

2023 MSU Extension On-Farm Cotton Variety Demonstration Program

2023 Trial Locations and Cooperators

Trials were arranged and conducted by Dr. Brian Pieralisi.

Assistance was provided by Bryce Bullock, Luke Noah, Ty Dickson, Will Duke, Dalton Tanner, Aiden Mathews, Cade Sumrall, Carson Walker, Lane Walker, Chase Felsher, Junior Borkowski, and Samuel Chitolina.

Special thanks to Dr. Tyson Raper, Associate Professor, University of Tennessee, West Tennessee AgResearch and Education Center.

Table 1. Locations, growers, and cooperating agronomists for the 2023 MSU Extension On-Farm Cotton Variety Demonstration Program.

Location	Grower	Region	Irrigation
Aberdeen	Clay Atkins	Hills	No
Clarksdale	Brian Fyfe	Delta	Yes
Coffeeville	Coley Bailey	Hills	No
Crawford	Rodney Mast/Lowell Mullett	Hills	Yes
Delta Island	Travis Dunn	Delta	Yes
Ellistown	Kerry Coker	Hills	No
Greenwood	John Moor	Delta	Yes
Louise	Byron Seward	Delta	Yes
Mayersville	Chase Mahalitic	Delta	Yes
Mississippi State	Dr. Brian Pieralisi	Hills	No
Natchez	Matthew Guedon	Hills	No
Prairie	Brandon Litwiller	Hills	Yes
Raymond	Kendall Garraway	Hills	No
Sledge	Sledge Taylor	Delta	Yes
Tallahatchie	Mike Sturdivant Jr.	Delta	Yes
West Point	Ben Harlow	Hills	No

MSU Extension sincerely appreciates the time and effort of the cooperating growers and MSU agronomists. In addition, several independent consultants provided a tremendous level of assistance with these trials: Ty Edwards, Jason Grafton, Bert Falkner, Tucker Miller, and Tim Richards. Sincere gratitude is also extended to the following seed companies and representatives for providing seed for these trials: BASF, Dr. Andy White and Bill Long; Crop Production Services/Dyna-Gro, Scott Cummings; PhytoGen Cottonseed, Shawn Butler; Americot/NexGen, Dr. Chase Samples and Terry Campbell; and Delta and Pine Land, Greg Ferguson. Cooperation from all parties is essential for the MSU Extension On-Farm Cotton Variety Demonstration Program's success. In addition, partial financial support for this project was provided by each participating company and Cotton Incorporated.

Introduction

The cotton variety selection process is often difficult and, in many cases, leaves growers wondering for the remainder of the growing season whether they made the right variety selections. Furthermore, the rapid introduction of new varieties and discontinued production of older ones has become commonplace over the past several years.

Historically, a premier variety would remain in the marketplace for a long period of time. However, a variety that performs well today typically has a life span of 4 to 6 years. One that does not perform well will likely remain on the market for less than 3 years. In addition, the historical standard for variety testing information was to have 2 to 3 years of data prior to release of any given variety. Today, 1 to 2 years of "broad scale" variety testing is common prior to release of a new variety. Therefore, greater demand has been placed upon testing a variety in as many environments as possible as a substitute for multiple

years of data. In most cases, variety testing prior to release is conducted by private industry through a series of testing methods and through University Official Variety Trial (OVT) program. OVT data is typically available for 1 year prior to release of a given variety.

Our on-farm testing program is not designed to replace or compete with small-plot OVT testing programs; rather, it is designed to complement the data that is provided by OVT program. The use of large-plot variety trial data in conjunction with small-plot OVT data provides a tremendous resource with respect to variety performance to the growers of Mississippi.

Methodology

The on-farm testing program at MSU is designed to test varieties in as many environments as possible. Limiting the number of entries allows for efficient planting and harvest operations and requires a minimum amount of time from cooperating growers. The number of variety entries each participating company is given depends on market share. In addition, one or two at-large entries are given to smaller companies to provide equal opportunity to as many seed providers as possible. Our on-farm variety tests are usually planted in eight- or twelve-row sets using planting equipment provided by each respective grower. In some cases, four- or six-row sets are used, depending on site characteristics and grower preference. In addition, two replications of each variety are planted and harvested at all locations. Plot lengths ranged from 500 to 2,600 feet in 2023, depending on the characteristics of the field the trial was conducted in. Seed treatments are at the discretion of the company providing seed. A premium seed treatment package, including an insecticide, fungicide, and nematicide, was provided for each variety. In-season management is at the discretion of the grower, and each is encouraged to manage the plot area as they would manage any given field on their farm.

