)	20
Morphological and host-plant resistance traits (Table 16)	22
2-year and 3-year yield averages (Table 17)	23

Conventional Variety Test:

All locations (Tables 18–19)	24
Keiser (Tables 20–21)	25
Judd Hill (Tables 22–23)	26
Marianna (Tables 24–25)	27
Rohwer (Tables 26–27)	28
Morphological and host-plant resistance traits (Table 28)	29
2-year and 3-year yield averages (Table 29)	29

County Large-Plot, Replicated Variety Evaluation:

Appendix Tables A1–A9	30
---	----

Arkansas Cotton Variety Tests 2024

*F. Bourland, J. Gann, B. Lovelady, B. Guest Jr.,
J. McAlee, L. Martin, Z. Treadway, and C. Henderson¹*

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 adaptability of varieties to particular cotton-growing regions of the state. Bourland et al. (2000) documented several unintentional biases that 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 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 2024 plots at Manila were oversprayed with dicamba, the dicamba-susceptible varieties were eliminated from analyses.

Materials and Methods

The 44 entries in the transgenic test included 15 B3XF, 18 B3TXF, and 11 W3FE lines, of which 18 were included in the 2023 Arkansas Cotton Variety Tests (Table 1). The 18 B3TXF lines included 5 that were also in the 2023 test. Varieties having ThryvOn® technology had not been evaluated in the Arkansas Cotton Variety Tests prior to 2023. The conventional test included 12 entries, all developed in the University of Arkansas System Division of Agriculture's Cotton Breeding Program. Six of these were in the 2023 test. All entries of each test 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. The transgenic test was evaluated at each site, and the conventional test was evaluated at all sites except Manila. The conventional tests were in the same fields as the transgenic test but were in different areas of the fields. Cultural practices and weather data (heat units and rainfall) associated with the test sites are listed in Tables 2 and 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 3.5 seed/row ft). All varieties were planted in 2-row plots on 38-inch centers and ranged from 48 to 50 feet in length (before alleys were cut). 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. 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 4 replications prior to defoliation.

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

Bract Variables. As all plants approached physiological cut-out, 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 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 two variety tests were evaluated for response to TPB in a separate field at Keiser. The TPB test included 8 replications of 1-row plots (22 feet long on 38-inch wide rows). Four rows of a susceptible Frego-bract line were planted between the tests. The TPB tests and border rows were planted on May 30 and received limited insecticide treatment for TPB infestations. In previous years, Response to TPB was determined by examining white flowers (up to 6 flowers/plot/day for 6 days in early to mid-August) for the presence of anther damage. The accumulative percentage of damaged flowers ("dirty flowers") was

¹ F. Bourland is a Professor and Altheimer Chair for cotton research and development, J. Gann is a Program Associate, and B. Lovelady is a Program Assistant at the Northeast Research and Extension Center; B. Guest Jr. is a Program Assistant at the Lon Mann Cotton Research Station; J. McAlee is the Resident Director at the Lon Mann Cotton Research Station; L. Martin is a Resident Director at the Rohwer Research Station; Z. Treadway is an Assistant Professor/Cotton Extension Agronomist and C. Henderson is a Program Associate at the Jackson County Extension Center.

not determined in 2024 because TPB populations were intense and hindered flower production. Each plot was visually rated for boll load using a scale from 0 (no bolls) to 10 (excellent boll load) on October 28.

Bacterial Blight. Entries in the two 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 in 2023. Scratches were examined for water-soaking, and the percent of susceptible plants was determined.

Verticillium Wilt. Relative yields of varieties over the 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 physiological cutout and before harvest. Average plant heights for varieties were determined by measuring from the soil surface to the terminal of one average-sized plant in each of the two rows. Plot means (average of the two measurements) were evaluated.

% Open Bolls. Near the time of the first application of defoliants, the percentage of open bolls was estimated from the front and back of each plot, then averaged for each plot. Open bolls data were not obtained in the 2024 Manila and Rohwer tests.

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 seedcotton 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. In order to reflect market demand for fiber quality, a weighted quality score (Q-score) was calculated as described by Bourland et al. (2010). Parameters (and weightings) 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 the fuzzy seed index (weight of 100 seed).

Seed Per Acre. For each plot, an estimate of the number of seed per acre was determined by multiplying seedcotton yield (pounds/acre converted to grams/acre) times average seed percentage (the percentage of seed weight to seedcotton weight in a 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 the lint weight from the ginned sample by the number of seed per sample (estimated using average seed weight), then multiplying by 100.

Seed Score. Seed-score (S-score) attempts to normalize seed index and lint index into a single index with penalties for both high and low SI values and no penalty for high LI values (Bourland et

al., 2022). S-score may vary from 0 to 100, with higher values indicating varieties having the optimum seed size and weight of lint per seed.

Fibers Per Seed. The number of fibers per seed was estimated by dividing the lint index by the estimated weight of individual fibers. The weight of an individual fiber was estimated by: fiber length $\times$ length uniformity $\times$ (micronaire/1,000,000).

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

Lint Yield. Seedcotton yield per plot (determined by mechanical cotton picker) was converted to seedcotton yield per acre and then multiplied by average lint percentage (determined by variety and location) to estimate lint per acre.

Yield Comparisons

Uncontrolled variation is inherent to the 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 interpret data. The statistical tool used to compare means in these tests was Fisher's Protected Least Significant Difference (LSD). An LSD was calculated when the F value from 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 2024 production season.

Heat units in 2024 exceeded historical averages at each Arkansas location with less deviation at Rohwer (south) than at Keiser (north) and Marianna (central) (Table 3). Daily high temperatures exceeded 95 °F on 15 days at Marianna (mostly early July and 11 days in August) and 9 days at Keiser (mostly late June, early July and 5 days in August). Rainfall totals in 2024 at Rohwer, Marianna, and Keiser were lower, above, and near, respectively, the historical

averages for each location. Very low rainfall in October at each location provided excellent harvest conditions.

Performance data of entries in the 2024 Transgenic Cotton Variety Tests at Manila, Keiser, Judd Hill, Marianna, and Rohwer are provided in Tables 4 through 15, with lint yield and yield-related variables in the even-numbered tables and fiber properties in the odd-numbered tables. Performance data across locations are presented in Tables 4 and 5. Morphological and host-plant resistance measurements for the 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 for the 2024 Conventional Cotton Variety Tests at Keiser, Judd Hill, Marianna, and Rohwer are provided in Tables 18 through 27, 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 28. Two- and three-year yield means for the conventional entries evaluated in previous years are in Table 29.

The following are other observations associated with each test site:

Keiser (Tables 6, 7, 20, and 21). Due to high weed pressure, the variety test was moved from field N6 to field S7 at the Northeast Research and Extension Center. Planting was delayed until 28 May due to excessive rain and poor drainage on the lower end of field. Excellent stands were obtained in most plots. Due to consistent rainfall occurring in May through July and slow drainage, the plots were not irrigated. In retrospect, the plots may have benefited from a late-season irrigation. Plots were harvested on 22 October. Although lint yields were relatively high, confidence in lint yield data from the test is low due to high unexplained variability.

Judd Hill (Tables 8, 9, 22, and 23). Plots at Judd Hill were planted on 30 April, and excellent stands were achieved. Plants grew well and established excellent boll loads. However, the high boll loads did not produce high yields. Verticillium wilt was intense, particularly late in the season, and apparently reduced harvest efficiency. Plots were harvested on 26–27 October.

Marianna (Tables 10, 11, 24, and 25). Plots were planted on 1 May, and achieved good stands. Pigweed pressure in the 2024 tests was relatively low. Harvest was completed on 7 October. Average lint yields in both the transgenic and conventional tests were higher than any other location in 2024.

Rohwer (Tables 12, 13, 26, and 27). The Rohwer location was planted on 9 May, and achieved acceptable stands. The plots were defoliated on 10 September, and boll samples were collected. However, mechanical issues with the plot picker delayed harvest. By the time that the picker was repaired, the plants had developed excessive regrowth and required another defoliation. Subsequent rain and storms prevented harvest and effectively destroyed the plots. Yield data are not available, but data from boll samples are reported.

Manila (Tables 14 and 15). The 2024 test at Manila was in the same field used since 2014, and in the same area of the field used since 2020. Plots were planted on 24 April and achieved good stands in most plots. An inadvertent over-the-top application with dicamba killed all plants in plots planted with non-dicamba resistant lines (W3FE transgenes, all from PhytoGen Seed Company). All plots adjacent to a missing plot were treated as skip-row plots with seedcotton yields adjusted.

Literature Cited

- Bourland, F.M., N.R. Benson, and W.C. Robertson. 2000. Inherent biases in the Arkansas cotton variety testing program. pp. 547-549. *In: Proc. Beltwide Cotton Prod. Res. Conf.*, San Antonio, Texas. 4-8 Jan. 2000. National Cotton Council, Memphis, Tenn.
- Bourland, F.M., R. Hogan, D.C. Jones, and E. Barnes. 2010. Development and utility of Q-score for characterizing cotton fiber quality. *J. Cotton Sci.* 14:53-63. Available at <http://www.cotton.org/journal/2010-14/2/upload/JCS14-53.pdf>
- Bourland, F.M., J.M. Hornbeck, A.B. McFall, and S.D. Calhoun. 2003. A rating system for leaf pubescence of cotton. *J. Cotton Sci.* 7:8-15. Available at <http://www.cotton.org/journal/2003-07/2/upload/jcs07-008.pdf>
- Bourland, F.M. and J.M. Hornbeck. 2007. Variation in marginal bract trichome density in Upland cotton. *J. Cotton Sci.* 11:242-251. Available at <https://www.cotton.org/journal/2007-11/4/upload/jcs11-242.pdf>
- Bourland, F.M., D.C. Jones, and E. Barnes. 2022. Seed-score (S-score), a method for characterizing seed and lint indices of cotton lines. *J. Cotton Sci.* 26:40-49.
- Groves, F.E. and F.M. Bourland. 2010. Estimating seed surface area of cottonseed. *J. Cotton Sci.* 14:74-81. Available at <http://www.cotton.org/journal/2010-14/2/upload/JCS14-74.pdf>

Acknowledgments

We express our appreciation to the directors, program technicians, and staff at the University of Arkansas System Division of Agriculture's Northeast Research and Extension Center, Lon Mann Cotton Research Station, and the Rohwer Research Station. Annually, the Judd Hill Foundation generously provides the test site for experiments at Judd Hill. We are particularly grateful to the City of Manila for making land available for testing, and to the Mississippi County Cooperative Extension Agents and Wildy Farms for assisting with the test site at the Manila Airport. Annual evaluation of cotton varieties is made possible by the work of the research assistants and technicians at these locations, and by the contributions of seed companies participating in the Arkansas Cotton Variety Tests.

This page intentionally left blank.

Table 1. Participants and entries in the 2024 Arkansas Cotton Variety Test.

Institution/Contact person	Returning entries	Experimental no.	First-year entries	Experimental no.
NexGen - Americot, Inc.	NG 3195 B3XF	AMX19B001B3XF	AMX12507 B3TXF	
Robert Lemon	NG 3457 B3XF	AMX20T157 B3XF	AMX12526 B3TXF	
	NG 4405 B3TXF	AMX21C005 B3TXF	AMX12572 B3TXF	
BASF			ST 6000AXTP	
Lucas Owen			BX 2515AXTP	
			BX 2531AXTP	
			BX 2533AXTP	
			BX 2555AXTP	
			BX 2556AXTP	
			BX 2557AXTP	
Nutrien Ag Solutions	DG 3528 B3XF		DG 3503 B3XF	
(Dyna-Gro)	DG 4530 B3TXF		DG 4434 B3TXF	
Ty Fowler			DG 4529 B3TXF	
Bayer Crop Science	DP 2115 B3XF	19R113B3XF	DP 2414 B3TXF	
Timothy Dabbert	DP 2127 B3XF	19R227B3XF	23R9128B3TXF	
	DP 2211 B3TXF		23R9143B3TXF	
	DP 2317 B3TXF	21R4127B3TXF	23R9822B3TXF	
	DP 2328 B3TXF		23R9918B3TXF	
	DP 2333 B3XF	20R733B3XF		
PhytoGen Seed Co.	PHY332W3FE	PX3D32W3FE	PHY475W3FE	PX1150B-04W3FE
Jason Woodward	PHY360W3FE	PX3C06W3FE	PX1130F309-04W3FE	
	PHY400W3FE	PX3B07W3FE	PX1140F329-04W3FE	
	PHY411W3FE	PX4B08W3FE	PX1140F330-04W3FE	
	PHY415W3FE	PX1140A383-04W3FE	PX1140F331-04W3FE	
	PHY443W3FE	PX3D43W3FE		
WinField United/CROPLAN	Armor 9371 B3XF	CP 20XA9 B3XF	Armor 24X951 B3TXF	
Robert Cossar			Armor 24X954 B3TXF	
			Arnir 9245 B3TXF	Armor 24X955 B3TXF
Conventional entries				
Americot Inc.	AM UA48	Ark 0102-48		
Seed Source Genetics	SSG UA107	Ark 0701-17		
Edward Jungmann	SSG UA114	Ark 0614-49		
	SSG UA222	Ark 0222-12		
	SSG UA248	Ark 0822-75		
University of Arkansas System	UA212ne	Ark 0812-87ne	Arkot 1102ne	Ark 1102-55ne
Division of Agriculture			Arkot 1115	Ark 1115-36
Fred Bourland			Arkot 1202	Ark 1202-34
			Arkot 1207	Ark 1207-32
			Arkot 1208	Ark 1208-21
			Arkot 1214	Ark 1214-42

Table 2. Cultural practices for locations of the 2024 Arkansas Cotton Variety Test.

Input	Location				
	Manila	Keiser	Judd Hill	Marianna	Rohwer
Soil type	Routon-Dundee-Crevasse complex	Sharkey clay	Dundee silt loam	Callaway silt loam	Hebert silt loam
N, P, K (lb)	92-0-60-10S-1B	150-0-0	110-0-100	92-0-46	115-0-0
Planting date	4/24	5/28	4/30	5/1	5/9
Irrigation method	furrow	furrow	furrow	furrow	furrow
Irrigation dates	not available	none	6/20;7/3;7/5; 8/3;8/14	7/4;8/9	7/6;7/12;7/26; 8/10;8/17
Mepiquat chloride	91 oz	none	108 oz	28oz	60 oz
Defoliation date	9/6	9/23	9/9;9/19	9/9;9/23	9/18;9/26; 10/3;10/9;11/26
Harvest date	10/12	10/22	10/10	10/7	not harvested

Table 3. Weather summary for the 2024 production season in north, central and south Arkansas.

Table of weather summary for the 2024 production season in May, June, July, August, and October					
Location	Month	DD60s in 2024	Historical avg. ^a		Historical avg. ^a rainfall
			DD60s	Rainfall in 2024	
------(in.)-----					
Keiser (northeast)	May	425	314	6.8	5.2
	June	561	532	5.9	3.9
	July	588	644	3.4	3.7
	August	568	583	0.2	2.9
	September	435	363	5.7	3.7
	October	391	127	0.0	3.3
	Total	2968	2563	22.1	22.6
Marianna (central)	May	456	336	6.9	5.1
	June	594	538	3.9	3.9
	July	657	646	4.3	3.9
	August	677	601	0.0	2.8
	September	438	397	9.1	3.2
	October	264	154	0.2	3.5
	Total	3084	2672	24.3	22.4
Rohwer (southeast)	May	462	354	2.9	4.9
	June	574	551	4.7	3.6
	July	635	661	5.0	3.7
	August	629	618	0.8	2.6
	September	433	415	2.9	3.0
	October	232	167	0.2	3.4
	Total	2964	2766	16.5	21.3

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

Table 4. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test across four test sites (Manila analyzed separately).

