

2022 MSU Extension On-Farm Cotton Variety Demonstration Program

2022 Trial Locations and Cooperators

Trials were arranged and conducted by Brian Pieralisi.

Assistance was provided by Tyler Soignier, Eli Hobbs, Will Duke, Chase Felsher, Kaylin McKay, Sheffield Anthony, and Bryce Bullock.

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

Table 1. Locations, growers, and cooperating agronomists for the 2022 MSU Extension On-Farm Cotton Variety Demonstration Program.

Location	Grower	MSU Agronomist
Coffeeville	Coley Bailey	Brian Pieralisi
Crawford	Rodney Mast/Lowell Mullett	Brian Pieralisi
Delta Island	Travis and Clint Dunn	Andy Braswell
Edwards	Kendall Garraway	Brian Pieralisi
Ellistown	Kerry Coker	Brian Pieralisi
Greenwood	John Moor	Andy Braswell
Louise	Byron Seward	Brian Pieralisi
Lyon	Bryan Fife/Clif Heaton	Brian Pieralisi
Mayersville	Chase Mahalitic	Brian Pieralisi
Natchez	Matthew Guedon	Brian Pieralisi
Sledge	Sledge Taylor	Brian Pieralisi
West Point	Ben Harlow	Brian Pieralisi

Mississippi State University Extension sincerely appreciates the time and effort of the cooperating growers and Mississippi State University agronomists. In addition, several independent consultants (Ty Edwards, Jason Grafton, Bert Falkner, Tucker Miller, and Tim Richards) provided tremendous assistance with these trials. Sincere gratitude is also extended to the following seed companies and representatives for providing seed for these trials: BASF, Andy White and Bill Long; Crop Production Services/Dyna-Gro, Scott Cummings; PhytoGen Cottonseed, Jonathan Siebert; Americot/NexGen, Chase Samples and Terry Campbell; and Delta and Pine Land, Greg Ferguson. Cooperation from all parties was essential for the success of the 2022 MSU Extension On-Farm Cotton Variety Demonstration Program. 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) programs. 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 programs. 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 2022, 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 it contains. 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 2022, Delta and Pine Land was allotted three spots; PhytoGen Cottonseed, Americot, and BASF/Stoneville 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 2022 MSU Extension On-Farm Cotton Variety Demonstration Program are listed in Table 2.

Site Characteristics

Six locations were in the Delta and six were in the Hills. All Delta locations were irrigated, and five of the six Hill locations were dryland. The remaining Hill location (Crawford) was 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. 2022 MSU Extension On-Farm Cotton Variety Demonstration Program entry list.

Slot #	Criteria/Company	Variety
1	At—Large Entry—Dyna-Gro	DG 3511 B3XF
2	BASF/Stoneville	ST 4595 B3XF
3	BASF/Stoneville	ST 5091 B3XF
4	Delta and Pine Land	DP 2115 B3XF
5	Delta and Pine Land	DP 2127 B3XF
6	Delta and Pine Land	DP 2127 B3XF
7	Americot/Nexgen	NG 3195 B3XF
8	Americot/Nexgen	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 12 locations.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,303*	40.6	4.8	1.17	31.2	84.1	3.2
ST 4595 B3XF	1,278*	40.9	4.6	1.21	30.8	82.8	4.0
ST 5091 B3XF	1,238*	39.5	4.3	1.19	31.3	82.6	3.4
DP 2115 B3XF	1,232*	40.6	4.8	1.19	31.7	84.1	3.2
NG 3195 B3XF	1,225	39.4	4.5	1.18	31.7	82.7	3.2
PHY 411 W3FE	1,220	39.6	4.3	1.15	32.5	82.7	3.9
NG 4190 B3XF	1,197	39.3	4.4	1.21	31.7	84.7	3.4
DP 2239 B3XF	1,179	39.9	4.5	1.24	31.2	83.0	3.2
PHY 443 W3FE	1,171	39.2	4.4	1.16	33.4	83.4	3.5
DG 3511 B3XF	1,136	40.1	4.6	1.20	33.4	84.1	3.0
Grand Mean	1,218	39.9	4.5	1.19	31.9	83.4	3.4
LSD (0.05)	73	0.70	0.15	0.03	0.90	0.55	0.53