Each replication for each variety was individually harvested using standard harvest equipment. Harvest weights were collected using a boll buggy or trailer modified to display the weight of seed cotton contained therein. Before all harvest operations, each boll buggy or trailer was calibrated by the Mississippi Department of Agriculture and Commerce to ensure that accurate harvest weights were collected. An 8- to 10-pound seed cotton sample was collected for each variety tested. To reduce ginning time, subsamples from replications number one and two were composited into a single sample. Seed cotton was ginned at the University of Tennessee, West Tennessee AgResearch and Education Center (WTREC). Ginning equipment at the WTREC consists of a 20-saw Continental Eagle gin equipped with a stick machine, incline cleaners, two

lint cleaners, and a condenser. Fiber quality for each ginned sample was determined using a high-volume instrument (HVI) located at the U.S. Department of Agriculture (USDA) Classing Office in Memphis.

Entries

A maximum of 10 core variety entries per year are allowed in the MSU Extension On-Farm Cotton Variety Demonstration Program. Entries are allotted by market share from respective companies. One entry per year is automatically given to the variety planted on the highest acreage in the previous year based on the annual Varieties Planted Report from USDA-Agricultural Marketing Service. In 2023, Delta and Pine Land was allotted three spots; PhytoGen Cottonseed, Americot, and Stoneville cottonseed were allotted two spots; and one additional at-large entry was given to Dyna-Gro to provide parity between smaller companies with fewer resources than larger companies have. Entries in the MSU Extension On-Farm Cotton Variety Demonstration Program are listed in Table 2.

Site Characteristics

Locations for the 2023 MSU Extension On-Farm Cotton Variety Demonstration Program are listed in Table 1. Yield trials were conducted at a total of 16 locations. Seven locations were in the Delta, and nine were in the Hills. All Delta locations were irrigated, and seven of nine Hill locations were dryland. The remaining Hill locations (Crawford and Prairie) were pivot irrigated. Field sites were chosen based upon grower preference and required elements to conduct a reliable yield trial.

Reported Data and Analysis

Each data table includes the following: variety, lint yield, lint percent, micronaire (Mic), staple length (in inches), fiber strength, fiber uniformity, and leaf grade. Data analysis using SAS v. 9.4 was conducted on all replicated trials. Grand means (averages) are presented as well as least significant differences (LSD). LSDs are the smallest value with which we can confidently say there is a difference between two means. Differences in means less than the given LSD value are likely due to variability within a given field or environment. For non-replicated trials and fiber data at individual locations, LSDs are not applicable. For locations that were replicated and data from one replication of a given variety was lost, SAS will interpret these data as missing and provide data analysis based on estimates. Therefore, average data for a given location may be slightly different than data reported.

Table 2. 2023 MSU Extension On-Farm Cotton Variety Demonstration Program entry list.

Slot #	Criteria/Company	Variety
1	At-Large Entry, Crop Production Services/Dyna-Gro	DG 4530 B3TXF
2	BASF-Stoneville	ST 4595B3XF
3	BASF-Stoneville	ST 5091B3XF
4	Delta and Pine Land	DP 2115 B2XF
5	Delta and Pine Land	DP 2127 B3XF
6	Delta and Pine Land	DP 2239 B3XF
7	Americot	NG 3195 B3XF
8	Americot	NG 4190 B3XF
9	Phytogen Cottonseed	PHY 411 W3FE
10	Phytogen Cottonseed	PHY 443 W3FE

Table 3. Yield and fiber quality data pooled across all 16 locations.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (grams/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	1,273*	41.3	4.6	1.13	33.5	83.5	4.5
DP 2127 B3XF	1,198	41.0	4.9	1.14	31.4	83.9	3.3
ST 5091B3XF	1,171	40.5	4.4	1.15	31.1	82.4	3.5
ST 4595B3XF	1,163	40.7	4.8	1.17	31.8	83.6	4.1
NG 4190 B3XF	1,131	39.4	4.6	1.18	32.1	84.1	3.6
DP 2115 B3XF	1,111	40.5	4.7	1.15	32.8	83.6	3.3
DP 2239 B3XF	1,105	41.1	4.6	1.19	31.7	83.4	3.2
PHY 443 W3FE	1,099	39.2	4.6	1.16	32.6	83.9	3.5
NG 3195 B3XF	1,090	38.7	4.7	1.17	35.6	83.3	2.9
DG 4530 B3TXF	1,082	39.2	4.4	1.19	31.7	83.9	3.4
Grand Mean	1,142*	40.1	4.6	1.16	32.4	83.6	3.5
LSD (0.05)	63	0.5	0.1	0.01	0.8	0.6	0.4