Variety	Lint yield	r ^a	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed- score	r	Seed/ acre	r	Fibers/ seed	r	Fiber density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)				(mil.)		(no.)		(no.)	
PHY415 W3FE	1577	1	45.0	24	87	42	83	1	9.9	9	8.3	13	79	7	8.727	4	17226	19	191	24
BX 2555AXTP	1519	2	47.5	3	95	17	71	38	9.0	36	8.4	10	80	6	8.374	9	18579	3	205	5
BX 2515AXTP	1511	3	43.9	32	93	24	76	23	9.6	16	7.8	28	72	23	8.878	2	15448	43	178	44
PHY411 W3FE	1504	4	46.3	7	94	20	80	5	8.6	41	7.7	33	67	37	8.971	1	16240	32	188	31
23R9822B3TXF	1480	5	46.1	10	90	36	79	6	8.7	40	7.6	34	69	31	8.828	3	17230	18	201	8
Armor 24X954 B3TXF	1462	6	44.0	31	95	15	72	36	9.3	28	7.5	37	68	36	8.659	6	17054	23	200	11
AMX12572 B3TXF	1450	7	46.4	5	93	27	82	3	8.7	39	7.8	29	66	39	8.576	7	17167	20	198	13
BX 2533AXTP	1446	8	42.7	42	94	19	71	38	10.5	4	8.1	20	69	31	8.196	12	16236	33	184	37
DG 4434 B3TXF	1438	9	46.4	4	89	38	75	26	8.2	44	7.5	40	57	43	8.685	5	17559	13	208	3
23R9143B3TXF	1436	10	45.8	16	97	6	73	32	9.3	27	8.1	18	76	15	7.937	15	16214	34	182	42
DP 2115 B3XF	1433	11	46.2	8	99	2	73	28	9.0	34	8.0	23	75	18	8.140	13	15812	36	179	43
DP 2414 B3TXF	1430	12	45.8	15	95	13	77	13	9.4	23	8.3	14	79	8	7.808	17	16787	29	186	33
PX1140F330-04W3FE	1410	13	45.7	17	91	31	76	21	9.6	18	8.4	11	80	5	7.666	19	17295	15	191	25
PX1130F309-04W3FE	1409	14	44.7	28	96	8	73	30	9.2	30	7.7	31	69	31	8.221	11	16960	24	196	18
PX1140F331-04W3FE	1381	15	46.0	13	95	14	77	17	9.6	19	8.5	9	82	4	7.391	22	16891	27	185	35
Armor 24X951 B3TXF	1372	16	46.1	9	93	28	77	17	9.8	11	8.7	3	86	1	7.171	32	17926	8	193	22
PX1140F329-04W3FE	1364	17	45.9	14	92	29	75	25	9.8	12	8.6	6	78	12	7.114	35	18773	2	204	7
Armor 9245 B3TXF	1358	18	44.8	26	90	35	76	21	9.0	37	7.5	38	68	35	8.250	10	16903	25	199	12
DP 2328 B3TXF	1357	19	45.3	20	97	4	71	38	9.4	22	8.0	21	76	17	7.734	18	17290	16	196	15
DP 2127 B3XF	1340	20	44.9	25	100	1	73	32	10.2	6	8.7	4	79	10	7.237	27	17144	21	185	34
PHY443 W3FE	1340	21	44.3	30	87	43	77	13	10.4	5	8.5	8	77	14	7.183	30	17809	12	194	20
AMX12526 B3TXF	1337	22	46.4	6	93	25	73	30	9.9	10	8.8	1	84	2	6.820	40	17463	14	187	32
ST 6000 AXTP	1323	23	47.6	1	94	21	80	4	9.3	26	8.6	5	84	3	7.085	36	17820	11	192	23
PHY360 W3FE	1319	24	43.8	34	89	37	78	11	9.3	29	7.5	39	68	34	7.963	14	15581	41	183	39
DP 2211 B3TXF	1314	25	44.7	27	98	3	70	41	9.8	13	8.2	16	78	11	7.246	26	17976	5	200	10
BX 2531AXTP	1301	26	44.6	29	97	7	70	41	10.6	2	8.8	2	71	25	6.860	39	19939	1	215	1
DP 2333 B3XF	1291	27	45.2	21	94	22	77	17	9.6	16	8.1	17	77	13	7.352	23	16825	28	189	28
BX 2556AXTP	1280	28	43.6	37	95	12	78	9	9.4	24	7.4	41	67	38	7.850	16	15934	35	189	29
DG 3528 B3XF	1280	29	43.6	38	91	34	75	26	9.5	20	7.5	36	69	28	7.590	20	15573	42	183	40
PHY400 W3FE	1271	30	46.0	12	86	44	83	1	9.3	25	8.2	15	72	23	7.209	29	17967	6	201	9
DG 4530 B3TXF	1268	31	45.6	18	88	40	71	37	9.0	33	7.9	26	74	20	7.213	28	17055	22	194	19
23R9128B3TXF	1261	32	47.5	2	96	9	73	28	8.5	42	8.0	22	70	27	7.350	24	17288	17	196	16
AMX12507 B3TXF	1246	33	41.9	44	95	18	70	41	10.6	1	7.9	27	59	41	7.260	25	16632	30	191	27
Armor 9371 B3XF	1246	34	45.0	23	96	9	72	35	10.2	7	8.5	7	76	16	6.584	42	17923	9	196	17
NG 3457 B3XF	1239	35	43.8	33	91	33	77	13	9.6	15	7.7	32	73	22	7.172	31	15790	38	183	38
NG 3195 B3XF	1232	36	43.7	36	92	30	79	6	9.9	8	7.9	24	73	21	6.992	37	16901	26	193	21
DP 2317 B3TXF	1215	37	42.9	39	97	5	68	44	8.5	42	6.6	44	51	44	8.522	8	14906	44	188	30
DG 3503 B3XF	1212	38	45.4	19	91	32	77	13	9.0	32	7.8	30	71	25	7.153	33	17961	7	208	4
23R9918B3TXF	1198	39	46.0	11	93	23	75	24	8.9	38	7.9	25	74	19	6.980	38	17918	10	205	6
BX 2557AXTP	1194	40	45.1	22	95	15	77	17	9.7	14	8.3	12	79	8	6.523	43	16506	31	182	41
DG 4529 B3TXF	1169	41	42.8	41	93	25	73	32	10.5	3	8.1	19	69	29	6.749	41	18428	4	208	2
PHY332 W3FE	1168	42	43.8	35	89	38	78	9	9.5	20	7.6	35	69	29	7.140	34	15730	40	184	36
NG 4405 B3TXF	1096	43	42.1	43	96	11	78	12	9.0	35	6.8	43	58	42	7.443	21	15786	39	197	14
PHY475 W3FE	1039	44	42.9	40	88	41	79	8	9.2	31	7.2	42	64	40	6.523	44	15811	37	191	26
Mean	1331		44.9		93		85		9.5		8.0		72		7.622		17006		193	
Var. LSD _{0.10}	194		0.7		7		7		0.4		0.4		8		1.109		887		10	
Loc. LSD _{0.10}	72		0.2		3		3		0.1		0.1		ns		0.289		84		3	
C.V.%	217.0		2.0		11.0		14.0		5.4		5.4		13.1		21.6		6.3		6.0	
R ² x 100	75.7		88.8		61.6		65.8		83.7		82.9		67.3		73.0		79.4		83.7	
Prob (var x loc)	0.008		0.020		0.968		0.123		0.031		0.058		0.538		0.001		0.907		0.660	

^a r = ranking.

Table 5. Fiber properties–2024 Arkansas Transgenic Cotton Variety Test across four test sites (Manila analyzed separately).

Variety	Lint		Quality		Fiber properties											
	yield	r ^a	score	r	Micronaire		Length		UI ^b		Strength		Elongation		SFI ^b	
					(lb/ac)			(in.)		(%)		(g/tex)		(%)		
PHY415 W3FE	1577	1	73	9	4.6	26	1.21	10	86.2	2	35.1	2	7.0	17	6.8	33
BX 2555AXTP	1519	2	61	19	4.5	35	1.19	22	84.5	31	33.8	11	6.9	18	7.3	20
BX 2515AXTP	1511	3	80	2	4.7	18	1.26	1	85.5	11	32.2	21	4.8	43	7.4	17
PHY411 W3FE	1504	4	41	42	4.9	6	1.13	43	84.7	28	34.0	9	7.3	11	7.3	21
23R9822B3TXF	1480	5	47	40	4.6	27	1.15	40	84.4	36	30.7	37	6.0	32	7.7	8
Armor 24X954 B3TXF	1462	6	53	33	4.5	31	1.16	38	84.3	37	31.3	31	8.0	6	7.1	22
AMX12572 B3TXF	1450	7	38	44	4.8	11	1.12	44	84.3	38	31.5	28	8.4	3	7.5	16
BX 2533AXTP	1446	8	78	5	4.7	19	1.24	4	86.1	4	31.4	30	5.0	42	6.7	37
DG 4434 B3TXF	1438	9	52	34	4.4	41	1.17	35	83.7	43	31.1	33	8.1	5	7.7	7
23R9143B3TXF	1436	10	56	29	5.0	4	1.18	28	85.3	15	33.8	12	8.5	2	7.0	26
DP 2115 B3XF	1433	11	55	31	5.0	2	1.19	27	85.1	20	31.9	25	7.4	9	6.9	29
DP 2414 B3TXF	1430	12	68	11	4.8	17	1.21	13	86.0	6	32.1	23	7.2	12	6.3	43
PX1140F330-04W3FE	1410	13	61	20	4.8	14	1.20	18	84.8	23	32.7	17	6.8	23	7.9	5
PX1130F309-04W3FE	1409	14	46	41	4.8	15	1.14	42	84.8	22	33.1	16	6.7	24	7.6	13
PX1140F331-04W3FE	1381	15	56	28	5.0	3	1.18	30	85.5	12	34.9	5	6.9	20	7.1	24
Armor 24X951 B3TXF	1372	16	64	16	4.8	16	1.21	12	84.6	30	29.9	42	6.8	21	7.0	28
PX1140F329-04W3FE	1364	17	60	23	4.6	30	1.19	25	84.5	32	32.6	18	6.6	27	8.0	2
Armor 9245 B3TXF	1358	18	61	20	4.5	37	1.18	31	84.7	29	31.1	33	4.7	44	6.8	34
DP 2328 B3TXF	1357	19	62	18	4.6	24	1.20	16	84.3	39	29.9	43	5.8	37	7.6	11
DP 2127 B3XF	1340	20	48	39	5.1	1	1.17	36	85.1	18	31.2	32	5.9	34	7.1	23
PHY443 W3FE	1340	21	53	32	4.8	9	1.16	39	85.4	14	34.8	7	7.0	16	6.9	30
AMX12526 B3TXF	1337	22	57	27	5.0	4	1.19	23	85.2	17	33.8	10	9.5	1	6.4	42
ST 6000 AXTP	1323	23	84	1	4.5	33	1.25	2	86.1	5	34.9	3	7.1	14	6.6	41
PHY360 W3FE	1319	24	51	36	4.9	8	1.18	29	83.9	42	30.1	39	5.8	38	7.9	3
DP 2211 B3TXF	1314	25	66	15	4.5	34	1.20	15	85.4	13	30.8	36	6.3	28	6.7	37
BX 2531AXTP	1301	26	59	26	4.4	40	1.19	21	84.8	24	30.6	38	6.7	25	7.7	9
DP 2333 B3XF	1291	27	50	38	4.9	7	1.17	32	84.4	34	30.1	40	5.6	40	7.5	14
BX 2556AXTP	1280	28	78	4	4.4	38	1.24	4	85.1	21	34.0	8	6.2	31	7.3	18
DG 3528 B3XF	1280	29	72	10	4.7	20	1.22	9	85.9	9	32.0	24	7.2	13	6.7	39
PHY400 W3FE	1271	30	56	30	4.6	22	1.17	34	84.8	26	33.4	15	6.6	26	7.9	4
DG 4530 B3TXF	1268	31	61	22	4.6	22	1.19	19	84.5	33	29.5	44	6.2	30	7.5	15
23R9128B3TXF	1261	32	60	24	4.6	24	1.19	26	84.8	24	32.2	22	7.9	8	7.0	25
AMX12507 B3TXF	1246	33	79	3	4.5	36	1.24	3	85.8	10	34.9	4	8.3	4	6.8	34
Armor 9371 B3XF	1246	34	51	37	4.8	9	1.17	33	84.8	27	30.0	41	5.9	35	7.3	19
NG 3457 B3XF	1239	35	74	8	4.6	21	1.22	6	86.0	8	32.3	19	8.0	7	6.7	40
NG 3195 B3XF	1232	36	64	17	4.6	27	1.19	20	86.0	7	31.9	26	5.8	36	6.8	36
DP 2317 B3TXF	1215	37	67	14	4.4	42	1.20	17	85.3	16	31.4	29	5.5	41	7.0	26
DG 3503 B3XF	1212	38	68	11	4.3	43	1.21	10	84.1	41	33.4	14	6.3	28	8.0	1
23R9918B3TXF	1198	39	51	35	4.5	31	1.17	37	84.4	35	31.0	35	5.9	33	7.6	12
BX 2557AXTP	1194	40	75	7	4.8	13	1.22	6	86.2	2	35.7	1	5.6	39	6.2	44
DG 4529 B3TXF	1169	41	60	25	4.4	39	1.19	23	84.2	40	31.7	27	6.8	22	7.7	10
PHY332 W3FE	1168	42	76	6	4.6	29	1.22	8	86.6	1	33.6	13	7.4	10	6.9	31
NG 4405 B3TXF	1096	43	68	13	4.2	44	1.21	14	85.1	19	32.2	20	7.1	15	6.9	32
PHY475 W3FE	1039	44	41	43	4.8	12	1.14	41	83.3	44	34.8	6	6.9	19	7.8	6
Mean	1331		61		4.66		1.19		85.0		32.3		6.7		7.2	
Var. LSD _{0.10}	194		9.8		0.21		0.03		0.9		1.2		0.3		0.6	
Loc. LSD _{0.10}	72		ns		0.63		0.01		0.3		0.4		0.1		0.2	
C.V.%	217.0		19.5		5.5		2.5		1.3		4.7		5.8		10.4	
R ² x 100	75.7		72.1		84.3		75.9		72.3		86.9		94.7		69.2	
Prob (var x loc)	0.008		0.605		0.639		0.723		0.332		0.653		<0.001		0.954	

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 6. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test on a Sharkey clay soil at Keiser.

Table of Field and Related Properties for 17 Arkansas Upland Cotton Varieties Tested on Adamant, Clay Soil at Reelen																				
Variety	Lint		Lint		Open		Seed		Lint		Seed-		Seed/		Fibers/		Fiber			
	yield	r ^a	frac.	r	Ht.	r	bolls ^b	r	index	r	index	r	score	r	acre	r	seed	r	density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)				(mil.)		(no.)		(no.)	
23R9822B3TXF	1863	1	47.3	7	102	36			8.2	42	7.6	34	64	36	11.170	1	17753	5	207	1
23R9143B3TXF	1808	2	46.7	12	108	18			8.8	33	8.0	23	75	16	10.270	3	15462	36	175	35
DG 4434 B3TXF	1761	3	48.2	4	106	25			7.7	44	7.6	32	47	44	10.540	2	17065	11	199	3
Armor 24X954 B3TXF	1707	4	46.1	19	106	26			8.5	39	7.6	36	69	29	10.250	4	16635	13	194	9
PHY415 W3FE	1645	5	45.5	25	100	44			10.2	6	8.7	8	85	4	8.587	11	16378	19	176	31
DP 2414 B3TXF	1633	6	46.1	21	109	17			8.9	31	7.9	28	73	23	9.418	5	16248	23	185	19
BX 2533AXTP	1609	7	43.0	43	113	6			10.1	7	7.9	29	73	23	9.279	7	14960	38	171	40
BX 2555AXTP	1565	8	48.8	2	112	8			8.8	35	8.5	12	82	7	8.371	13	17950	3	196	8
PHY411 W3FE	1545	9	46.1	18	105	32			8.7	36	7.6	33	69	28	9.245	8	16307	21	190	13
PX1140F330-04W3FE	1533	10	46.2	17	104	33			9.6	15	8.5	11	82	7	8.200	16	15983	25	174	36
DP 2115 B3XF	1487	11	47.1	8	111	10			8.8	34	8.1	18	76	14	8.373	12	15639	33	176	29
DP 2328 B3TXF	1467	12	46.8	11	108	20			9.1	26	8.1	15	77	11	8.160	17	15963	26	178	27
PHY360 W3FE	1465	13	44.6	30	105	28			8.5	38	7.1	42	63	39	9.372	6	14513	42	176	32
AMX12572 B3TXF	1450	14	48.9	1	111	10			8.0	43	7.9	27	63	39	8.335	14	17354	10	198	5
PX1140F329-04W3FE	1446	15	46.4	15	109	15			9.7	11	8.7	7	85	3	7.507	24	17510	9	188	16
AMX12526 B3TXF	1436	16	48.1	5	101	42			9.5	16	8.9	3	88	1	7.308	26	17696	6	187	17
BX 2556AXTP	1432	17	44.0	38	115	3			9.2	21	7.4	38	66	33	8.807	9	14779	39	175	34
PX1140F331-04W3FE	1418	18	46.9	10	103	34			9.1	23	8.3	14	80	10	7.732	19	15835	29	174	37
NG 3457 B3XF	1396	19	44.7	29	105	31			9.7	12	8.0	22	75	16	7.933	18	15310	37	173	38
Armor 9245 B3TXF	1389	20	44.3	33	108	18			8.9	30	7.3	40	65	35	8.669	10	15463	35	185	21
PHY443 W3FE	1376	21	44.4	32	101	41			10.0	9	8.1	16	77	13	7.682	22	16537	16	185	20
BX 2515AXTP	1351	22	45.5	24	101	39			9.3	18	8.0	25	74	22	7.709	21	14718	40	167	44
Armor 24X951 B3TXF	1324	23	46.5	14	106	27			9.6	13	8.7	9	84	5	6.935	31	18388	2	198	4
Armor 9371 B3XF	1317	24	45.1	27	107	22			10.6	4	9.0	2	77	11	6.671	36	16609	14	175	33
PHY400 W3FE	1313	25	46.1	20	102	38			10.2	5	8.8	6	81	9	6.748	33	16534	17	176	30
DP 2333 B3XF	1298	26	44.2	34	106	24			9.9	10	8.0	20	75	16	7.368	25	15821	30	179	26
BX 2531AXTP	1286	27	45.1	26	110	12			10.8	2	9.1	1	68	32	6.388	38	18879	1	197	6
PX1130F309-04W3FE	1283	28	44.5	31	109	14			9.2	22	7.7	30	71	26	7.534	23	15818	31	183	24
AMX12507 B3TXF	1280	29	41.9	44	106	23			9.4	17	7.1	43	62	41	8.204	15	15751	32	191	12
DP 2211 B3TXF	1267	30	45.9	23	114	4			9.2	20	8.1	17	76	14	7.135	28	16733	12	188	14
ST 6000 AXTP	1266	31	48.7	3	103	35			8.9	29	8.5	10	82	6	6.738	34	17621	8	192	11
DP 2127 B3XF	1215	32	44.2	35	116	1			10.8	1	8.9	5	64	36	6.203	40	15855	28	168	43
23R9128B3TXF	1213	33	47.9	6	115	2			8.4	40	8.0	24	75	16	6.899	32	16412	18	186	18
PHY332 W3FE	1206	34	44.8	28	105	29			9.1	26	7.6	37	69	29	7.237	27	14473	43	169	42
DG 4530 B3TXF	1202	35	46.2	16	101	43			8.6	37	7.7	31	71	27	7.111	29	15940	27	185	22
DG 3528 B3XF	1166	36	44.2	36	102	36			9.3	19	7.6	35	69	29	7.004	30	14595	41	171	41
BX 2557AXTP	1145	37	46.9	9	111	9			9.6	14	8.9	4	88	1	5.830	41	16296	22	172	39
DP 2317 B3TXF	1131	38	43.8	39	109	15			8.3	41	6.6	44	55	43	7.722	20	14029	44	176	28
DG 3503 B3XF	1092	39	46.1	22	109	13			9.1	24	8.0	26	75	16	6.220	39	17821	4	202	2
NG 4405 B3TXF	1065	40	43.3	41	113	5			9.1	26	7.2	41	64	36	6.724	35	16312	20	196	7
PHY475 W3FE	1035	41	43.7	40	101	40			9.1	25	7.3	39	66	33	6.394	37	15523	34	184	23
DG 4529 B3TXF	1018	42	43.2	42	107	21			10.8	3	8.4	13	59	42	5.478	42	17644	7	193	10
NG 3195 B3XF	965	43	44.1	37	112	7			10.1	8	8.0	19	73	25	5.456	43	16107	24	182	25
23R9918B3TXF	960	44	46.6	13	105	29			8.8	32	8.0	21	75	16	5.452	44	16605	15	188	15
Mean	1360		45.6		107				9.3		8.0		72		7.736		16269		184	
LSD _{0.10}	461		1.5		ns				0.6		0.6		10		2.569		1759		18	
C.V.%	28.6		2.0		737.0				3.9		4.1		8.0		28.3		6.4		5.7	
R ² x 100	34.3		87.4		31.3				89.7		86.4		82.3		38.7		70.2		66.3	

^a r = ranking.^b Open bolls data are not available.