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

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

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,522*	40.1	4.8	1.19	31.5	84.3	3.0
ST 4595 B3XF	1,483*	39.9	4.6	1.24	30.7	83.1	3.9
DP 2115 B3XF	1,444	39.9	4.8	1.20	31.3	84.8	3.3
ST 5091 B3XF	1,419	39.0	4.4	1.22	31.0	83.1	3.1
PHY 411 W3FE	1,402	39.2	4.3	1.17	32.7	83.1	3.7
NG 3195 B3XF	1,388	38.5	4.5	1.21	31.8	82.9	2.9
PHY 443 W3FE	1,361	39.1	4.3	1.18	32.9	84.1	3.4
DP 2239 B3XF	1,349	39.3	4.5	1.26	31.3	83.2	3.0
NG 4190 B3XF	1,303	38.5	4.4	1.23	32.3	85.0	3.3
DG 3511 B3XF	1,276	39.4	4.7	1.22	33.3	84.5	2.8
Grand Mean	1,395	39.3	4.5	1.21	31.9	83.8	3.3
LSD (0.05)	71	0.70	0.15	0.02	1.00	0.81	0.44

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

Table 5. Yield and fiber quality data pooled over six Hill region locations: Coffeeville, Crawford, Edwards, Ellistown, Natchez, and West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 4190 B3XF	1,103	39.9	4.3	1.21	31.1	84.5	3.5
DP 2127 B3XF	1,070	40.9	4.7	1.17	30.8	84.0	3.4
NG 3195 B3XF	1,063	40.1	4.4	1.17	31.7	82.6	3.4
ST 4595 B3XF	1,060	41.8	4.5	1.20	30.9	82.6	4.0
ST 5091 B3XF	1,053	39.8	4.3	1.17	30.3	82.2	3.8
PHY 411 W3FE	1,036	39.8	4.2	1.14	32.4	82.3	4.2
DP 2115 B3XF	1,012	41.1	4.7	1.19	31.3	83.5	3.2
DP 2239 B3XF	1,009	40.3	4.4	1.24	31.3	82.9	3.3
DG 3511 B3XF	1,002	40.6	4.5	1.19	33.7	83.9	3.1
PHY 443 W3FE	980	39.0	4.4	1.16	34.0	82.7	3.5
Grand Mean	1,039	40.3	4.4	1.18	31.7	83.1	3.5
LSD (0.05)	NS	1.18	0.16	0.03	0.90	0.86	0.43

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

Table 6. Yield and fiber quality data pooled over seven irrigated locations: Crawford, Delta Island, Greenwood, Louise, Lyon, Mayersville, and Sledge.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,295*	40.1	4.8	1.18	31.5	84.3	3.3
ST 4595 B3XF	1,247*	39.9	4.7	1.24	30.7	83.1	4.2
DP 2115 B3XF	1,205	39.9	4.8	1.19	31.2	84.6	3.6
ST 5091 B3XF	1,184	39.0	4.4	1.22	30.9	83.1	3.4
PHY 411 W3FE	1,175	39.3	4.4	1.17	32.7	83.0	4.0
NG 3195 B3XF	1,171	38.6	4.5	1.20	31.9	83.0	3.3
PHY 443 W3FE	1,134	39.1	4.3	1.18	32.9	84.1	3.8
DP 2239 B3XF	1,127	39.4	4.5	1.26	31.3	83.2	3.3
NG 4190 B3XF	1,091	38.5	4.4	1.23	32.2	84.9	3.6
DG 3511 B3XF	1,047	39.4	4.7	1.21	33.2	84.4	3.2
Grand Mean	1,168	39.3	4.6	1.21	31.9	83.8	3.6
LSD (0.05)	73	0.72	0.14	0.02	0.95	0.77	0.42

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

Table 7. Yield and fiber quality data pooled over five dryland locations: Coffeerville, Edwards, Ellistown, Natchez, and West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 4190 B3XF	1,127	40.2	4.3	1.20	31.1	84.4	3.4
DP 2127 B3XF	1,100	41.1	4.7	1.16	30.8	83.9	3.3
ST 4595 B3XF	1,096	42.2	4.5	1.19	31.0	82.5	4.0
ST 5091 B3XF	1,093	40.0	4.2	1.16	30.3	82.1	3.7
NG 3195 B3XF	1,081	40.3	4.3	1.16	31.6	82.5	3.3
PHY 411 W3FE	1,066	40.0	4.1	1.13	32.4	82.2	4.1
DP 2115 B3XF	1,049	41.3	4.6	1.18	31.5	83.5	3.1
DG 3511 B3XF	1,042	40.7	4.4	1.18	33.8	83.9	3.0
DP 2239 B3XF	1,033	40.5	4.3	1.23	31.3	82.9	3.2
PHY 443 W3FE	1,010	39.2	4.4	1.15	34.0	82.6	3.4
Grand Mean	1,070	40.6	4.4	1.17	31.8	83.0	3.4
LSD (0.05)	NS	1.25	0.17	0.03	1.03	0.91	0.45

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

Individual Trial Location Data

Location: Coffeerville
 Grower: Coley Bailey
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 9, 2022