*Yields in bold type are not significantly different from the highest yielding variety.

Table 4. Yield and fiber quality data pooled over seven Delta locations: Clarksdale, Delta Island, Greenwood, Louise, Mayersville, Sledge, and Tallahatchie.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	1,726*	41.7	4.5	1.14	33.0	84.0	4.4
DP 2127 B3XF	1,428	40.0	4.9	1.15	32.1	84.0	3.4
ST 5091B3XF	1,405	40.3	4.4	1.16	31.5	82.8	3.3
ST 4595B3XF	1,402	40.4	4.8	1.19	32.3	83.5	4.2
PHY 443 W3FE	1,355	38.9	4.6	1.18	36.8	85.1	3.4
NG 4190 B3XF	1,337	38.8	4.6	1.19	32.9	83.9	3.8
DP 2239 B3XF	1,331	40.6	4.6	1.21	32.2	83.8	3.6
DP 2115 B3XF	1,322	39.6	4.8	1.16	33.4	84.4	3.7
DG 4530 B3TXF	1,310	38.4	4.4	1.20	32.1	84.2	3.5
NG 3195 B3XF	1,305	38.9	4.6	1.16	32.8	84.1	3.6
Grand Mean	1392	39.8	4.6	1.17	32.9	84.0	3.7
LSD (0.05)	121	0.7	0.2	0.02	1.2	1.0	0.6

*Yields in bold type are not significantly different from the highest yielding variety.

Table 5. Yield and fiber quality data pooled over nine Hill region locations: Aberdeen, Coffeerville, Crawford, Ellistown, Mississippi State, Natchez, Prairie, Raymond, and West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,048*	41.7	4.9	1.14	31.1	83.9	3.2
PHY 411 W3FE	1,035*	41.2	4.8	1.13	34.0	83.3	4.5
ST 5091B3XF	1,019*	40.7	4.4	1.15	31.0	82.2	3.6
ST 4595B3XF	1,008*	41.0	4.8	1.16	31.6	83.6	4.1
NG 4190 B3XF	997*	39.8	4.7	1.18	31.8	84.3	3.4
DP 2115 B3XF	974*	41.2	4.7	1.14	32.6	83.0	3.1
DP 2239 B3XF	959	41.5	4.6	1.17	31.5	83.1	2.9
NG 3195 B3XF	950	39.4	4.6	1.15	32.8	83.8	3.5
PHY 443 W3FE	942	39.9	4.5	1.18	31.7	83.7	3.3
DG 4530 B3TXF	935	38.8	4.7	1.16	35.2	82.4	2.6
Grand Mean	987	40.5	4.7	1.16	32.3	83.3	3.4
LSD (0.05)	67	0.7	0.2	0.02	1.0	0.7	0.5

*Yields in bold type are not significantly different from the highest yielding variety.

Table 6. Yield and fiber quality data pooled over nine irrigated locations: Clarksdale, Crawford, Delta Island, Greenwood, Louise, Mayersville, Prairie, Sledge, and Tallahatchie.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	1,593*	42.3	4.5	1.14	33.0	84.0	4.3
DP 2127 B3XF	1,296	40.6	4.8	1.16	32.5	84.0	3.4
ST 5091B3XF	1,269	40.6	4.3	1.16	31.6	82.8	3.4
ST 4595B3XF	1,267	40.9	4.8	1.19	32.5	83.5	4.2
PHY 443 W3FE	1,221	39.4	4.6	1.19	36.9	85.0	3.3
DP 2115 B3XF	1,211	40.3	4.8	1.16	33.1	84.2	3.6
DP 2239 B3XF	1,195	41.3	4.6	1.21	32.4	83.9	3.4
NG 4190 B3XF	1,195	39.5	4.6	1.19	33.0	84.2	3.6
NG 3195 B3XF	1,180	39.4	4.6	1.17	32.8	84.4	3.5
DG 4530 B3TXF	1,157	39.1	4.4	1.20	32.1	84.1	3.5
Grand Mean	1,258	40.3	4.6	1.18	33.0	84.0	3.6
LSD (0.05)	105	0.7	0.2	0.02	1.1	0.9	0.5

*Yields in bold type are not significantly different from the highest yielding variety.