Table 7. Fiber properties–2024 Arkansas Transgenic Cotton Variety Test on a Sharkey clay soil at Keiser.

Variety	Lint		Quality		Fiber properties											
	yield	r ^a	score	r	Micronaire		Length		UI ^a		Strength		Elongation		SFI ^a	
					(lb/ac)				(in.)		(%)		(g/tex)		(%)	
23R9822B3TXF	1863	1	47	38	4.5	41	1.14	40	84.4	37	32.0	40	6.3	38	8.0	3
23R9143B3TXF	1808	2	54	28	5.1	7	1.17	33	86.6	7	34.8	17	9.5	4	6.9	24
DG 4434 B3TXF	1761	3	49	36	4.6	37	1.15	38	84.5	36	32.5	34	8.6	6	7.9	4
Armor 24X954 B3TXF	1707	4	40	41	4.8	28	1.14	41	83.5	42	33.3	29	9.6	3	6.9	28
PHY415 W3FE	1645	5	77	5	5.0	19	1.23	5	87.3	2	37.7	5	8.0	12	6.5	35
DP 2414 B3TXF	1633	6	73	12	4.7	35	1.21	11	85.8	18	33.9	22	8.1	11	6.5	35
BX 2533AXTP	1609	7	77	5	4.9	20	1.23	4	87.0	4	33.2	31	5.1	43	6.4	40
BX 2555AXTP	1565	8	49	35	4.9	24	1.17	33	83.3	43	33.6	25	7.3	24	7.2	18
PHY411 W3FE	1545	9	33	43	5.0	13	1.10	43	84.6	34	36.7	8	7.7	15	7.4	9
PX1140F330-04W3FE	1533	10	61	21	5.2	4	1.21	16	85.6	20	36.2	9	7.9	13	7.5	7
DP 2115 B3XF	1487	11	54	30	5.1	7	1.19	24	85.2	26	33.4	28	7.7	19	7.2	18
DP 2328 B3TXF	1467	12	73	10	4.9	24	1.23	5	85.7	19	31.0	44	6.3	36	7.0	23
PHY360 W3FE	1465	13	51	34	5.0	18	1.18	28	83.9	40	32.2	39	6.2	39	8.0	2
AMX12572 B3TXF	1450	14	30	44	5.0	13	1.09	44	83.6	41	33.3	30	9.8	2	7.2	18
PX1140F329-04W3FE	1446	15	61	20	4.9	20	1.19	20	85.3	23	35.4	15	7.2	28	7.5	6
AMX12526 B3TXF	1436	16	44	39	5.2	4	1.15	37	84.8	29	35.8	13	10.5	1	6.2	42
BX 2556AXTP	1432	17	91	1	4.6	40	1.27	1	86.5	11	35.3	16	6.3	36	6.8	29
PX1140F331-04W3FE	1418	18	52	32	5.3	3	1.17	31	86.1	15	37.3	6	7.7	17	7.3	12
NG 3457 B3XF	1396	19	63	19	5.1	11	1.21	14	85.5	21	33.4	27	8.5	7	6.5	35
Armor 9245 B3TXF	1389	20	67	14	4.6	37	1.19	24	86.3	12	33.2	31	5.7	41	5.7	43
PHY443 W3FE	1376	21	40	42	5.1	7	1.13	42	85.0	28	35.8	13	7.9	13	7.3	12
BX 2515AXTP	1351	22	78	4	5.0	13	1.26	2	86.0	17	33.6	24	5.0	44	7.2	16
Armor 24X951 B3TXF	1324	23	60	25	4.7	32	1.19	24	84.7	32	31.7	42	7.7	15	7.1	21
Armor 9371 B3XF	1317	24	52	32	5.3	2	1.18	28	86.3	12	32.5	34	6.4	34	6.9	24
PHY400 W3FE	1313	25	63	18	5.2	4	1.21	16	86.2	14	38.5	1	7.6	22	6.8	31
DP 2333 B3XF	1298	26	53	31	5.1	11	1.19	21	84.3	38	31.3	43	5.3	42	7.3	11
BX 2531AXTP	1286	27	73	12	4.7	35	1.21	16	86.6	7	34.4	19	7.6	21	7.1	21
PX1130F309-04W3FE	1283	28	41	40	5.1	7	1.14	39	84.8	29	36.1	10	7.1	29	7.2	17
AMX12507 B3TXF	1280	29	81	3	4.3	44	1.23	8	86.7	5	37.8	3	9.3	5	6.8	31
DP 2211 B3TXF	1267	30	58	26	4.8	28	1.18	28	85.2	27	32.5	34	7.7	19	6.3	41
ST 6000 AXTP	1266	31	77	7	4.6	37	1.23	8	86.0	16	36.8	7	7.3	24	6.5	39
DP 2127 B3XF	1215	32	61	21	5.4	1	1.21	14	86.7	6	32.3	37	6.4	35	6.7	33
23R9128B3TXF	1213	33	57	27	4.9	24	1.19	24	84.7	32	33.5	26	8.4	8	7.3	12
PHY332 W3FE	1206	34	75	8	4.9	20	1.22	10	87.3	3	36.1	10	8.4	9	6.6	34
DG 4530 B3TXF	1202	35	66	15	4.7	32	1.20	19	85.4	22	31.9	41	6.5	33	7.3	12
DG 3528 B3XF	1166	36	65	17	5.0	13	1.21	11	85.3	23	32.9	33	7.5	23	6.9	24
BX 2557AXTP	1145	37	83	2	5.0	13	1.25	3	87.6	1	37.8	3	6.0	40	5.6	44
DP 2317 B3TXF	1131	38	61	21	4.7	32	1.17	35	86.6	7	34.2	21	6.9	30	6.8	29
DG 3503 B3XF	1092	39	74	9	4.4	42	1.23	5	84.0	39	36.0	12	6.7	32	8.2	1
NG 4405 B3TXF	1065	40	65	16	4.4	42	1.19	21	85.2	25	33.7	23	7.7	17	6.9	24
PHY475 W3FE	1035	41	48	37	4.9	20	1.17	35	83.1	44	38.1	2	8.2	10	7.8	5
DG 4529 B3TXF	1018	42	61	21	4.8	30	1.19	21	84.7	31	34.5	18	7.2	26	7.4	9
NG 3195 B3XF	965	43	73	10	4.8	30	1.21	11	86.6	7	34.2	20	7.2	26	6.5	35
23R9918B3TXF	960	44	54	28	4.9	24	1.17	31	84.6	35	32.3	37	6.8	31	7.5	7
Mean	1360		60		4.86		1.19		85.4		34.4		7.4		7.0	
LSD _{0.10}	461		17		0.34		0.05		1.9		2.3		0.6		ns	
C.V.%	28.6		17.0		4.2		2.4		1.3		4.0		5.0		9.4	
R ² x 100	34.3		79.0		76.1		79.4		68.2		81.6		95.7		59.7	

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 8. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.

Variety	Lint yield	r ^a	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed- score	r	Seed/ acre	r	Fibers/ seed	r	Fiber density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)				(mil.)		(no.)		(no.)	
PHY411 W3FE	1340	1	46.8	1	93	5	80	27	7.8	44	7.1	34	59	42	8.646	1	16130	43	196	42
BX 2555AXTP	1212	2	46.4	4	86	26	81	23	8.1	42	7.3	28	70	33	7.548	2	18774	13	224	12
AMX12572 B3TXF	1144	3	45.6	10	85	27	86	10	8.6	33	7.5	19	76	19	6.933	6	18001	27	212	27
PHY415 W3FE	1142	4	44.8	20	84	29	89	4	8.9	28	7.4	22	75	21	7.038	5	18086	25	215	24
BX 2515AXTP	1133	5	43.2	34	87	22	79	34	9.1	21	7.3	30	73	27	7.093	4	17948	28	215	22
23R9918B3TXF	1104	6	44.1	26	94	4	80	27	8.3	38	6.8	40	67	38	7.327	3	19715	7	244	3
DP 2127 B3XF	1056	7	44.5	21	92	8	81	23	9.5	11	7.8	10	81	9	6.113	9	18471	16	211	28
PX1130F309-04W3FE	1052	8	44.2	25	91	9	75	42	9.1	25	7.6	15	78	14	6.253	8	18448	17	214	26
DG 4529 B3TXF	1032	9	41.8	41	81	37	91	1	9.6	7	7.0	38	69	37	6.704	7	19954	5	244	2
Armor 24X951 B3TXF	1007	10	45.8	8	83	31	84	17	9.4	13	8.3	4	87	3	5.527	16	18665	15	207	32
DP 2211 B3TXF	930	11	43.6	30	91	11	79	34	9.7	4	8.0	6	82	5	5.318	18	20247	2	231	8
Armor 24X954 B3TXF	907	12	42.4	37	80	40	76	38	9.5	9	7.3	25	74	22	5.615	14	18747	14	223	13
ST 6000 AXTP	906	13	46.3	5	90	14	90	3	9.4	14	8.3	5	87	3	4.964	22	18345	21	203	36
23R9128B3TXF	902	14	46.1	6	90	14	83	20	8.1	41	7.3	29	73	27	5.642	12	18273	22	219	18
BX 2531AXTP	889	15	43.3	33	96	2	80	27	9.2	17	7.3	24	74	22	5.508	17	21612	1	257	1
BX 2557AXTP	883	16	44.3	24	82	32	84	17	9.3	16	7.8	12	80	12	5.167	19	16761	41	193	44
PHY400 W3FE	877	17	45.1	17	78	43	88	7	8.4	35	7.2	32	72	29	5.548	15	19330	10	233	7
23R9822B3TXF	872	18	45.2	15	89	17	86	10	8.3	39	7.0	35	70	33	5.617	13	17789	31	216	19
PHY443 W3FE	858	19	44.0	27	85	28	86	10	10.2	1	8.3	3	80	10	4.686	31	19552	8	216	21
DG 3503 B3XF	850	20	44.4	22	86	25	80	27	8.3	39	6.8	41	62	40	5.652	11	18404	19	229	11
DP 2115 B3XF	849	21	46.7	3	92	6	76	38	8.7	31	7.9	8	82	7	4.872	24	17204	36	196	43
PX1140F330-04W3FE	846	22	45.1	16	88	20	83	20	8.9	28	7.6	17	78	16	5.053	21	19057	12	222	14
PX1140F329-04W3FE	835	23	45.4	11	82	32	80	27	9.2	18	7.9	9	82	7	4.791	27	20139	3	229	9
AMX12526 B3TXF	831	24	46.7	2	94	3	76	38	9.5	10	8.5	1	91	1	4.431	34	18034	26	197	41
DG 4530 B3TXF	822	25	44.8	19	82	34	86	10	9.1	23	7.7	13	79	13	4.861	26	19182	11	222	15
DP 2328 B3TXF	807	26	43.5	31	97	1	71	43	9.4	12	7.5	20	76	20	4.913	23	20045	4	236	5
DP 2317 B3TXF	768	27	41.5	43	91	13	70	44	8.3	37	6.1	44	56	44	5.751	10	15845	44	209	29
Armor 9245 B3TXF	766	28	45.4	13	86	23	81	23	8.7	31	7.4	23	74	22	4.721	29	18186	23	216	20
DP 2333 B3XF	765	29	45.1	18	87	21	91	1	9.1	21	7.6	16	78	16	4.571	32	17813	30	208	31
BX 2533AXTP	765	30	41.6	42	82	36	79	34	9.8	3	7.1	33	71	31	4.867	25	17777	32	215	23
DG 3528 B3XF	746	31	43.9	28	80	38	76	38	9.0	26	7.2	31	72	29	4.714	30	16879	39	203	35
PHY360 W3FE	743	32	43.0	36	84	30	85	15	9.6	5	7.7	14	78	14	4.405	35	17140	38	199	39
NG 4405 B3TXF	733	33	42.2	38	88	18	88	7	8.6	34	6.5	42	58	43	5.144	20	17926	29	229	10
Armor 9371 B3XF	732	34	44.3	23	91	9	89	4	9.1	20	7.6	18	77	18	4.389	36	19953	6	233	6
NG 3195 B3XF	732	35	43.4	32	77	44	85	15	8.9	28	7.0	37	70	33	4.731	28	18156	24	221	16
PX1140F331-04W3FE	706	36	45.7	9	88	19	80	27	9.0	27	7.9	7	82	5	4.043	42	17737	33	202	37
BX 2556AXTP	705	37	43.6	29	86	24	88	7	9.2	19	7.4	21	74	22	4.335	38	17611	34	209	30
AMX12507 B3TXF	698	38	41.1	44	92	7	78	37	10.2	2	7.3	26	70	32	4.339	37	18434	18	220	17
DG 4434 B3TXF	684	39	45.3	14	80	41	83	20	7.9	43	6.9	39	64	39	4.523	33	19390	9	240	4
DP 2414 B3TXF	674	40	46.1	7	89	16	89	4	9.6	6	8.4	2	89	2	3.622	44	18353	20	201	38
NG 3457 B3XF	653	41	43.1	35	80	39	86	10	9.4	14	7.3	27	73	26	4.063	41	17307	35	207	33
PHY332 W3FE	642	42	41.8	40	82	35	80	27	9.5	8	7.0	36	70	33	4.146	40	16808	40	205	34
23R9143B3TXF	625	43	45.4	12	91	12	81	23	9.1	24	7.8	11	80	10	3.646	43	17187	37	198	40
PHY475 W3FE	593	44	42.1	39	79	42	84	17	8.4	36	6.4	43	61	41	4.196	39	16658	42	214	25
Mean	859		44.0		87		82		9.0		7.4		74		5.273		18320		217	
LSD _{0.10}	347		1.3		ns		ns		0.7		0.7		13		2.124		2278		29	
C.V.%	34.5		1.8		14.0		13.7		4.8		5.6		10.2		34.4		7.4		8.0	
R ² x 100	39.8		88.6		22.7		23.4		78.4		76.6		69.3		41.7		66.1		66.1	

^a r = ranking.

Table 9. Fiber properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.