Harvest Date: October 2, 2022
 Soil Series: Cotton silt loam

Table 8. Yield and fiber quality data at Coffeerville.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 4190 B3XF	1,086*	41.2	4.3	1.22	31.7	84.9	3
ST 4595 B3XF	1,086*	41.4	4.6	1.19	31.2	84.1	4
DP 2127 B3XF	1,044*	42.8	5.0	1.16	33.4	85	3
NG 3195 B3XF	967	40.9	4.7	1.16	32.3	81.3	3
ST 5091 B3XF	950	40.6	4.5	1.16	32.2	81.9	4
DG 3511 B3XF	932	40.2	4.5	1.19	34.5	84.6	3
DP 2239 B3XF	911	41.4	4.6	1.25	32.8	83	3
DP 2115 B3XF	891	39.2	4.3	1.28	32.2	83.7	3
Grand Mean	983	41.0	4.6	1.20	32.5	83.6	3.3
LSD (0.05)	156	—	—	—	—	—	—

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

Location: Crawford
 Grower: R. Mast/L. Mullett
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 40"
 Planting Date: May 3, 2022

Harvest Date: October 28, 2022
 Soil Series: Vaiden silty clay

Table 9. Yield and fiber quality data at Crawford.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 3195 B3XF	1,024	38.3	4.5	1.25	30.7	82.8	4
NG 4190 B3XF	1,015	39.2	4.6	1.22	32.8	84.0	4
DP 2239 B3XF	917	40.0	4.6	1.34	31.4	82.9	4
ST 4595 B3XF	848	39.6	4.8	1.25	30.5	83.0	4
ST 5091 B3XF	810	38.3	4.6	1.22	31.5	84.7	4
DP 2115 B3XF	787	40.4	5.0	1.16	30.3	83.4	4
DG 3511 B3XF	741	40.5	4.9	1.19	32.3	83.8	4
Grand Mean	877	39.5	4.7	1.23	31.4	83.5	4.0

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

Location: Delta Island
 Grower: Travis/Clint Dunn
 MSU Agronomist: Brian Pieralisi

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 4, 2022

Harvest Date: October 3, 2022
 Soil Series: Tensas silty clay loam

Table 10. Yield and fiber quality data at Delta Island.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,699*	41.2	4.5	1.19	30.6	85.9	3
ST 4595 B3XF	1,630*	41.7	4.8	1.19	32.6	83.2	4
DP 2115 B3XF	1,618*	40.9	4.8	1.16	31.3	84.5	4
ST 5091 B3XF	1,569*	38.7	4.0	1.19	30.0	82.0	3
NG 3195 B3XF	1,542*	38.7	4.4	1.19	32.4	82.8	3
DP 2239 B3XF	1,454*	40.2	4.4	1.25	31.5	81.7	3
DG 3511 B3XF	1,384	39.9	4.6	1.19	36.0	85.1	3
NG 4190 B3XF	1,356	38.6	4.1	1.25	30.2	85.3	4
Grand Mean	1,508	39.8	4.4	1.20	32.0	83.5	3.4
LSD (0.05)	298	—	—	—	—	—	—

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

Location: Edwards
 Grower: Rodney Mast
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 6, 2022

Harvest Date: October 9, 2022
 Soil Series: McRaven silt loam

Table 11. Yield and fiber quality data at Edwards.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
PHY 411 W3FE	1,097*	40.4	4.9	1.06	31.0	81.0	3
PHY 443 W3FE	1,000*	40.4	4.5	1.09	31.3	80.9	3
NG 4190 B3XF	922	41.4	4.7	1.16	30.9	83.8	3
DP 2127 B3XF	868	42.1	5.0	1.09	29.0	82.1	3
NG 3195 B3XF	747	40.8	4.4	1.06	29.2	78.9	4
DP 2239 B3XF	729	41.4	4.3	1.16	29.7	81.4	3
ST 4595 B3XF	711	41.4	4.4	1.16	31.2	81.8	3
ST 5091 B3XF	701	40.8	4.8	1.16	30.0	80.5	3
DG 3511 B3XF	697	41.4	4.7	1.16	31.5	82.8	3
DP 2115 B3XF	604	42.1	5.0	1.13	31.8	81.5	2
Grand Mean	808	41.2	4.7	1.12	30.6	81.5	3
LSD (0.05)	155	—	—	—	—	—	—

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

Location: Ellistown
 Grower: Kerry Coker
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 31, 2022