Table 7. Yield and fiber quality data pooled over seven dryland locations: Aberdeen, Coffeeville, Ellistown, Mississippi State, Natchez, Raymond, and West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,039*	41.8	5.0	1.13	30.3	83.8	3.2
PHY 411 W3FE	1,030*	41.1	4.8	1.13	33.6	83.1	4.5
ST 5091B3XF	1,012*	40.8	4.4	1.14	30.6	82.0	3.6
NG 4190 B3XF	1,006*	39.6	4.7	1.17	31.3	83.9	3.5
ST 4595B3XF	999*	40.8	4.8	1.16	31.1	83.7	4.0
DP 2239 B3XF	955	41.2	4.7	1.17	31.1	82.9	2.9
DP 2115 B3XF	950	41.1	4.7	1.13	32.7	82.8	2.9
DG 4530 B3TXF	947	39.3	4.6	1.14	32.6	83.3	3.5
NG 3195 B3XF	939	39.8	4.5	1.18	31.6	83.8	3.3
PHY 443 W3FE	936	38.7	4.7	1.16	34.9	82.3	2.6
Grand Mean	981	40.4	4.7	1.15	32.0	83.2	3.4
LSD (0.05)	73	0.8	0.2	0.01	1.1	0.7	0.5

*Yields in bold type are not significantly different from the highest yielding variety.

Individual Trial Location Data

Location: Aberdeen
 Grower: Clay Atkins
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 10, 2023

Harvest Date: October 9, 2023
 Soil Series: Prentiss fine sandy loam

Table 8. Yield and fiber quality data at Aberdeen.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2115 B3XF	1,267	39.9	4.6	1.17	33.3	83.5	4.0
ST 5091B3XF	1,081	39.2	4.5	1.23	34.2	84.3	3.0
ST 4595B3XF	1,060	39.8	4.5	1.21	33.9	83.9	6.0
PHY 411 W3FE	1,044	38.4	4.3	1.13	32.7	82.4	6.0
NG 3195 B3XF	1,033	36.4	4.1	1.18	33.2	82.9	4.0
DP 2239 B3XF	1,031	39.6	4.2	1.21	32.0	83.5	3.0
DP 2127 B3XF	1,020	38.8	4.7	1.17	31.2	84.0	3.0
DG 4530 B3TXF	1,008	40.7	4.4	1.17	30.7	83.8	4.0
NG 4190 B3XF	961	35.5	5.6	1.19	29.2	82.7	4.0
PHY 443 W3FE	870	37.0	4.5	1.19	36.5	84.7	5.0
Grand Mean	1,037	38.5	4.5	1.19	32.7	83.6	4.2
LSD (0.05)	—	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Clarksdale
 Grower: Bryan Fife
 Region: Delta

Irrigation: Furrow
 Row Width: 40"
 Planting Date: May 16, 2023

Harvest Date: October 25, 2023
 Soil Series: Dubbs very fine sandy loam

Table 9. Yield and fiber quality data at Clarksdale.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	2,220*	40.1	4.3	1.08	29.6	81.0	3.0
DP 2127 B3XF	1,890	42.0	4.3	1.14	29.6	83.9	3.0
PHY 443 W3FE	1,826	39.2	4.4	1.14	34.5	83.4	3.0
ST 4595B3XF	1,789	40.6	4.6	1.15	30.5	81.7	4.0
DG 4530 B3TXF	1,776	38.3	4.6	1.23	29.4	82.7	3.0
NG 4190 B3XF	1,689	39.4	4.0	1.14	29.3	79.8	3.0
DP 2239 B3XF	1,668	40.6	4.6	1.19	30.0	82.1	3.0
DP 2115 B3XF	1,654	39.8	5.0	1.17	32.9	85.1	3.0
ST 5091B3XF	1,624	40.6	4.2	1.12	28.6	80.8	2.0
NG 3195 B3XF	1,445	39.6	4.6	1.15	29.3	82.4	2.0
Grand Mean	1,758	40.0	4.5	1.15	30.4	82.3	2.9
LSD (0.05)	298	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Coffeerville
 Grower: Coley Bailey
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 26, 2023