Variety	Lint		Quality		Fiber properties											
	yield	r ^a	score	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r
					(lb/ac)				(in.)		(%)		(g/tex)		(%)	
PHY411 W3FE	1340	1	48	39	4.7	2	1.13	42	83.4	31	30.7	15	6.8	11	7.4	30
BX 2555AXTP	1212	2	72	9	3.9	36	1.19	12	84.4	15	31.2	11	6.7	13	8.2	14
AMX12572 B3TXF	1144	3	47	40	4.5	9	1.11	44	84.7	11	28.4	35	8.1	3	8.1	16
PHY415 W3FE	1142	4	71	10	4.1	23	1.19	15	84.7	9	32.9	2	6.8	12	7.4	30
BX 2515AXTP	1133	5	82	3	3.9	33	1.25	1	83.1	34	29.2	30	4.4	44	8.8	5
23R9918B3TXF	1104	6	50	36	3.6	43	1.15	36	84.2	20	29.7	21	5.3	38	8.1	16
DP 2127 B3XF	1056	7	45	42	4.6	6	1.14	41	82.9	37	28.3	38	5.8	31	8.5	11
PX1130F309-04W3FE	1052	8	60	24	4.3	15	1.15	36	85.3	6	30.7	14	6.7	14	7.8	24
DG 4529 B3TXF	1032	9	53	33	3.7	41	1.17	26	82.7	40	29.6	23	6.5	22	8.7	6
Armor 24X951 B3TXF	1007	10	70	12	4.4	11	1.21	8	83.5	29	27.5	40	6.5	19	8.0	19
DP 2211 B3TXF	930	11	64	19	4.0	29	1.19	12	84.3	18	28.7	33	5.4	36	7.4	34
Armor 24X954 B3TXF	907	12	61	22	4.0	26	1.17	24	84.7	11	28.3	38	7.7	6	7.5	28
ST 6000 AXTP	906	13	85	2	4.3	14	1.23	2	85.0	8	31.8	6	6.7	14	7.0	41
23R9128B3TXF	902	14	68	13	4.0	26	1.19	16	84.0	25	31.3	9	7.2	10	7.4	34
BX 2531AXTP	889	15	45	41	3.5	44	1.16	32	83.7	27	27.4	41	6.1	25	8.6	9
BX 2557AXTP	883	16	86	1	4.4	11	1.23	3	85.6	3	33.9	1	5.1	39	6.6	44
PHY400 W3FE	877	17	61	22	3.8	38	1.17	26	84.1	22	30.3	17	6.6	18	8.4	12
23R9822B3TXF	872	18	57	31	4.2	19	1.15	36	84.5	14	29.4	26	5.7	34	8.2	13
PHY443 W3FE	858	19	59	28	4.4	11	1.15	35	84.2	21	31.9	5	6.3	23	7.7	26
DG 3503 B3XF	850	20	52	35	3.9	33	1.17	26	82.2	44	30.2	18	5.8	30	9.5	2
DP 2115 B3XF	849	21	57	31	4.7	1	1.17	21	83.6	28	29.6	22	7.3	9	7.9	20
PX1140F330-04W3FE	846	22	58	29	4.2	19	1.16	33	83.1	33	29.5	25	6.0	27	8.9	4
PX1140F329-04W3FE	835	23	60	25	4.1	23	1.17	26	83.2	32	29.5	24	5.8	31	8.7	6
AMX12526 B3TXF	831	24	67	15	4.7	2	1.21	8	84.1	23	32.2	4	8.9	1	7.4	34
DG 4530 B3TXF	822	25	60	25	4.1	22	1.18	20	82.9	38	26.8	43	6.1	24	8.6	9
DP 2328 B3TXF	807	26	48	38	4.0	31	1.15	36	82.4	43	26.4	44	5.4	37	9.6	1
DP 2317 B3TXF	768	27	70	11	3.8	38	1.20	11	84.4	15	28.4	35	4.7	42	7.8	23
Armor 9245 B3TXF	766	28	59	27	4.2	17	1.17	26	83.0	35	30.2	19	4.5	43	7.8	24
DP 2333 B3XF	765	29	50	36	4.5	9	1.15	34	84.1	23	28.7	32	5.8	31	7.5	27
BX 2533AXTP	765	30	78	6	3.9	33	1.22	5	84.4	15	28.4	34	5.1	40	7.9	20
DG 3528 B3XF	746	31	77	8	4.2	19	1.21	10	85.6	5	31.1	12	7.5	8	7.0	41
PHY360 W3FE	743	32	67	14	4.5	7	1.19	16	83.9	26	29.3	28	5.9	28	7.5	28
NG 4405 B3TXF	733	33	58	29	3.7	41	1.19	12	82.8	39	29.3	28	6.5	19	7.8	22
Armor 9371 B3XF	732	34	53	33	4.0	29	1.17	26	82.6	42	27.0	42	5.5	35	8.1	16
NG 3195 B3XF	732	35	63	21	3.9	32	1.17	24	85.1	7	29.4	26	4.9	41	7.1	40
PX1140F331-04W3FE	706	36	67	15	4.5	7	1.17	21	84.6	13	30.7	15	6.0	26	7.4	30
BX 2556AXTP	705	37	64	19	4.3	15	1.19	16	83.5	30	31.4	8	5.9	28	8.2	14
AMX12507 B3TXF	698	38	78	6	3.9	36	1.23	4	84.3	18	32.7	3	8.0	4	7.4	34
DG 4434 B3TXF	684	39	44	44	3.8	38	1.14	40	82.7	40	28.4	35	8.3	2	8.6	8
DP 2414 B3TXF	674	40	66	17	4.6	4	1.19	16	85.7	2	30.0	20	6.5	19	6.7	43
NG 3457 B3XF	653	41	82	3	4.1	23	1.21	6	85.6	3	29.2	30	7.5	7	7.1	38
PHY332 W3FE	642	42	81	5	4.0	26	1.21	6	86.5	1	30.8	13	6.7	14	7.1	38
23R9143B3TXF	625	43	65	18	4.6	4	1.17	21	84.7	9	31.3	10	7.7	5	7.4	30
PHY475 W3FE	593	44	44	43	4.2	17	1.12	43	83.0	35	31.6	7	6.7	14	8.9	3
Mean	859		62		4.13		1.18		84.0		29.8		6.3		7.9	
LSD _{0.10}	347		22		0.52		0.05		2.6		2.6		0.8		ns	
C.V.%	34.5		21.0		7.4		2.7		1.8		5.1		7.4		13.1	
R ² x 100	39.8		62.0		72.5		67.6		50.5		71.7		91.2		55.8	

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 10. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.

Variety	Lint yield	r ^a	Lint frac.	r	Ht.	r	Open bolls	r	Seed index	r	Lint index	r	Seed- score	r	Seed/ acre	r	Fibers/ seed	r	Fiber density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)				(mil.)		(no.)		(no.)	
BX 2515AXTP	2048	1	43.7	39	90	10	86	11	9.6	21	7.9	35	71	27	11.830	2	14965	43	171	44
PX1140F331-04W3FE	2018	2	46.2	21	94	3	85	17	9.9	9	8.8	6	84	2	10.400	14	17751	15	189	24
NG 3195 B3XF	2000	3	44.1	38	86	23	93	4	10.2	6	8.4	18	78	12	10.790	8	17264	20	189	23
DP 2414 B3TXF	1983	4	45.6	26	88	16	76	37	9.8	12	8.7	9	82	5	10.390	15	17034	24	183	33
DP 2115 B3XF	1964	5	46.5	19	94	2	80	30	8.9	33	8.0	28	71	27	11.170	4	15792	39	179	39
BX 2533AXTP	1964	6	43.4	40	87	19	76	37	10.8	2	8.5	15	55	38	10.440	12	16322	32	177	41
PHY415 W3FE	1943	7	45.6	25	76	43	95	2	9.7	15	8.3	20	78	13	10.560	9	16986	26	187	27
DG 3528 B3XF	1928	8	44.5	34	90	12	86	11	9.6	19	7.9	32	72	25	11.050	5	15591	40	177	42
Armor 9245 B3TXF	1920	9	45.4	28	77	42	80	30	8.9	31	7.7	38	68	30	11.360	3	17919	11	208	3
PX1130F309-04W3FE	1893	10	46.7	12	88	15	81	27	8.5	39	7.9	34	57	37	10.880	7	18210	9	208	2
23R9143B3TXF	1875	11	46.2	22	91	6	69	42	9.7	13	8.6	12	81	6	9.893	21	16506	28	179	40
DG 4434 B3TXF	1870	12	47.4	8	82	35	86	11	8.1	42	7.7	37	59	36	11.000	6	17820	12	206	6
PX1140F330-04W3FE	1851	13	46.6	18	83	33	85	17	9.7	17	8.6	11	81	6	9.744	22	17551	18	190	21
PX1140F329-04W3FE	1812	14	46.7	13	84	29	83	23	10.2	7	9.1	2	65	33	9.044	36	19527	2	204	7
DP 2333 B3XF	1810	15	46.6	17	88	18	81	27	9.0	29	8.1	24	74	20	10.120	17	16419	30	184	32
ST 6000 AXTP	1798	16	48.4	2	89	14	89	8	8.8	35	8.5	14	77	15	9.553	26	17786	14	193	16
DP 2328 B3TXF	1797	17	46.7	14	87	20	83	23	9.0	30	8.1	25	74	21	10.130	16	16500	29	186	29
PHY443 W3FE	1786	18	45.0	31	74	44	88	10	10.5	4	8.8	5	77	15	9.181	34	18307	7	195	14
Armor 24X951 B3TXF	1785	19	47.1	9	89	13	84	20	9.7	14	9.0	4	86	1	9.051	35	17212	21	182	36
DG 4530 B3TXF	1779	20	46.8	11	82	34	68	44	9.0	28	8.4	19	77	14	9.667	24	17481	19	193	20
BX 2555AXTP	1778	21	48.1	3	87	21	78	35	9.2	25	8.8	8	83	3	9.202	33	18918	4	202	11
Armor 24X954 B3TXF	1773	22	44.5	35	99	1	73	40	9.6	18	8.0	30	72	23	10.110	19	17203	22	195	13
AMX12507 B3TXF	1761	23	42.9	42	86	25	85	17	11.2	1	8.7	10	45	43	9.236	32	16163	33	174	43
AMX12572 B3TXF	1755	24	47.4	7	83	31	93	4	8.2	41	7.6	39	53	39	10.460	11	16086	36	187	26
DP 2127 B3XF	1749	25	45.0	30	92	5	81	27	9.7	16	8.5	17	79	11	9.396	29	16576	27	181	37
PHY360 W3FE	1749	26	44.9	32	79	39	90	6	9.3	24	7.8	36	71	29	10.110	18	16115	35	184	31
DP 2317 B3TXF	1747	27	44.3	37	92	4	78	35	8.0	43	6.6	43	35	44	12.090	1	15265	42	193	19
DP 2211 B3TXF	1746	28	45.7	24	91	9	74	39	9.8	11	8.5	13	80	8	9.286	31	17805	13	194	15
AMX12526 B3TXF	1745	29	46.4	20	84	30	86	11	10.1	8	9.1	1	80	8	8.720	39	17639	16	185	30
BX 2531AXTP	1727	30	46.1	23	84	27	83	23	10.3	5	9.0	3	75	19	8.685	41	19710	1	207	4
23R9822B3TXF	1705	31	47.6	5	80	38	96	1	8.6	38	8.0	27	72	23	9.694	23	17555	17	199	12
BX 2556AXTP	1704	32	44.5	36	86	23	83	23	9.1	26	7.4	42	65	33	10.410	13	16349	31	193	17
DG 3503 B3XF	1695	33	46.6	15	78	40	80	30	8.8	34	8.0	26	73	22	9.586	25	18116	10	204	8
Armor 9371 B3XF	1690	34	46.6	16	90	11	80	30	9.9	10	8.8	7	83	4	8.691	40	19007	3	203	10
NG 3457 B3XF	1667	35	44.7	33	88	17	84	20	9.5	22	8.0	31	72	25	9.520	27	16028	37	182	34
23R9128B3TXF	1667	36	49.1	1	83	32	71	41	7.9	44	8.0	29	52	41	9.510	28	17029	25	193	18
PHY332 W3FE	1655	37	45.2	29	80	37	89	8	8.8	36	7.5	41	61	35	10.040	20	15440	41	182	35
PHY411 W3FE	1626	38	47.0	10	85	26	90	6	8.9	31	8.2	23	75	18	9.020	37	17036	23	190	22
PHY400 W3FE	1624	39	47.5	6	78	41	95	2	8.3	40	7.9	33	51	42	9.331	30	18466	6	210	1
BX 2557AXTP	1554	40	45.5	27	91	7	79	34	9.4	23	8.2	21	76	17	8.572	42	16156	34	179	38
23R9918B3TXF	1531	41	47.9	4	81	36	84	20	9.0	27	8.5	16	80	8	8.162	43	18901	5	206	5
PHY475 W3FE	1491	42	42.9	43	84	28	86	11	9.6	20	7.5	40	66	31	8.978	38	15959	38	187	28
NG 4405 B3TXF	1489	43	41.8	44	86	22	86	11	8.6	37	6.5	44	52	40	10.460	10	14709	44	188	25
DG 4529 B3TXF	1456	44	43.3	41	91	7	69	42	10.5	3	8.2	22	66	31	8.067	44	18263	8	204	9
Mean	1771		45.8		86		83		9.4		8.2		70		9.854		17124		191	
LSD _{0.10}	204		1.5		ns		9		1.1		0.8		22		1.125		1769		14	
C.V.%	9.8		2.0		11.9		9.0		7.1		6.1		19.1		9.7		6.1		4.4	
R ² x 100	52.8		86.7		29.1		60.0		72.7		73.3		60.8		59.2		72.5		75.9	

^a r = ranking.

Table 11. Fiber properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.

Variety	Lint		Quality		Fiber properties											
	yield	r ^a	score	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r
					(lb/ac)		(in.)		(%)		(g/tex)		(%)			
BX 2515AXTP	2048	1	87	2	4.8	17	1.28	1	85.8	10	31.3	19	5.0	42	7.1	27
PX1140F331-04W3FE	2018	2	56	27	5.0	10	1.19	25	84.7	22	32.8	9	6.4	22	7.1	27
NG 3195 B3XF	2000	3	63	20	4.8	17	1.19	25	85.8	12	30.8	26	5.2	41	7.1	27
DP 2414 B3TXF	1983	4	82	4	4.8	22	1.24	5	86.4	3	31.3	20	6.8	14	6.4	38
DP 2115 B3XF	1964	5	48	35	5.1	2	1.16	34	85.3	18	31.4	17	7.4	8	6.8	32
BX 2533AXTP	1964	6	86	3	4.8	17	1.26	3	86.5	2	30.9	25	5.0	42	6.7	33
PHY415 W3FE	1943	7	75	10	4.7	28	1.22	11	85.8	12	32.9	7	6.5	20	7.1	26
DG 3528 B3XF	1928	8	80	5	4.8	22	1.23	6	87.0	1	31.0	23	6.7	16	6.1	43
Armor 9245 B3TXF	1920	9	54	30	4.4	39	1.15	35	84.3	25	29.2	40	4.2	44	7.4	15
PX1130F309-04W3FE	1893	10	36	43	4.8	22	1.10	44	83.3	40	30.0	35	6.4	22	8.9	2
23R9143B3TXF	1875	11	51	33	5.2	1	1.19	23	84.3	25	32.9	8	8.0	3	7.3	19
DG 4434 B3TXF	1870	12	53	31	4.5	37	1.17	30	82.3	44	30.8	27	7.5	7	7.4	15
PX1140F330-04W3FE	1851	13	63	20	4.9	14	1.21	16	84.2	28	30.5	29	6.5	20	8.3	5
PX1140F329-04W3FE	1812	14	62	24	4.7	30	1.19	25	84.2	29	31.4	17	6.3	25	8.4	4
DP 2333 B3XF	1810	15	55	28	5.0	10	1.18	28	84.9	21	29.6	37	5.6	37	7.6	13
ST 6000 AXTP	1798	16	89	1	4.4	39	1.27	2	85.8	10	33.1	4	7.2	9	6.4	38
DP 2328 B3TXF	1797	17	64	19	4.8	20	1.21	15	84.0	32	29.5	38	5.6	36	7.3	20
PHY443 W3FE	1786	18	69	14	4.7	27	1.19	20	86.1	5	35.4	1	6.7	16	6.5	35
Armor 24X951 B3TXF	1785	19	67	16	5.0	5	1.21	12	85.7	15	29.8	36	6.4	22	6.3	42
DG 4530 B3TXF	1779	20	63	20	4.8	22	1.19	20	84.3	24	28.8	41	6.3	27	7.4	15
BX 2555AXTP	1778	21	68	15	4.6	35	1.20	17	85.0	20	33.0	6	6.6	18	7.0	30
Armor 24X954 B3TXF	1773	22	48	35	4.8	20	1.15	35	83.6	37	30.2	33	7.2	10	7.7	12
AMX12507 B3TXF	1761	23	77	9	5.0	5	1.25	4	85.8	9	32.6	11	7.9	5	6.5	34
AMX12572 B3TXF	1755	24	33	44	5.1	2	1.11	43	83.6	37	30.1	34	7.7	6	8.2	6
DP 2127 B3XF	1749	25	51	34	5.1	2	1.17	33	85.9	7	31.6	15	5.8	34	6.4	37
PHY360 W3FE	1749	26	39	41	5.0	5	1.17	30	83.2	41	26.7	44	5.3	40	8.6	3
DP 2317 B3TXF	1747	27	60	26	4.4	43	1.18	28	83.8	35	31.1	21	5.5	39	7.1	25
DP 2211 B3TXF	1746	28	74	12	4.6	32	1.21	12	86.1	4	31.1	22	6.2	29	6.4	38
AMX12526 B3TXF	1745	29	63	20	5.0	5	1.20	17	85.7	14	32.3	13	9.1	1	6.5	35
BX 2531AXTP	1727	30	61	25	4.6	32	1.19	23	83.6	37	28.7	42	6.3	25	7.8	10
23R9822B3TXF	1705	31	38	42	4.9	14	1.13	40	83.1	42	30.3	32	5.8	33	8.0	7
BX 2556AXTP	1704	32	74	11	4.4	39	1.23	6	84.0	32	32.6	11	5.9	31	7.9	8
DG 3503 B3XF	1695	33	67	16	4.4	39	1.20	17	84.2	29	30.6	28	6.5	19	7.4	15
Armor 9371 B3XF	1690	34	43	39	4.9	14	1.14	39	84.3	25	28.2	43	5.8	34	7.8	10
NG 3457 B3XF	1667	35	78	6	4.7	28	1.23	6	85.9	7	31.9	14	8.1	2	6.9	31
23R9128B3TXF	1667	36	55	29	4.8	22	1.17	30	84.2	29	30.9	24	7.9	4	7.3	22
PHY332 W3FE	1655	37	78	6	4.6	32	1.23	6	85.5	17	32.6	10	6.9	13	7.2	24
PHY411 W3FE	1626	38	41	40	5.0	5	1.13	40	85.2	19	33.1	5	7.1	11	7.3	20
PHY400 W3FE	1624	39	46	38	4.6	36	1.13	40	83.1	42	30.5	31	6.3	27	9.0	1
BX 2557AXTP	1554	40	71	13	4.9	12	1.21	12	85.9	6	34.8	2	5.5	38	6.0	44
23R9918B3TXF	1531	41	52	32	4.7	30	1.15	35	83.9	34	30.5	29	6.0	30	7.9	8
PHY475 W3FE	1491	42	46	37	4.9	12	1.15	35	83.7	36	33.9	3	5.8	32	7.3	22
NG 4405 B3TXF	1489	43	78	6	4.2	44	1.23	10	85.6	16	31.6	16	7.1	11	6.4	38
DG 4529 B3TXF	1456	44	66	18	4.5	38	1.19	20	84.4	23	29.3	39	6.8	14	7.4	14
Mean	1771		61		4.75		1.19		84.7		31.1		6.5		7.2	
LSD _{0.10}	204		18		0.26		0.05		1.6		2.1		0.5		1.2	
C.V.%	9.8		17.2		3.2		2.5		1.1		3.9		4.8		10.2	
R ² x 100	52.8		79.6		82.3		79.1		74.0		80.5		95.2		67.1	

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 12. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.