Harvest Date: October 24, 2023
 Soil Series: Collins silt loam

Table 10. Yield and fiber quality data at Coffeerville.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 5091B3XF	1,108*	42.4	4.4	1.18	32.3	83.4	3.0
NG 4190 B3XF	1,045*	41.5	4.6	1.19	31.8	85.2	3.0
ST 4595B3XF	1,040*	41.7	4.7	1.18	29.7	83.6	3.0
DP 2127 B3XF	1,032*	41.6	5.0	1.14	30.4	83.6	2.0
DG 4530 B3TXF	989	41.5	4.5	1.17	31.4	82.9	2.0
DP 2239 B3XF	971	41.8	4.6	1.20	30.9	82.7	2.0
NG 3195 B3XF	970	40.0	4.5	1.20	33.6	83.6	2.0
DP 2115 B3XF	872	40.8	4.7	1.14	34.2	82.9	3.0
Grand Mean	1,003	41.4	4.6	1.18	31.8	83.5	2.5
LSD (0.05)	223	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Crawford
 Grower: Rodney Mast
 Region: Hills

Irrigation: Pivot
 Row Width: 38"
 Planting Date: May 9, 2023

Harvest Date: October 5, 2023
 Soil Series: Vaiden silty clay

Table 11. Yield and fiber quality data at Crawford.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 4595B3XF	1,240*	40.7	4.6	1.18	32.8	83.1	5.0
DP 2115 B3XF	1,212*	40.5	4.6	1.16	31.8	83.6	4.0
DP 2127 B3XF	1,189*	40.3	5.0	1.14	33.1	83.9	3.0
ST 5091B3XF	1,189*	40.0	4.1	1.15	31.8	81.8	4.0
NG 3195 B3XF	1,141*	39.4	4.4	1.17	31.7	86.0	3.0
DP 2239 B3XF	1,092	42.3	4.7	1.18	32.4	83.6	3.0
NG 4190 B3XF	1,050	39.3	4.5	1.20	33.0	85.8	3.0
DG 4530 B3TXF	985	38.9	4.6	1.17	30.9	82.7	4.0
Grand Mean	1,137	40.2	4.6	1.17	32.2	83.8	3.6
LSD (0.05)	132	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the grower's request.

Location: Delta
 Grower: Travis Dunn
 Region: Delta

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 9, 2023

Harvest Date: September 20, 2023
 Soil Series: Dubbs-Dundee complex

Table 12. Yield and fiber quality data at Delta.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 5091B3XF	1,463	40.1	4.1	1.17	31.2	82.3	4.0
NG 3195 B3XF	1,307	40.2	4.7	1.13	32.3	83.8	4.0
ST 4595B3XF	1,221	40.4	4.5	1.22	34.2	84.5	5.0
DP 2127 B3XF	1,220	39.8	4.7	1.14	31.6	84.9	5.0
DP 2239 B3XF	1,209	40.7	4.4	1.26	32.8	84.1	4.0
DG 4530 B3TXF	1,201	39.6	4.0	1.21	31.0	83.9	4.0
NG 4190 B3XF	1,151	39.3	4.3	1.17	32.0	82.5	3.0
DP 2115 B3XF	1,124	40.7	4.8	1.18	31.9	84.3	5.0
Grand Mean	1,237	40.1	4.4	1.19	32.1	83.8	4.3
LSD (0.05)	—	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phytothen varieties omitted per the grower's request.

Location: Ellistown
 Grower: Kerry Coker
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: June 1, 2023