Variety	Lint yield ^a (lb/ac)	Lint frac. (%)	r	Ht. ^a (cm)	r	Open bolls (%)	r	Seed index (g)	r	Lint index (g)	r	Seed- score (mil.)	r	Seed/ acre ^a (mil.)	r	Fibers/ seed (no.)	r	Fiber density (no.)	r
NG 3195 B3XF		43.1	32			60	26	10.5	15	8.2	24	72	24			16079	25	179	26
NG 3457 B3XF		42.6	38			61	23	9.9	27	7.4	39	71	26			14516	41	171	41
NG 4405 B3TXF		41.1	44			59	28	9.7	30	6.9	44	57	43			14198	43	174	37
AMX12507 B3TXF		41.4	43			48	42	11.6	2	8.4	19	60	40			16179	23	178	31
AMX12526 B3TXF		44.3	20			56	36	10.3	17	8.5	17	79	13			16482	19	179	24
AMX12572 B3TXF		43.7	26			66	6	10.2	23	8.1	26	73	21			17228	13	194	4
ST 6000 AXTF		46.9	2			63	17	10.2	21	9.2	3	89	2			17528	7	181	19
BX 2515AXTP		42.9	34			63	17	10.5	14	8.0	29	72	25			14159	44	160	44
BX 2531AXTP		43.7	27			48	42	12.0	1	9.5	1	68	30			19555	1	198	1
BX 2533AXTP		42.9	35			58	31	11.2	3	8.7	14	76	16			15886	28	171	42
BX 2555AXTP		46.8	3			54	41	9.9	29	8.9	6	84	5			18674	2	198	2
BX 2556AXTP		42.3	40			65	12	10.0	26	7.4	40	64	38			14996	38	177	33
BX 2557AXTP		43.8	25			68	3	10.6	11	8.5	18	73	21			16811	16	183	16
DP 2115 B3XF		44.5	17			64	15	9.7	34	7.9	30	71	27			14615	39	166	43
DP 2127 B3XF		45.7	4			55	38	11.0	6	9.5	2	92	1			17674	5	180	22
DP 2211 B3TXF		43.6	29			58	31	10.4	16	8.3	22	76	16			17118	14	189	7
DP 2317 B3TXF		41.9	41			56	36	9.5	38	7.1	43	60	40			14483	42	175	35
DP 2328 B3TXF		44.1	22			59	28	10.2	19	8.4	20	77	14			16651	17	183	17
DP 2333 B3XF		45.1	10			58	31	10.5	13	8.8	8	83	6			17246	12	184	15
DP 2414 B3TXF		45.6	5			66	6	9.4	40	8.0	28	73	21			15514	33	175	36
23R9128B3TXF		47.0	1			66	6	9.7	31	8.8	9	80	12			17438	11	186	12
23R9143B3TXF		44.8	14			68	3	9.5	37	8.0	27	70	28			15700	30	177	34
23R9822B3TXF		44.4	19			55	38	9.7	31	7.8	32	69	29			15824	29	181	20
23R9918B3TXF		45.4	6			63	17	9.7	31	8.3	23	76	16			16450	20	182	18
PHY332 W3FE		43.3	30			66	6	10.6	10	8.3	21	77	15			16199	22	179	25
PHY360 W3FE		42.6	39			59	28	9.6	35	7.3	41	62	39			14557	40	174	39
PHY400 W3FE		45.3	7			65	12	10.5	12	9.0	5	86	3			17538	6	185	13
PHY411 W3FE		45.1	11			70	2	9.1	44	7.8	33	67	34			15488	34	178	30
PHY415 W3FE		44.0	23			64	15	10.7	8	8.7	15	81	10			17453	9	188	8
PHY443 W3FE		43.6	28			58	31	10.9	7	8.7	11	76	19			16840	15	181	21
PHY475 W3FE		42.8	36			66	6	9.6	36	7.5	38	65	36			15102	37	178	29
PX1130F309-04W3FE		43.3	31			63	17	9.9	27	7.7	34	68	30			15365	35	177	32
PX1140F329-04W3FE		45.2	8			63	17	10.2	21	8.6	16	81	10			17915	3	193	5
PX1140F330-04W3FE		44.8	13			61	23	10.2	20	8.7	12	82	8			16590	18	178	27
PX1140F331-04W3FE		45.0	12			65	12	10.3	18	8.7	10	82	7			16240	21	174	38
Armor 9371 B3XF		43.9	24			48	42	11.1	4	8.8	7	68	30			16125	24	172	40
Armor 24X951 B3TXF		45.1	9			63	17	10.6	9	9.0	4	86	3			17439	10	184	14
Armor 24X954 B3TXF		42.8	37			66	6	9.5	39	7.2	42	56	44			15631	31	187	9
Armor 9245 B3TXF		44.2	21			68	3	9.3	42	7.6	36	66	35			16044	26	187	10
DG 3503 B3XF		44.5	18			71	1	10.0	25	8.2	25	75	20			17504	8	195	3
DG 3528 B3XF		41.8	42			61	23	10.1	24	7.5	37	64	37			15225	36	179	23
DG 4434 B3TXF		44.8	15			55	38	9.1	43	7.6	35	59	42			15961	27	186	11
DG 4529 B3TXF		43.0	33			58	31	11.1	5	8.7	13	81	9			17851	4	192	6
DG 4530 B3TXF		44.7	16			60	26	9.4	40	7.9	31	68	30			15619	32	178	28
Mean		44.0				61		10.2		8.2		73				16311		181	
LSD _{0.10}		1.6				ns		0.9		0.8		16				1267		13	
C.V.%		2.1				20.2		5.3		5.6		13.3				4.6		4.3	
R ² x 100		81.6				38.5		75.0		79.7		63.6				84.1		68.7	

^a Lint yield, height, and seed/acre data were not collected.^b r = ranking.

Table 13. Fiber properties—2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.

Variety	Lint		Quality		Fiber properties											
	yield ^a	r ^b	score	r	Micronaire	r	Length	r	UI ^b	r	Strength	r	Elongation	r	SFI ^b	r
	(lb/ac)						(in.)		(%)		(g/tex)		(%)			
NG 3195 B3XF			58	26	5.0	19	1.19	27	86.7	8	33.1	27	6.1	31	6.4	32
NG 3457 B3XF			76	6	4.8	27	1.24	8	86.9	5	34.6	17	8.1	5	6.3	39
NG 4405 B3TXF			69	10	4.7	37	1.21	19	86.9	5	34.3	19	7.2	17	6.4	35
AMX12507 B3TXF			82	3	4.8	27	1.27	2	86.5	10	36.7	7	8.2	4	6.6	26
AMX12526 B3TXF			54	32	5.1	11	1.19	32	86.1	18	35.1	14	9.5	1	5.8	43
AMX12572 B3TXF			44	41	4.8	27	1.16	42	85.5	32	34.2	22	8.2	3	6.5	28
ST 6000 AXTF			88	1	4.8	27	1.27	2	87.5	1	38.0	2	7.4	13	6.6	26
BX 2515AXTF			75	7	5.2	5	1.26	4	87.2	2	34.7	16	4.8	42	6.4	32
BX 2531AXTF			59	24	4.8	27	1.21	21	85.3	35	32.0	36	6.7	25	7.3	5
BX 2533AXTF			71	8	5.1	11	1.25	7	86.8	7	33.0	30	4.7	43	6.0	41
BX 2555AXTF			56	27	4.7	36	1.19	27	85.5	29	37.6	3	7.2	14	6.9	15
BX 2556AXTF			85	2	4.5	42	1.28	1	86.4	11	37.0	5	6.5	27	6.5	28
BX 2557AXTF			59	25	4.9	23	1.20	24	85.7	26	36.2	9	5.8	38	6.7	21
DP 2115 B3XF			60	21	5.2	5	1.22	10	86.3	16	33.2	26	7.2	14	6.0	41
DP 2127 B3XF			36	43	5.4	1	1.17	40	85.2	36	32.5	33	5.9	35	7.0	12
DP 2211 B3TXF			68	12	4.7	37	1.21	15	86.0	20	31.0	41	6.1	30	6.9	13
DP 2317 B3TXF			79	5	4.6	41	1.25	6	86.4	11	32.0	36	5.2	41	6.4	35
DP 2328 B3TXF			63	17	4.9	24	1.22	10	85.2	36	32.6	32	6.0	33	6.7	20
DP 2333 B3XF			42	42	5.2	5	1.17	37	84.6	42	30.8	42	5.6	40	7.8	1
DP 2414 B3TXF			54	32	5.1	10	1.19	32	86.4	11	33.3	24	7.5	9	5.8	43
23R9128B3TXF			62	20	4.9	24	1.21	21	86.4	11	33.0	28	8.0	6	6.3	39
23R9143B3TXF			55	29	5.0	13	1.19	27	85.8	23	36.3	8	8.8	2	6.5	31
23R9822B3TXF			48	37	5.0	19	1.17	38	85.5	29	31.3	40	6.1	31	6.7	21
23R9918B3TXF			50	35	5.0	13	1.19	32	84.8	40	31.8	39	5.7	39	7.1	8
PHY332 W3FE			69	11	4.9	24	1.22	10	87.1	3	35.1	14	7.5	9	6.8	17
PHY360 W3FE			47	38	5.0	13	1.19	35	84.5	43	32.3	34	5.8	37	7.5	2
PHY400 W3FE			55	30	5.0	13	1.19	27	85.8	25	34.3	21	6.2	29	7.4	3
PHY411 W3FE			45	40	5.1	9	1.16	43	85.8	24	35.6	12	7.4	11	7.0	10
PHY415 W3FE			70	9	4.7	33	1.21	15	87.0	4	37.1	4	6.7	23	6.3	37
PHY443 W3FE			46	39	5.2	5	1.17	40	86.3	17	36.0	10	7.2	16	6.3	37
PHY475 W3FE			25	44	5.3	2	1.13	44	83.3	44	35.6	12	7.0	19	7.2	7
PX1130F309-04W3FE			49	36	5.0	13	1.17	38	86.0	19	35.8	11	6.8	21	6.7	19
PX1140F329-04W3FE			60	22	4.7	33	1.20	24	85.5	32	34.3	20	7.2	17	7.3	4
PX1140F330-04W3FE			62	18	5.0	13	1.21	15	86.4	11	34.5	18	6.8	22	6.9	15
PX1140F331-04W3FE			51	34	5.3	2	1.19	35	86.6	9	38.7	1	7.4	11	6.6	24
Armor 9371 B3XF			56	27	5.3	2	1.21	15	85.9	21	32.2	35	5.9	35	6.5	28
Armor 24X951 B3TXF			62	18	5.0	19	1.23	9	84.7	41	30.7	43	6.7	26	6.6	24
Armor 24X954 B3TXF			64	15	4.5	42	1.20	24	85.7	27	33.5	23	7.7	8	6.6	23
Armor 9245 B3TXF			63	16	4.6	39	1.21	19	85.1	38	32.0	36	4.5	44	6.4	32
DG 3503 B3XF			81	4	4.4	44	1.26	4	85.9	21	36.8	6	6.4	28	7.0	10
DG 3528 B3XF			65	13	4.7	33	1.22	10	85.6	28	33.0	28	7.0	19	6.9	13
DG 4434 B3TXF			65	14	4.6	39	1.22	10	85.3	34	32.9	31	8.0	6	7.1	8
DG 4529 B3TXF			60	22	4.8	27	1.21	21	85.0	39	33.3	25	6.7	23	7.3	6
DG 4530 B3TXF			55	30	5.0	22	1.19	27	85.5	29	30.4	44	6.0	34	6.8	17
Mean			60		4.88		1.21		85.8		34.0		6.7		6.7	
LSD _{0.10}			22		ns		0.53		1.2		3.1		0.7		0.8	
C.V.%			22.2		6.4		2.6		0.9		5.4		6.0		6.8	
R ² x 100			66.0		53.7		68.5		72.2		74.1		93.7		66.2	

^a Lint yield data were not collected at Rohwer.^b r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 14. Yield and related properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Routon-Dundee-Crevasse complex soil at Manila.

Variety	Lint yield	r ^a	Lint frac.	r	Ht.	r	Open bolls ^b	r	Seed index	r	Lint index	r	Seed- score	r	Seed/ acre	r	Fibers/ seed	r	Fiber density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)				(mil.)		(no.)		(no.)	
AMX12526 B3TXF	1955	1	46.2	6	101	4			9.6	14	8.5	6	83	6	10.440	11	16971	20	185	30
DP 2127 B3XF	1947	2	46.0	9	96	17			9.9	9	8.7	2	86	2	10.150	13	18901	6	203	10
DP 2328 B3TXF	1918	3	45.8	11	101	4			9.5	16	8.2	11	79	11	10.520	9	18038	13	201	14
23R9822B3TXF	1908	4	45.5	16	103	3			9.0	26	7.7	22	72	21	11.260	4	17286	17	200	16
DP 2115 B3XF	1890	5	45.1	19	88	25			8.9	27	7.6	25	70	23	11.270	3	16602	26	193	24
BX 2515AXTP	1870	6	43.8	25	81	33			9.4	17	7.6	26	70	24	11.200	5	15074	32	176	32
DP 2414 B3TXF	1855	7	46.1	7	98	13			9.5	15	8.5	5	84	4	9.881	15	19014	5	207	8
Armor 24X954	1849	8	45.3	18	99	10			9.0	23	7.7	23	71	22	10.95	7	18190	11	211	5
23R9918B3TXF	1846	9	46.9	2	94	18			9.0	25	8.2	12	79	12	10.220	12	18791	7	209	6
DG 4434 B3TXF	1805	10	45.8	14	100	7			8.3	32	7.2	29	58	33	11.36	2	16071	29	193	25
Armor 9371 B3XF	1746	11	45.9	10	100	6			9.6	13	8.5	7	82	7	9.368	22	18146	12	198	17
DP 2211 B3TXF	1734	12	45.4	17	100	9			9.9	8	8.5	4	83	5	9.229	24	17828	16	194	23
BX 2556AXTP	1691	13	42.3	31	97	15			9.1	21	6.9	31	60	31	11.160	6	15742	31	194	22
ST 6000 AXTP	1688	14	45.6	15	88	26			9.7	12	8.4	8	82	7	9.080	25	18300	9	200	15
DP 2333 B3XF	1687	15	46.1	8	87	27			9.1	21	8.1	15	77	13	9.492	18	17863	15	201	13
23R9128B3TXF	1686	16	48.2	1	99	12			8.4	31	8.1	14	77	13	9.449	19	18485	8	207	7
Armor 9245 B3TXF	1684	17	44.7	20	92	21			8.8	28	7.3	28	67	28	10.45	10	18259	10	218	4
Armor 24X951	1680	18	46.4	5	104	2			10.0	4	8.9	1	89	1	8.551	29	19468	4	206	9
DG 3528 B3XF	1674	19	44.4	22	100	8			9.7	11	8	17	76	16	9.531	17	17870	14	202	12
DG 4530 B3TXF	1673	20	44.3	23	94	19			9.2	18	7.6	24	81	9	9.949	14	16959	21	197	20
BX 2533AXTP	1659	21	43.8	26	99	11			10.0	5	8.0	16	76	15	9.395	21	17013	19	192	27
BX 2557AXTP	1639	22	45.8	13	92	22			7.2	33	6.2	33	76	16	11.890	1	13330	33	170	33
NG 3195 B3XF	1613	23	43.3	29	89	23			9.9	7	7.8	20	73	20	9.397	20	17194	18	198	19
NG 4405 B3TXF	1607	24	42.0	33	85	30			9.0	24	6.7	32	58	32	10.860	8	16246	28	203	11
DG 3503 B3XF	1589	25	44.5	21	94	19			9.2	19	7.6	27	70	24	9.546	16	16900	22	198	18
AMX12507 B3TXF	1587	26	42.1	32	89	23			10.4	2	7.8	19	69	26	9.249	23	16649	24	191	29
BX 2555AXTP	1561	27	46.6	4	97	16			9.1	20	8.4	9	81	9	8.470	30	19892	2	219	2
NG 3457 B3XF	1542	28	44.1	24	83	32			9.7	10	7.8	18	74	19	8.925	26	16826	23	192	26
AMX12572 B3TXF	1512	29	46.9	3	86	29			8.5	30	7.7	21	69	26	8.904	27	16583	27	192	28
23R9143B3TXF	1478	30	45.8	12	109	1			9.9	6	8.7	3	86	2	7.736	33	16633	25	179	31
BX 2531AXTP	1474	31	43.6	27	87	28			10.2	3	8.2	13	75	18	8.201	31	20574	1	230	1
DG 4529 B3TXF	1466	32	42.9	30	97	14			10.8	1	8.3	10	64	29	7.975	32	19804	3	218	3
DP 2317 B3TXF	1348	33	43.4	28	84	31			8.8	29	7.0	30	62	30	8.767	28	15880	30	194	21
Mean	1693		45.0		94				9.3		7.9		74		10.877		17497		199	
LSD _{0.10}	267		1.3		8				1.1		0.9		10		1.895		2011		17	
C.V.%	13.4		1.6		6.8				6.9		6.8		7.8		14.8		6.8		5.2	
R ² x 100	54.6		89.5		71.8				71.2		73.1		80.6		59.8		76.8		75.1	

^a r = ranking.^b Open bolls data are not available.