Harvest Date: November 11, 2023
 Soil Series: Providence silt loam

Table 13. Yield and fiber quality data at Ellistown.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 4595B3XF	1,133*	41.6	3.8	1.20	29.1	80.2	3.0
DG 4530 B3TXF	1,115*	41.0	3.7	1.19	28.2	82.6	3.0
PHY 443 W3FE	1,115*	42.0	3.9	1.16	32.7	79.1	3.0
NG 4190 B3XF	1,104*	41.6	3.9	1.17	30.3	80.5	3.0
DP 2127 B3XF	1,083*	42.5	3.8	1.20	31.4	79.2	4.0
ST 5091B3XF	1,080*	41.0	3.8	1.15	29.1	80.6	3.0
PHY 411 W3FE	1,080*	42.0	4.8	1.12	31.8	81.7	2.0
NG 3195 B3XF	1,052*	41.4	3.5	1.18	30.2	81.5	3.0
DP 2115 B3XF	959	42.5	4.2	1.15	30.5	80.3	3.0
DP 2239 B3XF	957	41.4	3.8	1.20	29.6	81.3	3.0
Grand Mean	1,068	42	3.9	1.17	30.3	82.7	3.0
LSD (0.05)	213	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Greenwood
 Grower: John Moor
 Region: Delta

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 9, 2023

Harvest Date: October 9, 2023
 Soil Series: Tensas silty clay loam

Table 14. Yield and fiber quality data at Greenwood.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	1,647*	44.5	4.5	1.15	34.5	84.4	5.0
ST 4595 B3XF	1,546*	42.1	4.8	1.20	32.0	83.6	4.0
DP 2127 B3XF	1,477	39.8	4.9	1.18	33.2	84.3	3.0
NG 3195 B3XF	1,473	39.7	4.8	1.17	33.1	84.7	3.0
ST 5091 B3XF	1,456	40.8	4.3	1.16	32.5	83.2	3.0
DG 4530 B3XF	1,434	39.6	4.3	1.19	30.8	85.5	4.0
DP 2239 B3XF	1,409	41.6	4.6	1.21	33.9	83.6	3.0
NG 4190 B3XF	1,403	38.7	4.5	1.22	34.3	85.5	4.0
PHY 443 W3FE	1,298	39.6	4.3	1.20	38.1	84.6	3.0
DP 2115 B3XF	1,296	40.8	4.8	1.15	32.8	84.3	4.0
Grand Mean	1,444	40.7	4.6	1.18	33.5	84.4	3.6
LSD (0.05)	126	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phylogen varieties omitted per the grower's request.

Location: Louise
 Grower: Byron Seward
 Region: Delta

Irrigation: Furrow
 Row Width: 30" 2x1 Skip
 Planting Date: May 16, 2023

Harvest Date: October 24, 2023
 Soil Series: Forestdale Brittain silt loam

Table 15. Yield and fiber quality data at Louise.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 5091B3XF	1,612*	40.5	4.3	1.18	32.4	83.1	3.0
DP 2127 B3XF	1,542*	39.4	4.9	1.18	33.1	85.2	4.0
DG 4530 B3TXF	1,504*	38.0	4.2	1.23	31.6	84.6	5.0
DP 2239 B3XF	1,474*	41.4	4.3	1.16	30.0	83.4	4.0
NG 4190 B3XF	1,452*	39.0	4.7	1.21	31.9	84.9	5.0
ST 4595B3XF	1,438*	40.2	5.0	1.17	31.8	82.4	5.0
NG 3195 B3XF	1,426*	38.7	4.4	1.20	30.5	85.3	5.0
DP 2115 B3XF	1,401*	38.8	4.7	1.15	32.6	83.9	4.0
Grand Mean	1,481	39.5	4.6	1.19	31.7	84.1	4.4
LSD (0.05)	445	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phylogen varieties omitted per the grower's request.

Location: Mayersville
 Grower: Chase Mahalitic
 Region: Delta

Irrigation: Pivot
 Row Width: 38"
 Planting Date: May 18, 2023

Harvest Date: October 24, 2023
 Soil Series: Sharkey clay

Table 16. Yield and fiber quality data at Mayersville.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	913	40.5	5.3	1.12	31.5	83.0	3.0
NG 3195 B3XF	912	38.6	4.8	1.14	35.8	84.2	4.0
NG 4190 B3XF	903	38.8	4.9	1.18	33.7	85.0	4.0
ST 5091B3XF	855	39.9	4.9	1.13	30.9	81.7	3.0
ST 4595B3XF	843	39.2	5.2	1.17	32.4	83.9	4.0
DP 2115 B3XF	813	38.9	4.9	1.16	32.1	83.9	3.0
DG 4530 B3TXF	783	37.9	4.1	1.17	34.5	83.6	4.0
DP 2239 B3XF	749	40.2	4.9	1.21	34.9	84.6	3.0
Grand Mean	846	39.2	4.9	1.16	33.2	83.7	3.5
LSD (0.05)	—	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the grower's request.

Location: Starkville
 Grower: Dr. Brian Perialisi
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 3, 2023

Harvest Date: October 9, 2023
 Soil Series: Marietta fine sandy loam

Table 17. Yield and fiber quality data at MSU.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,399*	44.2	4.7	1.12	28.6	83.7	3.0
PHY 411 W3FE	1,373*	42.9	4.6	1.12	33.0	82.4	5.0
DP 2239 B3XF	1,367*	42.9	4.4	1.15	29.5	84.1	3.0
NG 4190 B3XF	1,346*	41.3	4.5	1.13	28.9	82.8	4.0
DP 2115 B3XF	1,334*	43.8	4.9	1.14	31.5	82.2	3.0
ST 4595B3XF	1262	40.2	4.5	1.14	30.7	82.9	4.0
ST 5091B3XF	1246	41.1	4.3	1.13	29.9	81.2	4.0
DG 4530 B3TXF	1226	39.5	4.1	1.19	32.3	84.1	5.0
PHY 443 W3FE	1208	40.1	4.6	1.12	33.9	80.7	3.0
NG 3195 B3XF	1165	40.5	4.6	1.14	32.8	82.2	4.0
Grand Mean	1293	41.7	4.5	1.14	31.1	82.6	3.8
LSD (0.05)	117	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Natchez
 Grower: Matthew Guedon
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 27, 2023

Harvest Date: October 16, 2023
 Soil Series: Convent silt loam

Table 18. Yield and fiber quality data at Natchez.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 5091B3XF	908*	39.3	4.5	1.13	32.1	82.1	4.0
ST 4595B3XF	900*	39.5	5.2	1.18	33.7	83.9	4.0
DP 2127 B3XF	871*	38.8	5.3	1.16	31.2	83.9	3.0
NG 4190 B3XF	870*	37.0	4.7	1.21	33.8	85.5	3.0
NG 3195 B3XF	801*	36.8	4.6	1.20	34.8	84.9	4.0
DP 2115 B3XF	782*	38.2	4.8	1.16	34.3	83.6	3.0
DP 2239 B3XF	744*	38.7	4.6	1.21	31.9	83.8	4.0
DG 4530 B3TXF	720*	37.5	4.8	1.20	34.2	84.5	2.0
Grand Mean	824	38.2	4.8	1.18	33.3	84.0	3.4
LSD (0.05)	250	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phylogen varieties omitted per the grower's request.

Location: Prairie
 Grower: Brandon Litwiller
 Region: Hills

Irrigation: Pivot
 Row Width: 38"
 Planting Date: May 27, 2023

Harvest Date: October 11, 2023
 Soil Series: Okolona silty clay

Table 19. Yield and fiber quality data at Prairie.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	998	42.4	3.9	1.17	35.0	83.8	4.0
DP 2115 B3XF	934	42.9	4.8	1.17	32.1	83.7	3.0
NG 3195 B3XF	888	40.0	4.5	1.23	33.5	86.4	3.0
ST 5091B3XF	884	40.5	4.2	1.23	32.2	84.5	3.0
NG 4190 B3XF	871	42.2	4.4	1.20	33.6	84.5	3.0
DP 2239 B3XF	857	42.0	4.5	1.23	34.2	84.3	3.0
ST 4595B3XF	782	42.8	4.8	1.18	33.2	83.6	3.0
DG 4530 B3TXF	774	42.1	4.3	1.20	33.6	84.4	3.0
Grand Mean	873	41.9	4.4	1.20	33.4	84.4	3.1
LSD (0.05)	—	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phylogen varieties omitted per the grower's request.