Table 15. Fiber properties–2024 Arkansas Transgenic Cotton Variety Test, with irrigation on a Routon-Dundee-Crevasse complex soil at Manila.

Variety	Lint yield (lb/ac)	r ^a	Quality		Fiber properties											
			score	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r
							(in.)		(%)		(g/tex)		(%)			
AMX12526 B3TXF	1955	1	78	6	4.7	4	1.25	4	86.5	9	34.5	6	9.6	1	6.2	29
DP 2127 B3XF	1947	2	41	32	4.8	3	1.14	32	85.2	22	32.6	14	6.4	25	6.5	23
DP 2328 B3TXF	1918	3	54	25	4.6	7	1.19	22	84.6	31	29.5	32	6.1	28	7.4	3
23R9822B3TXF	1908	4	54	25	4.5	12	1.17	27	85.9	17	30.8	29	7.0	17	6.9	13
DP 2115 B3XF	1890	5	60	20	4.5	8	1.19	23	86.0	15	32.5	16	8.1	10	6.8	16
BX 2515AXTP	1870	6	86	2	4.6	6	1.28	1	86.8	8	33.1	11	4.9	33	6.8	15
DP 2414 B3TXF	1855	7	64	18	4.4	18	1.21	19	85.5	19	31.9	21	7.7	11	6.8	14
Armor 24X954 B3TXF	1849	8	49	28	4.30	22	1.17	27	84.7	29	29.5	32	8.8	4	7.1	9
23R9918B3TXF	1846	9	49	29	4.5	12	1.15	31	85.0	24	32.6	15	6.6	24	6.8	16
DG 4434 B3TXF	1805	10	55	24	4.50	8	1.18	24	84.6	31	30.1	31	8.7	5	7.3	4
Armor 9371 B3XF	1746	11	77	8	4.35	18	1.23	8	86.9	6	31.3	26	6.7	23	6.1	30
DP 2211 B3TXF	1734	12	78	6	4.5	15	1.23	8	87.1	4	30.6	30	6.9	21	6.0	33
BX 2556AXTP	1691	13	73	11	4.2	24	1.24	5	84.9	25	35.3	5	7.0	19	7.6	1
ST 6000 AXTP	1688	14	90	1	4.2	24	1.27	2	87.7	1	35.5	2	8.1	9	6.3	26
DP 2333 B3XF	1687	15	47	31	4.6	5	1.16	29	84.7	30	31.3	26	6.1	28	7.2	7
23R9128B3TXF	1686	16	54	27	4.4	16	1.17	26	84.8	27	32.7	13	8.2	8	7.5	2
Armor 9245 B3TXF	1684	17	48	30	4.10	29	1.16	29	84.3	33	31.8	23	5.3	32	7.2	7
Armor 24X951 B3TXF	1680	18	61	19	4.50	8	1.19	20	85.2	21	30.9	28	7.2	16	7	12
DG 3528 B3XF	1674	19	78	5	4.15	24	1.24	5	86.8	7	32.3	18	7.5	14	6.5	22
DG 4530 B3TXF	1673	20	73	13	4.25	23	1.22	14	86.9	5	31.9	20	6.8	22	6	32
BX 2533AXTP	1659	21	81	4	4.4	18	1.24	5	87.6	2	31.7	24	5.8	31	6.4	24
BX 2557AXTP	1639	22	73	11	4.5	12	1.23	12	86.1	14	36.3	1	6.1	28	6.7	19
NG 3195 B3XF	1613	23	57	22	4.5	8	1.18	24	85.3	20	32.4	17	6.2	27	6.4	25
NG 4405 B3TXF	1607	24	70	15	4.0	32	1.22	14	86.1	13	32.2	19	7.7	12	6.1	31
DG 3503 B3XF	1589	25	85	3	4.10	29	1.27	2	85.9	16	35.4	4	7.0	17	6.6	20
AMX12507 B3TXF	1587	26	76	10	4.4	16	1.23	8	86.2	12	34.2	7	8.5	7	6.3	26
BX 2555AXTP	1561	27	68	16	4.1	31	1.21	16	85.6	18	34.1	8	7.0	20	7.1	11
NG 3457 B3XF	1542	28	77	8	4.4	18	1.23	11	87.2	3	34.0	9	8.6	6	6.3	28
AMX12572 B3TXF	1512	29	33	33	4.9	2	1.13	33	84.8	27	31.5	25	8.9	3	7.3	4
23R9143B3TXF	1478	30	56	23	5.0	1	1.21	18	86.3	11	35.4	3	9.3	2	6.6	20
BX 2531AXTP	1474	31	65	17	3.9	33	1.21	16	84.9	25	32.7	12	7.3	15	7.3	4
DG 4529 B3TXF	1466	32	60	20	4.15	24	1.19	20	85.1	23	33.6	10	7.7	12	7.1	9
DP 2317 B3TXF	1348	33	73	13	4.2	24	1.23	12	86.5	10	31.8	22	6.2	26	6.8	16
Mean	1693		65		4.37		1.21		85.8		326.0		7.2		6.7	
LSD _{0.10}	267		12		0.28		0.04		1.5		2.1		0.5		0.9	
C.V.%	13.4		11.0		3.8		2.0		1.1		3.8		4.3		7.5	
R ² x 100	54.6		88.9		83.3		83.5		69.4		80.5		96.6		62.9	

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 16. Morphological and host-plant resistance traits in the 2024 Arkansas Transgenic Cotton Variety Test.

Variety	1st-year in test	Leaf		Stem		Bract trichomes ^c (no./cm)	r	TPB-boll load ratings ^d				Bacterial blight ^e (% sus.)
		pubescence rating ^a	r ^b	pubescence rating ^a	r			Rating	r	pctl	r	
NG 3195 B3XF	2020	2.2	8	5.7	29	32.0	28	3.4	36	72	34	69
NG 3457 B3XF	2023	2.7	13	4.8	9	33.3	35	3.6	32	76	36	8
NG 4405 B3TXF	2023	4.6	38	5.7	33	32.9	30	6	4	4	2	11
AMX12507 B3TXF	2024	3.5	26	5.8	35	28.4	16	5.8	7	20	9	3
AMX12526 B3TXF	2024	6.0	44	6.2	40	42.9	44	3.8	29	72	33	50
AMX12572 B3TXF	2024	4.8	39	6.4	43	32.9	31	5.9	6	7	3	52
ST 6000 AXTF	2024	3.8	29	5.7	32	33.6	37	3.3	38	89	41	14
BX 2515AXTF	2024	3.3	21	4.9	14	36.5	41	4.2	23	46	21	8
BX 2531AXTF	2024	3.1	20	5.1	17	29.2	17	3.1	40	76	35	18
BX 2533AXTF	2024	4.1	32	5.3	21	30.1	22	3.6	32	70	32	26
BX 2555AXTF	2024	2.9	18	6.6	44	32.4	29	3.3	38	85	39	24
BX 2556AXTF	2024	4.9	40	5.2	19	37.1	42	5.1	13	22	10	8
BX 2557AXTF	2024	1.5	4	5.8	34	26.6	6	2.8	44	89	42	0
DP 2115 B3XF	2020	2.3	9	5.7	30	33.0	32	5	16	30	15	83
DP 2127 B3XF	2020	2.8	14	4.8	10	34.0	38	3.3	37	80	37	67
DP 2211 B3TXF	2023	1.2	2	3.7	2	29.8	19	5.4	11	22	11	76
DP 2317 B3TXF	2023	1.0	1	5.0	16	30.4	24	6.2	2	7	4	0
DP 2328 B3TXF	2023	2.5	12	4.8	8	33.3	34	4.8	18	37	17	8
DP 2333 B3XF	2023	2.8	15	5.5	24	27.0	10	3.1	41	83	38	0
DP 2414 B3TXF	2024	1.6	5	3.3	1	30.1	21	5.1	14	39	18	67
23R9128B3TXF	2024	1.3	3	4.4	4	31.8	27	5.7	8	15	7	8
23R9143B3TXF	2024	3.3	22	5.2	18	31.3	26	4.5	19	39	19	74
23R9822B3TXF	2024	5.0	41	5.3	22	27.4	12	6.1	3	11	5	6
23R9918B3TXF	2024	4.0	31	5.3	20	29.4	18	5.4	11	30	14	51
PHY332 W3FE	2019	3.0	19	5.6	27	23.3	3	4.3	22	43	20	8
PHY360 W3FE	2018	2.8	16	4.8	11	26.0	5	5.1	14	28	13	20
PHY400 W3FE	2018	2.4	11	5.9	37	27.1	11	3.9	25	52	24	3
PHY411 W3FE	2021	4.2	34	5.5	26	28.4	15	4.4	20	48	22	11
PHY415 W3FE	2021	2.8	17	5.5	25	30.1	23	4.1	24	57	26	15
PHY443 W3FE	2019	1.8	7	6.4	42	25.2	4	3.8	29	61	28	23
PHY475 W3FE	2024	3.4	25	4.7	7	27.6	14	3.7	31	67	31	4
PX1130F309-04W3FE	2024	2.3	10	4.9	13	20.2	1	3.9	25	48	23	18
PX1140F329-04W3FE	2024	4.4	37	4.9	15	27.0	9	4.3	21	52	25	16
PX1140F330-04W3FE	2024	4.2	35	4.5	6	27.0	8	3.9	27	59	27	13
PX1140F331-04W3FE	2024	4.2	36	5.8	36	23.1	2	3.9	27	61	29	0
Armor 9371 B3XF	2020	3.3	23	4.8	12	33.3	36	3	42	85	40	52
Armor 24X951 B3TXF	2024	1.6	6	4.3	3	27.0	7	5.6	9	17	8	12
Armor 24X954 B3TXF	2024	3.5	27	4.4	5	27.6	13	6.7	1	2	1	69
Armor 9245 B3TXF	2024	3.9	30	6.1	38	37.6	43	5.4	10	22	12	23
DG 3503 B3XF	2024	5.5	43	6.3	41	34.9	39	2.8	43	96	44	56
DG 3528 B3XF	2022	3.7	28	5.6	28	30.9	25	3.6	34	61	30	21
DG 4434 B3TXF	2024	5.3	42	5.4	23	35.9	40	4.9	17	35	16	0
DG 4529 B3TXF	2024	3.3	24	5.7	31	29.8	20	3.6	34	89	43	0
DG 4530 B3TXF	2023	4.1	33	6.1	39	33.2	33	5.9	5	13	6	50
Ark 0628fg RF (sus.)								0	45	98	45	
Ark 0628fg RF (sus.)								0	45	98	46	
Mean		3.3		5.3		30.4		4.2				26
LSD _{0.10}		1.4		1.3		3.6		0.65				24
C.V.%		37.6		20.5		10.2		18.9				68.3
R ² x 100		60.8		36.6		71.8		75.0				75.9

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

^b r = rating.

^c Marginal trichome density of bracts determined on 6 bracts/plot (4 reps) at Keiser irrigated test.

^d Response to tarnished plant bug was determined by visually rating the boll load at end of season from 0 (none) to 10 (excellent). Plots were 1-row, replicated 8 times, and not sprayed for TPB control. Percentile (pctl) determined by (100*rank of performance rating/no. of entries).

^e 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 in 2023. Scratches were examined for water-soaking, and % of susceptible plants was determined.

Table 17. Two-year and three-year average lint yields (lb/ac) for transgenic varieties at the five locations of the 2022–2024 Arkansas Cotton Variety Test.

2022–2024 Kansas Cotton Variety Test														
Variety	Manila ^a		r ^c	Judd Hill		r	Marianna		r	Rohwer ^d		r	Judd Hill & Marianna	
	(lb/ac)			(lb/ac)			(lb/ac)			(lb/ac)				
Two-year (2023–2024) means														
PHY415W3FE				988	6		1885	1					1436	1
DP 2328 B3TXF	1875	1		1057	2		1800	6					1428	2
DP 2115 B3XF	1754	3		1042	3		1780	8					1411	3
PHY360W3FE				967	7		1801	5					1384	4
DP 2127 B3XF	1700	6		1042	4		1685	13					1363	5
DP 2333 B3XF	1654	8		1026	5		1694	12					1360	6
DG 3528 B3XF	1794	2		871	10		1815	4					1343	7
NG 3195 B3XF	1698	7		839	12		1841	2					1340	8
DG 4530 B3TXF	1641	9		892	9		1785	7					1338	9
PHY400W3FE				946	8		1696	11					1321	10
PHY411W3FE				1092	1		1520	18					1306	11
DP 2211 B3TXF	1730	4		714	16		1826	3					1270	12
DP 2317 B3TXF	1438	11		857	11		1662	14					1260	13
PHY443W3FE				801	13		1625	16					1213	14
Armor 9371 B3XF	1707	5		707	18		1714	9					1210	15
PHY332W3FE				719	15		1698	10					1208	16
NG 3457 B3XF	1496	10		724	14		1629	15					1176	17
NG 4405 B3TXF	1334	12		709	17		1533	17					1121	18
Three-year (2022–2024) means														
DP 2115 B3XF	1695	3	1417	2	1132	3	1901	1	914	3	1517	1		
PHY415W3FE			1407	5	1115	4	1819	4	837	6	1467	2		
DP 2127 B3XF	1708	2	1228	10	1141	2	1764	7	744	11	1452	3		
NG 3195 B3XF	1676	4	1173	11	1053	7	1844	2	789	9	1448	4		
PHY360W3FE			1378	6	1062	6	1829	3	959	2	1446	5		
DG 3528 B3XF	1784	1	1277	9	1002	8	1804	5	803	7	1403	6		
PHY411W3FE			1534	1	1172	1	1634	11	907	4	1403	7		
PHY400W3FE			1280	8	1087	5	1717	8	845	5	1402	8		
Armor 9371 B3XF	1541	5	1415	3	865	11	1791	6	799	8	1328	9		
PHY443W3FE			1412	4	991	9	1647	10	783	10	1319	10		
PHY332W3FE			1329	7	926	10	1654	9	960	1	1290	11		

^a Two- and three-year means for PhytoGen varieties are not available for Manila due to lack of 2024 data.^b Two- and three-year means not available for Keiser due to lack of 2023 data; three-year means are the average of 2022 and 2024.^c r = ranking.^d Two- and three-year means are not available for Rohwer due to loss of 2024 test; three-year means are the average of 2022 and 2023.

Table 18. Yield and related properties—2024 Arkansas Conventional Cotton Variety Test across three test sites.

Variety	Lint		Lint		Open		Seed		Lint		Seed-		Seed/		Fibers/		Fiber	
	yield	r ^a	frac.	r	Ht.	r	bolls	r	index	r	score	r	acre	r	seed	r	density	r
	(lb/ac)		(%)		(cm)		(%)		(g)		(g)		(mil.)		(no.)		(no.)	
SSG UA248	1497	1	42.4	3	90	11	78	4	10.8	9	8.1	4	76	4	8.703	1	15731	5
Arkot 1208	1451	2	42.5	2	93	6	73	10	11.5	5	8.7	1	84	1	7.705	6	16760	2
SSG UA107	1410	3	40.9	8	95	3	88	1	11.7	3	8.3	3	73	7	7.732	4	16780	1
Arkot 1207	1380	4	41.4	6	92	7	76	6	10.5	11	7.5	11	65	10	8.427	2	14740	9
UA212ne	1357	5	41.4	7	91	10	79	2	11.2	7	8.1	5	76	3	7.697	7	16192	4
Arkot 1202	1348	6	40.9	9	102	1	75	7	12.1	2	8.5	2	78	2	7.371	9	16480	3
SSG UA114	1333	7	39.0	11	94	5	72	11	11.3	6	7.4	12	66	9	8.355	3	14148	11
Arkot 1115	1315	8	44.2	1	95	2	76	5	9.8	12	7.9	8	56	11	7.707	5	14703	10
AM UA48	1260	9	37.7	12	87	12	79	2	12.7	1	7.8	9	47	12	7.417	8	13375	12
SSG UA222	1252	10	40.3	10	92	8	70	12	11.6	4	8.0	6	74	6	7.024	12	15213	8
Arkot 1102ne	1238	11	41.7	5	92	9	74	8	11.0	8	8.0	7	75	5	7.095	10	15574	6
Arkot 1214	1203	12	41.8	4	94	4	74	8	10.6	10	7.8	10	70	8	7.076	11	15403	7
Mean	1337		41.2		93		76		11.2		8.0		70		7.692		15425	
Var. LSD _{0.10}	145		0.7		5		7		0.5		0.4		9		0.827		72	
Loc. LSD _{0.10}	73		0.4		2		ns		0.3		0.1		ns		0.413		ns	
C.V.%	16.0		2.0		7.6		10.8		4.9		5.2		15.6		15.9		5.5	
R ² x 100	73.1		91.6		72.4		62.9		87.3		76.2		72		71.3		79.8	
Prob (var x loc)	0.001		0.069		0.504		0.185		0.431		0.231		0.631		<.0001		0.748	

^ar = ranking.**Table 19. Fiber properties—2024 Arkansas Conventional Cotton Variety Test across four test sites.**

Variety	Lint		Quality		Fiber properties											
	yield	r ^a	score	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r
					(lb/ac)				(in.)	(%)		(g/tex)	(%)			
SSG UA248	1497	1	58	7	4.8	6	1.23	8	86.6	6	33.6	7	7.0	8	6.4	3
Arkot 1208	1451	2	56	10	4.9	3	1.24	7	86.1	11	32.7	10	8.0	2	6.6	1
SSG UA107	1410	3	49	11	4.8	9	1.20	11	86.3	10	33.5	8	6.3	10	6.4	2
Arkot 1207	1380	4	60	6	4.8	7	1.24	6	86.0	12	33.5	9	7.7	3	6.3	6
UA212ne	1357	5	57	9	4.7	10	1.23	10	86.4	8	32.0	11	6.8	9	6.3	7
Arkot 1202	1348	6	71	2	4.7	10	1.27	3	86.9	4	33.7	6	5.9	11	6.4	4
SSG UA114	1333	7	47	12	5.0	2	1.20	12	86.7	5	36.5	2	7.7	4	5.8	12
Arkot 1115	1315	8	71	3	4.8	4	1.28	2	87.1	2	33.8	5	7.2	6	5.9	10
AM UA48	1260	9	76	1	5.1	1	1.30	1	88.1	1	38.4	1	5.6	12	5.9	11
SSG UA222	1252	10	68	4	4.8	8	1.26	4	87.0	3	35.5	3	8.8	1	6.2	9
Arkot 1102ne	1238	11	58	8	4.8	5	1.23	9	86.5	7	31.8	12	7.1	7	6.3	5
Arkot 1214	1203	12	65	5	4.7	12	1.26	5	86.4	9	34.2	4	7.3	5	6.2	8
Mean	1337		61		4.8		1.25		86.7		34.1		7.1		6.2	
Var. LSD _{0.10}	145		6		0.2		0.02		0.1		1.1		0.3		0.4	
Loc. LSD _{0.10}	73		ns		0.1		0.01		0.5		0.7		0.4		0.2	
C.V.%	16.0		11.9		3.9		1.6		1.2		3.9		5.8		6.5	
R ² x 100	73.1		81.0		74.3		84.9		60.5		86.4		93.2		65.1	
Prob (var x loc)	0.001		0.101		0.761		0.055		0.856		0.691		0.748		0.677	

^ar = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 20. Yield and related properties—2024 Arkansas Conventional Cotton Variety Test on a Sharkey clay soil at Keiser.

Variety	Lint yield (lb/ac)	r ^a	Lint frac. (%)	r	Ht. (cm)	r	Open bolls (%)	r	Seed index (g)	r	Lint index (g)	r	Seed- score (mil.)	r	Seed/ acre (no.)	r	Fibers/ seed (no.)	r	Fiber density (no.)	r
SSG UA107	1694	1	42.2	7	106	3			10.9	6	8.1	6	77.5	6	9.495	1	16487	2	185	1
SSG UA248	1611	2	43.0	3	102	9			10.3	10	7.9	8	74.5	7	9.291	2	15495	6	177	3
Arkot 1208	1545	3	42.6	5	104	6			11.2	3	8.6	1	85	1	8.152	5	16712	1	180	2
SSG UA114	1437	4	39.7	11	104	7			10.8	7	7.2	12	65	11	9.077	3	13674	11	165	9
Arkot 1202	1422	5	41.0	9	110	1			11.9	2	8.4	2	79	3	7.683	6	15994	3	175	5
UA212ne	1369	6	42.9	4	100	12			10.7	8	8.2	3	79.5	2	7.546	7	15947	4	177	4
AM UA48	1350	7	37.2	12	101	10			12.0	1	7.2	11	40.5	12	8.444	4	12779	12	153	12
Arkot 1207	1211	8	42.0	8	100	11			9.9	11	7.4	10	67.5	9	7.448	8	13846	10	164	10
SSG UA222	1156	9	40.8	10	106	2			11.1	4	7.9	9	74	8	6.685	9	14889	8	170	8
Arkot 1102ne	1146	10	42.4	6	104	7			10.9	5	8.1	5	78	4	6.414	10	15186	7	170	7
Arkot 1214	963	11	43.1	2	105	5			10.6	9	8.1	4	78	4	5.362	12	15552	5	174	6
Arkot 1115	960	12	44.6	1	105	4			9.6	12	7.9	7	67.5	9	5.518	11	14246	9	162	11
Mean	1322		41.8		104				10.8		7.9		72.2		7.593		15067		171	
LSD _{0.10}	401		1.4		ns				1.2		0.6		17.7		2.278		1909		16	
C.V.%	25.4		1.9		6.2				6.4		4.5		13.7		25.1		7.1		5.2	
R ² x 100	44.2		92.5		24.8				68.2		76.0		74.1		45.2		72.4		67.4	

^a r = ranking.**Table 21. Fiber properties—2024 Arkansas Conventional Cotton Variety Test on a Sharkey clay soil at Keiser.**

Variety	Lint yield (lb/ac)	r ^a	Quality		Fiber properties															
			score	r	Micronaire	r	Length (in.)	r	UI ^a (%)	r	Strength (g/tex)	r	Elongation (%)	r	SFI ^a	r				
SSG UA107	1694	1	39	12	4.9	6	1.18	12	85.9	12	34.2	9	6.9	11	6.4	2				
SSG UA248	1611	2	54	10	4.8	7	1.23	10	86.4	10	34.5	8	7.4	9	6.5	1				
Arkot 1208	1545	3	61	7	4.8	9	1.25	7	86.7	7	33.5	11	9.0	2	6.3	4				
SSG UA114	1437	4	44	11	5.1	1	1.21	11	86.2	11	38.0	3	8.3	4	5.9	9				
Arkot 1202	1422	5	70	3	4.8	11	1.26	4	87.9	2	36.0	5	7.1	10	6.0	8				
UA212ne	1369	6	60	8	4.8	7	1.23	9	87.4	5	33.4	12	7.9	5	5.6	12				
AM UA48	1350	7	78	1	5.0	2	1.29	1	88.6	1	41.5	1	6.0	12	5.7	11				
Arkot 1207	1211	8	58	9	5.0	2	1.25	7	86.6	9	35.7	6	8.8	3	6.3	3				
SSG UA222	1156	9	72	2	4.8	11	1.27	3	87.8	3	38.6	2	9.6	1	5.8	10				
Arkot 1102ne	1146	10	62	6	4.9	5	1.25	6	87.2	6	34.1	10	7.8	6	6.2	6				
Arkot 1214	963	11	66	5	4.8	9	1.26	4	86.7	8	37.6	4	7.7	7	6.3	4				
Arkot 1115	960	12	70	3	5.0	2	1.28	2	87.5	4	34.5	7	7.5	8	6.2	7				
Mean	1322		61		4.86		1.25		81.1		35.9		7.8		6.1					
LSD _{0.10}	401		10		ns		0.03		ns		2.5		0.6		ns					
C.V.%	25.4		8.9		2.9		1.5		2.6		3.8		4.6		5.0					
R ² x 100	44.2		89.9		51.5		85.2		62.9		87.3		93.8		63.4					

^a r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 22. Yield and related properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.

Variety	Lint yield		Lint frac.		Ht.	r	Open bolls		Seed index		Lint index		Seed-score		Seed/acre ¹		Fibers/seed		Fiber density	
	(lb/ac)	r ^a	(%)	r			(%)	r	(g)	r	(g)	r	r	r	(mil.)	r	(no.)	r	(no.)	r
Arkot 1208	1226	1	42.8	3	94	3	70	10	11.4	4	8.7	1	88.5	1	6.410	5	17097	2	184	5
Arkot 1115	1213	2	43.2	1	90	6	78	6	9.6	11	7.4	9	60.5	10	7.459	1	14205	10	168	11
Arkot 1207	1092	3	41.9	5	89	8	81	3	10.6	7	7.8	5	77	4	6.327	6	16081	5	184	6
SSG UA248	1079	4	41.7	6	80	12	79	5	10.3	9	7.6	7	74.5	5	6.426		15442	8	179	7
SSG UA107	1079	5	40.5	9	94	2	89	1	11.8	2	8.1	2	66.5	8	6.021	9	17767	1	199	1
SSG UA114	1072	6	39.0	11	93	4	68	11	10.9	6	6.8	12	62.5	9	7.181	2	13698	11	170	10
Arkot 1202	1060	7	41.2	7	100	1	74	8	11.2	5	8.0	4	79	2	6.025	8	16752	3	190	3
UA212ne	1044	8	41.0	8	91	5	80	4	10.4	8	7.4	10	70.5	7	6.445	3	16373	4	195	2
SSG UA222	999	9	40.3	10	88	9	66	12	11.7	3	8.1	3	78	3	5.622	10	15502	7	174	9
Arkot 1214	951	10	42.0	4	89	7	74	8	9.5	12	7.0	11	54.5	11	6.163	7	14559	9	178	8
AM UA48	927	11	37.5	12	84	11	86	2	12.8	1	7.8	6	34.5	12	5.411	12	13475	12	155	12
Arkot 1102ne	922	12	42.8	2	87	10	75	7	9.9	10	7.6	8	73.5	6	5.523	11	16044	6	187	4
Mean	1055		41.1		90		77		10.8		7.7		68.3		6.251		15583		180	
LSD _{0.10}	147		1.4		9.2		11		0.8		0.6		14.3		0.876		1450		15	
C.V.%	11.7		1.9		8.6		11.5		4.3		4.0		11.6		11.7		5.2		4.6	
R ² x 100	47.3		91.7		42.9		54.3		89.7		85.4		86.4		49.7		85.5		82.0	

^ar = ranking.**Table 23. Fiber properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Dundee silt loam soil at Judd Hill.**

Variety	Lint yield		Quality score		Fiber properties											
	(lb/ac)	r ^a	r	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r
							(in.)		(%)		(g/tex)		(%)			
Arkot 1208	1226	1	58	9	4.8	2	1.23	9	86.7	4	31.8	9	8.2	2	6.6	2
Arkot 1115	1213	2	76	3	4.7	5	1.29	3	87.0	2	33.2	6	7.7	5	5.8	12
Arkot 1202	1160	3	78	2	4.3	11	1.29	2	87.0	3	33.3	4	6.0	11	6.5	5
Arkot 1207	1092	4	60	8	4.6	6	1.25	7	85.2	12	31.4	11	7.8	3	6.6	4
SSG UA248	1079	5	67	4	4.6	8	1.26	6	86.3	6	33.3	4	7.1	9	6.7	1
SSG UA107	1079	6	48	12	4.5	9	1.19	12	86.0	8	32.5	7	6.5	10	6.5	5
SSG UA114	1072	7	55	10	4.7	4	1.22	10	86.4	5	35.4	2	7.7	4	5.9	10
Arkot 1214	1058	8	67	6	4.5	9	1.27	5	85.6	10	32.5	7	7.6	6	6.3	8
UA212ne	1044	9	63	7	4.2	12	1.25	7	86.1	7	31.6	10	7.2	8	6.1	9
SSG UA222	999	10	67	4	4.8	2	1.28	4	86.0	9	34.7	3	8.9	1	6.6	2
AM UA48	927	11	83	1	5.0	1	1.32	1	88.8	1	37.0	1	5.9	12	5.9	10
Arkot 1102ne	922	12	49	11	4.6	6	1.21	11	85.3	11	30.8	12	7.4	7	6.4	7
Mean	1073		64		4.58		1.25		86.3		33.0		7.3		6.3	
LSD _{0.10}	182		11		0.31		0.36		1.7		3.1		0.9		ns	
C.V.%	14.1		9.7		3.7		1.6		1.1		5.2		6.6		7.8	
R ² x 100	37.1		86.6		76.7		86.4		70.1		69.8		88.4		54.1	

^ar = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 24. Yield and related properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.

Variety	Lint yield (lb/ac)	r ^a	Lint frac. (%)	r	Ht. (cm)	r	Open bolls (%)	r	Seed index (g)	r	Lint index (g)	r	Seed- score (r)	r	Seed/ acre (mil.)	r	Fibers/ seed (no.)	r	Fiber density (no.)	r
Arkot 1207	1836	1	42.0	5	88	5	70	12	9.8	11	7.2	12	49	11	11.500	1	15031	10	180	5
SSG UA248	1801	2	42.6	3	89	4	78	2	10.3	10	7.9	10	70.5	7	10.390	2	15545	7	177	7
Arkot 1115	1773	3	45.5	1	90	2	75	6	9.3	12	7.9	8	44	12	10.140	3	15203	9	173	9
Arkot 1214	1695	4	42.5	4	90	2	75	6	10.5	9	7.9	9	73.5	6	9.702	4	16211	4	184	2
UA212ne	1657	5	41.7	6	83	9	78	2	11.3	6	8.3	5	77.5	3	9.098	6	16421	3	182	4
Arkot 1102ne	1646	6	41.4	7	85	7	74	9	11.2	7	8.0	7	74.5	5	9.348	5	15907	6	180	6
SSG UA222	1600	7	41.2	9	81	11	74	9	11.7	4	8.3	4	78	2	8.764	8	15223	8	169	11
Arkot 1208	1581	8	42.8	2	81	10	75	6	11.0	8	8.4	3	79.5	1	8.553	9	16599	2	182	3
Arkot 1202	1561	9	40.2	10	96	1	76	4	12.4	2	8.4	2	68	9	8.406	10	16203	5	177	8
AM UA48	1504	10	38.7	12	76	12	71	11	12.6	1	8.1	6	53.5	10	8.396	11	13760	12	154	12
SSG UA114	1491	11	39.7	11	85	7	76	4	11.4	5	7.7	11	70	8	8.808	7	14852	11	172	10
SSG UA107	1457	12	41.4	8	85	6	88	1	11.9	3	8.6	1	76	4	7.681	12	17275	1	187	1
Mean	1634		41.6		86		76		11.1		8.1		68		9.233		15686		176	
LSD _{0.10}	117		1.2		8		ns		1.1		ns		ns		0.662		1403		8	
C.V.%	6.0		1.7		8.3		10.0		5.4		6.3		24.9		6.0		5.0		2.6	
R ² x 100	72.5		92.5		59.9		70.3		85.0		52.0		51.2		84.2		74.6		88.3	

^ar=ranking.**Table 25. Fiber properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Calloway silt loam soil at Marianna.**

Variety	Lint yield (lb/ac)	r ^a	Quality		Fiber properties													
			score	r	Micronaire	r	Length	r	UI ^a	r	Strength	r	Elongation	r	SFI ^a	r		
							(in.)		(%)		(g/tex)		(%)					
Arkot 1207	1836	1	53	11	4.7	11	1.21	10	85.1	12	32.6	7	7.1	5	6.4	7		
SSG UA248	1801	2	64	4	4.8	9	1.23	4	86.3	6	32.0	9	7.1	6	6.3	8		
Arkot 1115	1773	3	61	6	4.9	3	1.23	5	86.6	4	33.0	5	6.9	7	6.2	10		
Arkot 1214	1695	4	62	5	4.7	12	1.23	6	85.9	8	32.9	6	7.3	4	6.8	3		
UA212ne	1657	5	53	10	4.9	5	1.21	9	85.8	10	31.0	12	6.2	9	6.9	2		
Arkot 1102ne	1646	6	57	7	4.8	8	1.22	7	85.9	8	31.9	11	6.5	8	6.8	3		
SSG UA222	1600	7	75	1	4.9	3	1.28	2	87.2	2	33.2	4	8.0	1	6.3	8		
Arkot 1208	1581	8	55	8	4.9	5	1.22	7	85.4	11	32.4	8	7.3	3	7.0	1		
AM UA48	1504	9	74	2	5.3	1	1.29	1	87.3	1	37.6	1	5.3	12	6.2	11		
SSG UA114	1491	10	50	12	5.0	2	1.19	12	86.8	3	35.8	2	7.4	2	5.9	12		
Arkot 1202	1473	11	74	2	4.8	9	1.28	2	86.0	7	32.0	10	5.4	11	6.8	3		
SSG UA107	1457	12	54	9	4.8	7	1.20	11	86.6	5	33.4	3	6.0	10	6.8	3		
Mean	1626		61		4.85		1.23		86.2		33.1		6.7		6.5			
LSD _{0.10}	132		14		0.18		0.04		ns		2.4		0.7		ns			
C.V.%	6.8		12.4		2.0		1.9		1.3		4.0		5.6		7.3			
R ² x 100	70.8		74.4		84.5		78.9		45.5		80.0		91.7		54.7			

^ar = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 26. Yield and related properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Hebert silt loam soil at Rohwer.