Location: Raymond
 Grower: Kendall Garraway
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 20, 2023

Harvest Date: October 4, 2023
 Soil Series: Loring silt loam

Table 20. Yield and fiber quality data at Raymond.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	801*	42.6	5.0	1.06	32.8	81.9	4.0
PHY 443 W3FE	746*	39.6	4.7	1.14	33.3	81.4	2.0
DP 2127 B3XF	700*	43.6	5.0	1.08	30.1	83.0	5.0
ST 5091B3XF	660*	41.4	4.4	1.06	26.2	78.9	4.0
NG 4190 B3XF	636	39.9	4.8	1.11	30.4	82.7	4.0
NG 3195 B3XF	621	41.8	4.7	1.02	25.9	81.1	4.0
DG 4530 B3TXF	618	39.9	4.6	1.11	28.3	82.0	3.0
ST 4595B3XF	559	42.2	4.9	1.08	28.4	82.1	4.0
DP 2239 B3XF	539	41.9	4.8	1.07	29.8	80.3	3.0
DP 2115 B3XF	503	41.4	3.9	1.03	31.0	80.7	3.0
Grand Mean	638	41.4	4.7	1.08	29.6	81.4	3.6
LSD (0.05)	142	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Location: Sledge
 Grower: Sledge Taylor
 Region: Delta

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 11, 2023

Harvest Date: October 28, 2023
 Soil Series: Dundee loam

Table 21. Yield and fiber quality data at Sledge.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 4595B3XF	1701	39.5	5.2	1.18	33.7	83.9	4.0
DP 2115 B3XF	1697	38.2	4.8	1.16	34.3	83.6	3.0
DP 2127 B3XF	1670	38.8	5.3	1.16	31.2	83.9	3.0
ST 5091B3XF	1647	39.3	4.5	1.13	32.1	82.1	4.0
DP 2239 B3XF	1637	38.7	4.6	1.21	31.9	83.8	4.0
NG 4190 B3XF	1583	37.0	4.7	1.21	33.8	85.5	3.0
NG 3195 B3XF	1529	36.8	4.6	1.20	34.8	84.9	4.0
DG 4530 B3TXF	1436	37.5	4.8	1.20	34.2	84.5	2.0
Grand Mean	1612	38.2	4.8	1.18	33.3	84.0	3.4
LSD (0.05)	108	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the grower's request.

Location: Tallahatchie
 Grower: Mike Sturdivant
 Region: Delta

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 23, 2023

Harvest Date: October 11, 2023
 Soil Series: Dundee loam

Table 22. Yield and fiber quality data at Tallahatchie.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2115 B3XF	1,290	40.9	5.2	1.20	34.5	85.5	4.0
ST 5091B3XF	1,231	40.6	4.6	1.23	31.7	84.2	3.0
DP 2127 B3XF	1,191	39.9	5.2	1.20	34.2	85.1	3.0
ST 4595B3XF	1,181	39.5	4.9	1.25	32.4	85.4	4.0
NG 4190 B3XF	1,173	40.2	4.7	1.22	34.5	83.7	3.0
NG 3195 B3XF	1,168	39.8	4.8	1.20	36.6	84.7	4.0
DP 2239 B3XF	1,075	41.0	4.9	1.27	33.2	84.5	3.0
DG 4530 B3TXF	901	38.3	4.5	1.27	32.9	85.9	4.0
Grand Mean	1,151	40.0	4.9	1.23	33.8	84.9	3.5
LSD (0.05)	—	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the grower's request.

Location: West Point
 Grower: Ben Harlow
 Region: Hills

Irrigation: None
 Row Width: 38"
 Planting Date: May 24, 2023

Harvest Date: October 23, 2023
 Soil Series: Kipling silt loam

Table 23. Yield and fiber quality data at West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,104*	42.7	5.5	1.16	31.1	84.3	3.0
ST 4595B3XF	1,061*	42.9	5.2	1.20	31.3	85.7	4.0
ST 5091B3XF	1,044*	41.8	4.6	1.16	30.5	83.1	3.0
DP 2239 B3XF	1,030*	42.0	5.2	1.19	32.7	82.3	2.0
DP 2115 B3XF	1,026*	42.1	5.1	1.17	32.0	84.0	2.0
NG 4190 B3XF	1,014*	41.3	4.7	1.21	33.0	84.1	3.0
NG 3195 B3XF	987*	40.0	4.9	1.14	34.9	85.2	3.0
DG 4530 B3TXF	966*	41.8	4.5	1.21	30.9	84.9	3.0
PHY 411 W3FE	944	41.3	4.9	1.15	33.1	84.3	4.0
PHY 443 W3FE	831	39.4	5.0	1.16	34.2	82.9	2.0
Grand Mean	1,001	41.5	5.0	1.18	32.4	84.1	2.9
LSD (0.05)	152	—	—	—	—	—	—

*Yields in bold type are not significantly different from the highest yielding variety.

Notes

Notes

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