Variety	Lint yield ^a (lb/ac)	r ^b	Lint frac. (%)	r	Ht. ^a (cm)	r	Open bolls ^a (%)	r	Seed index (g)	r	Lint index (g)	r	Seed- score	r	Seed/ acre ^a (mil.)	r	Fibers/ seed (no.)	r	Fiber density (no.)	r
SSG UA107			39.5	8					12.3	4	8.2	6	73.5	5			15589	5	173	6
SSG UA114			38.5	11					12.1	7	7.8	10	68	8			14370	10	165	10
SSG UA222			39.0	10					11.9	9	7.8	11	67.5	9			15239	7	175	2
SSG UA248			42.1	2					12.1	6	8.9	3	83.5	3			16441	3	174	5
AM UA48			37.4	12					13.3	1	8.1	9	58.5	11			13485	12	152	12
UA212ne			39.8	6					12.3	3	8.4	4	76	4			16025	4	176	1
Arkot 1102ne			40.4	5					12.0	8	8.2	7	73	6			15160	8	169	8
Arkot 1115			43.4	1					10.6	12	8.4	5	53	12			15156	9	167	9
Arkot 1202			41.1	4					13.1	2	9.3	1	86	1			16970	1	175	4
Arkot 1207			39.5	9					11.6	11	7.6	12	65.5	10			14000	11	163	11
Arkot 1208			41.7	3					12.3	5	9.0	2	84.5	2			16634	2	175	3
Arkot 1214			39.6	7					11.9	10	8.1	8	72	7			15289	6	172	7
Mean			40.2						12.1		8.3		72				15363		170	
LSD _{0.10}			1.8						0.8		0.8		10				1277		ns	
C.V.%			2.5						3.5		5.5		7.8				4.6		4.7	
R ² x 100			85.0						64.5		72.8		87.1				82.1		63.0	

^a Lint yield, height, open bolls, and seed/acre data were not collected at Rohwer.^b r = ranking.**Table 27. Fiber properties—2024 Arkansas Conventional Cotton Variety Test, with irrigation on a Hebert silt loam at Rohwer.**

Variety	Lint	Quality		Fiber properties												
	yield ^a	r ^b	score	r	Micronaire	r	Length	r	UI ^b	r	Strength	r	Elongation	r	SFI ^b	r
	(lb/ac)						(in.)		(%)		(g/tex)		(%)			
SSG UA107			56	8	4.9	6	1.24	8	86.8	9	34.1	7	5.8	10	6.1	6
SSG UA114			41	12	5.2	2	1.19	12	87.6	3	36.8	2	7.3	3	5.6	12
SSG UA222			58	7	4.8	12	1.24	8	87.0	8	35.5	3	8.7	1	6.2	5
SSG UA248			49	11	5.1	3	1.22	11	87.4	4	34.8	4	6.7	6	6.2	4
AM UA48			70	2	5.3	1	1.30	2	87.9	1	37.4	1	5.1	12	6.0	9
UA212ne			54	9	4.9	6	1.24	8	86.2	11	32.1	11	6.1	9	6.7	2
Arkot 1102ne			64	5	4.9	6	1.26	6	87.6	2	30.4	12	6.6	7	6.1	7
Arkot 1115			77	1	4.9	10	1.31	1	87.2	6	34.6	5	6.6	7	5.7	11
Arkot 1202			62	6	5.0	5	1.27	4	86.7	10	33.8	9	5.3	11	6.3	3
Arkot 1207			68	3	4.9	6	1.28	3	87.1	7	34.4	6	7.2	4	6.0	8
Arkot 1208			53	10	5.1	4	1.25	7	85.7	12	33.0	10	7.7	2	6.7	1
Arkot 1214			66	4	4.8	11	1.27	4	87.3	5	34.1	7	6.9	5	5.7	10
Mean			60		4.97		1.26		87.0		34.2		6.6		6.1	
LSD _{0.10}			17		ns		0.03		ns		1.4		0.8		0.6	
C.V.%			15.8		5.8		1.5		1.0		2.3		6.3		5.2	
R ² x 100			70.1		39.7		84.4		48.6		92.1		92.1		71.5	

^a Lint yield data were not collected at Rohwer.^b r = ranking; UI = fiber length uniformity index; SFI = short fiber index.

Table 28. Morphological and host plant resistance traits in the 2024 Arkansas Conventional Cotton Variety Test.

Variety	Leaf pubescence rating ^a	^b r	Stem pubescence rating ^a	r	Bract trichomes ^c (no./cm)	r	Bacterial blight ^d (% sus.)
SSG UA107	1.3	1	3.2	4	25.3	1	0
SSG UA114	3.8	10	6.0	12	33.0	11	0
SSG UA222	4.8	12	3.8	6	32.8	10	0
SSG UA248	3.3	8	5.4	10	26.9	2	0
AM UA48	1.9	2	5.3	9	30.5	8	0
UA212ne	2.5	5	2.3	2	28.6	5	0
Arkot 1102ne	2.9	6	3.2	5	27.9	4	0
Arkot 1115	4.4	11	3.1	3	27.0	3	0
Arkot 1202	2.4	4	2.3	1	30.7	9	0
Arkot 1207	3.2	7	4.6	8	34.5	12	0
Arkot 1208	3.4	9	5.5	11	29.4	6	0
Arkot 1214	2.2	3	4.3	7	30.4	7	3
Mean	3.0		4.1		29.8		0.3
LSD _{0.10}	0.1		1.6		3.7		ns
C.V.%	21.3		33.5		10.5		600.0
R ² x 100	78.9		55.1		56.6		37.1

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

^b r = ranking.

^c Marginal trichome density of bracts was determined on 6 bracts/plot (4 reps) at the Keiser irrigated test.

^d Varieties/breeding lines were planted in flats (3 replications, 10 seed/plot) in a greenhouse, and scratch inoculated with *Xanthomonas citris* pv. *malvacearum*. The inoculum was obtained from naturally infected leaves collected in 2023. Scratches were examined for water-soaking, and % of susceptible plants were determined.

Table 29. Two-year and 3-year average lint yields (pounds per acre) for conventional varieties at the four locations of the 2022–2024 Arkansas Cotton Variety Test.

Variety	Keiser Irrigated ^a	^b r	Judd Hill Irrigated	r	Marianna Irrigated	r	Rohwer Irrigated ^c	r	Judd Hill & Marianna	r
	(lb/ac)		(lb/ac)		(lb/ac)		(lb/ac)		(lb/ac)	
Two-year (2023–2024) means										
UA212ne			888	1	1494	1			1191	1
UA248			885	2	1451	2			1168	2
SGS UA222			773	5	1451	2			1112	3
SGS UA107			856	4	1311	4			1083	4
SGS UA114			864	3	1277	5			1071	5
AM UA48			754	3	1231	6			992	6
Three-year (2022–2024) means										
UA212ne	1334	4	1026	1	1599	1	700	5	1313	1
UA248	1501	1	957	3	1525	2	735	4	1241	2
SGS UA107	1387	2	970	2	1442	4	761	3	1206	3
SGS UA222	1197	6	889	5	1519	3	653	6	1204	4
SGS UA114	1366	3	954	4	1389	5	765	2	1172	5
AM UA48	1283	5	857	6	1322	6	766	1	1090	6

^a Two- and three-year means were not available for Keiser due to lack of 2023 data; three-year means are an average of 2022 and 2024.

^b r = ranking.

^c Two-year and three-year means were not available for Rohwer due to a loss of 2024 test; three-year means are an average of 2022 and 2023.

Appendix Table A1. Lint Yield and Fiber Properties–Craighead County Transgenic Variety Test.

Cooperator(s):	Brannon and Gary Qualls				Date Planted:	5/6/2024		
Soil Type:	Dundee Fine Sandy Loam				Date of Harvest:	10/24/2024		
Irrigation:	Furrow				Replications:	4		
Agent(s):	Branon Thiesse and Chris Grimes							
Variety	Lint	Loan	Income	r ^a	Fiber properties			
	yield	rate			Micronaire	Length	UI ^b	Strength
	(lb/ac)	(¢/lb)			(\$/ac)	(in.)	(%)	(g/tex)
DP 2333 B3XF	1957	52.14	1021	1	5.0	1.16	82.7	29.2
DP 2038 B3XF	2010	47.24	975	2	4.9	1.16	82.9	30.2
DP 2127 B3XF	2011	47.23	960	3	4.9	1.16	84.2	29.8
NG 3457 B3XF	1971	47.34	949	4	4.4	1.20	83.7	30.4
NG 4405 B3TXF	1860	47.18	894	5	4.2	1.18	83.9	29.0
DG 4530 B3XF	1850	42.13	806	6	4.7	1.17	83.6	28.5
DP 2115 B3XF	1882	42.31	796	7	5.0	1.17	83.9	30.1
Mean	1935	47	921		4.7	1.20	83.50	29.5
LSD _{0.05}	250.1	12.6	230.5		0.4	0.03	1.13	1.3
C.V.%	8.7	18.4	16.9		5.3	1.50	0.91	3.0
Prob (var)	0.6690	0.7851	0.3076		0.0011	0.0057	0.0903	0.0533

^a r = ranking.^b UI = fiber length uniformity index.**Appendix Table A2. Lint Yield and Fiber Properties–Jackson County Transgenic Variety Test.**

Cooperator(s):	D&M Farms				Date Planted:	5/1/2024		
Soil Type:	Bosket Fine Sandy Loam				Date of Harvest:	10/8/2024		
Irrigation:	Furrow				Replications:	4		
Agent(s):	Matthew Davis							
	Lint	Loan			Fiber properties			
Variety	yield	rate	Income	r^a	Micronaire	Length	UI^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
NG 3457 B3XF	1983	52.19	1035	1	4.4	1.20	83.18	29.7
DP 2333 B3XF	2233	42.04	940	2	4.3	1.18	81.95	28.7
DP 2127 B3XF	2393	37.18	890	3	4.5	1.16	83.53	29.5
DP 2038 B3XF	2146	37.03	796	4	4.4	1.16	81.53	28.4
PHY 411 W3FE	2051	37.36	772	5	4.2	1.21	82.53	31.4
DP 2115 B3XF	2126	32.09	682	6	4.5	1.18	82.95	29.1
DG 4530 B3XF	2014	32.05	646	7	4.0	1.18	82.38	27.2
PHY 415 W3FE	1987	32.23	640	8	4.4	1.16	82.18	30.3
NG 4405 B3TXF	1856	32.18	597	9	3.4	1.18	82.68	30.0
Mean	2088	37.15	778		4.22	1.18	82.54	29.36
LSD _{0.05}	198.4	10.30	235.8		0.4	0.02	0.8	1.6
C.V.%	6.5	18.91	21.0		6.1	1.20	0.7	3.7
Prob (var)	0.0006	0.0075	0.0079		0.0001	0.0003	0.0017	0.0011

^a r = ranking.^b UI = fiber length uniformity index.

Appendix Table A3. Lint Yield and Fiber Properties–Jefferson County Transgenic Variety Test.

Cooperator(s):	Cornerstone Farms				Date Planted:	5/10/2024		
Soil Type:	Coushatta Silt Loam				Date of Harvest:	10/9/2024		
Irrigation:	Furrow				Replications:	2		
Agent(s):	Brady Harmon							
	Lint	Loan			Fiber properties			
Variety	yield	rate	Income	r^a	Micronaire	Length	UI^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
DP 2115 B3XF	2248	42.20	941	1	4.8	1.18	82.7	30.4
PHY415 W3FE	2048	42.43	859	2	4.6	1.20	84.5	31.8
PHY411 W3FE	2394	32.48	777	3	4.5	1.17	82.5	32.4
DP 2127 B3XF	2183	32.38	707	4	4.9	1.19	84.7	30.6
NG 4405 B3TXF	2169	32.45	704	5	4.3	1.22	83.9	31.5
DP 2038 B3XF	2150	32.35	695	6	4.6	1.21	83.1	31.0
NG 3457 B3XF	1929	32.40	625	7	4.1	1.20	83.8	30.7
DP 2333 B3XF	1929	32.23	622	8	4.9	1.19	83.2	29.8
DG 4530 B3XF	1878	42.30	399	9	4.6	1.19	83.6	30.5
Mean	2103	35.69	703		4.6	1.19	83.5	30.9
LSD _{0.05}	200.0	19.6	364.3		0.6	0.07	2.4	2.5
C.V.%	5.2	23.81	21		5.2	2.47	1.3	3.4
Prob (var)	0.1000	0.6960	0.5551		0.1000	0.7996	0.4390	0.4591

^a r = ranking.^b UI = fiber length uniformity index.**Appendix Table A4. Lint Yield and Fiber Properties–Lee/Phillips County Transgenic Variety Test.**

Cooperator(s):	West Higginbotham				Date Planted:	5/13/2024		
Soil Type:	Henry Silt Loam				Date of Harvest:	10/22/2024		
Irrigation:	Furrow				Replications:	2		
Agent(s):	Stan Baker, Shawn Payne and Tucker Vonkanel							
	Lint	Loan	Fiber properties					
Variety	yield	rate	Income	r^a	Micronaire	Length	UI^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
DP 2333 B3XF	1680	42.10	711	1	4.6	1.16	82.9	29.0
DP 2038 B3XF	1658	42.08	700	2	4.9	1.12	82.7	28.7
DP 2115 B3XF	1843	32.23	594	3	5.0	1.19	83.8	30.2
NG 3457 B3XF	1386	42.25	574	4	4.8	1.19	83.9	30.0
NG 4405 B3TXF	1352	42.33	563	5	4.0	1.22	84.2	30.4
DP 2127 B3XF	1627	32.23	524	6	4.5	1.18	84.9	29.4
DG 4530 B3XF	1621	32.13	521	7	3.9	1.22	83.4	28.7
Mean	1595	37.90	598		4.5	1.18	83.7	29.5
LSD _{0.05}	272	26.17	376		0.4	0.04	2.0	1.8
C.V.%	7.0	28.20	25.7		3.7	1.40	1.0	2.6
Prob (var)	0.0389	0.7906	0.7818		0.0029	0.0110	0.3025	0.2381

^a r = ranking.^b UI = fiber length uniformity index.

Appendix Table A5. Lint Yield and Fiber Properties—Mississippi County Transgenic Variety Test.

Cooperator(s):	David Wildy				Date Planted:	5/7/2024		
Soil Type:	Routon-Dundee-Crevasse Complex				Date of Harvest:	10/28/2024		
Irrigation:	Pivot				Replications:	4		
Agent(s):	Alan Beach							
	Lint	Loan			Fiber properties			
Variety	yield	rate	Income	r^a	Micronaire	Length	UI^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
DP 2038 B3XF	1897	52.16	989	1	4.9	1.16	83.5	29.6
DP 2127 B3XF	1813	52.15	946	2	5.1	1.14	83.6	28.7
DP 2115 B3XF	1946	47.25	920	3	5.0	1.20	84.2	29.3
NG 3457 B3XF	1630	52.31	853	4	4.8	1.19	84.5	30.2
DP 2333 B3XF	1765	47.19	832	5	4.9	1.17	83.1	29.7
DG 4530 B3XF	1567	52.24	819	6	4.8	1.21	84.5	29.2
NG 4405 B3TXF	1587	47.34	744	7	4.4	1.21	84.6	30.0
Mean	1744	50.09	872		4.8	1.18	84.0	29.5
LSD _{0.05}	83.4	9.5	157.7		0.4	0.34	1.3	1.5
C.V.%	3.2	12.71	12		5.4	1.92	1.0	3.5
Prob (var)	0.0001	0.6578	0.0591		0.0327	0.0037	0.1143	0.5104

^a r = ranking.^b UI = fiber length uniformity index.**Appendix Table A6. Lint Yield and Fiber Properties—Poinsett County Transgenic Variety Test.**

Cooperator(s):	Marty White and Jesse Flye				Date Planted:	5/11/2024		
Soil Type:	Dundee Silt Loam				Date of Harvest:	10/22/2024		
Irrigation:	Furrow				Replications:	4		
Agent(s):	Craig Allen and Gregory Simpson							
	Lint	Loan			Fiber properties			
Variety	yield	rate	Income	r^a	Micronaire	Length	UI^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
DP 2333 B3XF	1649	52.13	859	1	4.7	1.16	83.2	29.1
DP 2127 B3XF	1480	52.34	774	2	4.7	1.17	84.1	30.2
DP 2115 B3XF	1458	52.24	762	3	4.6	1.18	83.1	30.4
PHY 411 W3FE	1664	42.31	713	4	5.0	1.13	83.7	30.2
DP 2038 B3XF	1425	47.24	669	5	4.1	1.15	82.8	30.3
PHY 415 W3FE	1387	47.40	648	6	4.6	1.17	83.9	31.3
NG 3457 B3XF	1210	52.31	633	7	4.5	1.21	83.8	30.3
DG 4530 B3XF	1434	42.21	598	8	4.4	1.21	84.7	29.3
NG 4405 B3TXF	1147	42.23	473	9	4.2	1.20	84.2	30.0
Mean	1428	47.82	681		4.5	1.18	30.1	83.7
LSD _{0.05}	149.2	10.2	146.8		0.5	0.02	0.9	1.2
C.V.%	7.2	14.66	15		7.6	1.42	0.7	2.8
Prob (var)	0.0001	0.1372	0.0010		0.0382	0.0001	0.0049	0.0486

^a r = ranking.^b UI = fiber length uniformity index.

Appendix Table A7. Lint Yield and Fiber Properties—St. Francis County Transgenic Variety Test.

Cooperator(s):	Joe Whittenton				Date Planted:	5/20/2024		
Soil Type:	Loring Silt Loam				Date of Harvest:	10/23/2024		
Irrigation:	Furrow				Replications:	4		
Agent(s):	Sarah Stone							
	Lint	Loan	Fiber properties					
Variety	yield	rate	Income	r ^a	Micronaire	Length	UI ^b	Strength
	(lb/ac)	(¢/lb)	(\$/ac)			(in.)	(%)	(g/tex)
DP 2038 B3XF	2140	52.09	1115	1	4.7	1.17	82.6	28.8
DP 2333 B3XF	2007	52.14	1047	2	5.0	1.18	83.6	29.0
DP 2127 B3XF	2083	47.29	987	3	5.0	1.17	84.2	30.1
DP 2115 B3XF	2206	42.25	937	4	4.8	1.21	84.0	30.0
NG 3457 B3XF	1869	47.38	891	5	4.3	1.22	84.2	31.0
PHY 415 W3FE	2021	42.50	851	6	4.3	1.23	84.1	32.6
NG 4405 B3TXF	1743	47.38	820	7	4.0	1.20	84.3	30.5
PHY 360 W3FE	1921	37.14	700	8	4.7	1.17	82.5	29.2
PHY 411 W3FE	1988	32.29	642	9	4.8	1.14	83.4	30.3
DG 4530 B3XF	1833	32.25	591	10	4.0	1.22	84.8	29.8
Mean	1981	43.27	858		4.6	1.19	30.1	83.8
LSD _{0.05}	198.7	11.8	242.1		0.5	0.03	1.2	1.0
C.V.%	6.9	18.77	19.5		7.3	1.81	1.0	2.3
Prob (var)	0.0014	0.0079	0.0015		0.0006	0.0001	0.0072	0.0001

^a r = ranking.^b UI = fiber length uniformity index.

COTTON VARIETY TEST LOCATIONS



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