Harvest Date: November 4, 2022
 Soil Series: Mantachie silt loam

Table 12. Yield and fiber quality data at Ellistown.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 3195 B3XF	1,176*	43.2	3.7	1.19	31.3	84.2	3
ST 5091 B3XF	1,131*	40.8	3.5	1.22	28.8	81.4	3
ST 4595 B3XF	999*	48.8	3.8	1.22	30.5	83.4	5
DG 3511 B3XF	983*	42.9	3.9	1.19	32.0	82.4	3
DP 2115 B3XF	973*	42.1	4.1	1.19	31.3	85.5	4
NG 4190 B3XF	966	40.5	3.9	1.25	29.6	83.9	4
DP 2239 B3XF	909	40.8	3.4	1.19	29.4	81.9	4
DP 2127 B3XF	855	40.4	3.9	1.22	29.7	83.8	4
Grand Mean	999	42.4	3.8	1.21	30.3	83.3	3.8
LSD (0.05)	203	—	—	—	—	—	—

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

Location: Greenwood
 Grower: John Moor
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 2, 2022

Harvest Date: October 6, 2022
 Soil Series: Dubbs/Tensas silty clay loam

Table 13. Yield and fiber quality data at Greenwood.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,651*	40.9	4.1	1.19	33.7	83.5	4
ST 4595 B3XF	1,645*	40.5	4.8	1.19	31.7	83.9	4
DP 2115 B3XF	1,644*	40.4	4.7	1.28	30.4	82.9	3
PHY 411 W3FE	1,578	39.9	4.6	1.22	32.8	83.9	3
NG 3195 B3XF	1,527	38.5	4.6	1.22	31.1	82.5	4
ST 5091 B3XF	1,511	39.1	4.6	1.25	34.6	84.1	3
PHY 443 W3FE	1,504	39.3	5.0	1.16	30.5	85.5	3
DP 2239 B3XF	1,480	39.5	4.2	1.19	30.2	80.2	4
NG 4190 B3XF	1,470	39.1	4.1	1.16	32.9	83.4	4
DG 3511 B3XF	1,365	39.2	4.3	1.25	31.0	83.8	4
Grand Mean	1,538	39.6	4.5	1.21	31.9	83.4	3.6
LSD (0.05)	95	—	—	—	—	—	—

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

Location: Louise
 Grower: Byron Seward
 MSU Agronomist: Brian Pieralisi

Irrigation: Furrow
 Row Width: 30" 2x1 Skip
 Planting Date: May 5, 2022

Harvest Date: November 8, 2022
 Soil Series: Forestdale-Brittain silt loam

Table 14. Yield and fiber quality data at Louise.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,360*	40.5	4.9	1.22	32.5	84.5	3
ST 4595 B3XF	1,353*	40.7	4.6	1.22	32.0	84.0	3
DP 2115 B3XF	1,333*	40.5	4.7	1.25	29.9	83.8	5
ST 5091 B3XF	1,313*	40.0					
NG 3195 B3XF	1,305*	40.0	4.8	1.22	31.9	85.2	4
DP 2239 B3XF	1,295*	40.7	4.7	1.25	29.7	83.1	3
NG 4190 B3XF	1,294*	40.5	4.7	1.19	31.9	85.8	4
DG 3511 B3XF	1,216	40.5	4.9	1.19	33.3	84.7	3
Grand Mean	1,309	40.4	4.8	1.22	31.6	84.4	3.6
LSD (0.05)	91	—	—	—	—	—	—

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

Location: Lyon
 Grower: Bryan Fife/Clif Heaton
 MSU Agronomist: Brian Pieralisi

Irrigation: Furrow
 Row Width: 38"
 Planting Date: May 10, 2022

Harvest Date: October 20, 2022
 Soil Series: Forestdale-Brittain silt loam

Table 15. Yield and fiber quality data at Lyon.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2127 B3XF	1,953*	39.4	4.3	1.19	31.8	83.3	3
ST 4595 B3XF	1,806*	38.3	4.3	1.28	29.6	83.6	5
PHY 443 W3FE	1,744*	39.3	4.3	1.19	31.6	83.8	3
PHY 411 W3FE	1,714*	37.0	4.2	1.19	30.5	81.4	4
DP 2115 B3XF	1,680	39.3					
NG 4190 B3XF	1,648	37.1	4.0	1.28	31.5	84.6	3
DP 2239 B3XF	1,627	37.6	4.0	1.31	31.5	83.2	3
ST 5091 B3XF	1,626	37.0	4.1	1.28	31.3	83.5	3
NG 3195 B3XF	1,596	38.0	4.5	1.19	29.2	81.4	3
DG 3511 B3XF	1,509	38.5	4.7	1.22	33.3	84.1	2
Grand Mean	1,690	38.2	4.3	1.24	31.1	83.2	3.2
LSD (0.05)	242	—	—	—	—	—	—

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

Location: Mayersville
 Grower: Chase Mahalitic
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 2, 2022

Harvest Date: October 17, 2022
 Soil Series: Commerce silty clay loam

Table 16. Yield and fiber quality data at Mayersville.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 4595 B3XF	1,046*	39.2	4.9	1.25	31.7	84.1	4
DP 2127 B3XF	1,041*	39.3	5.3	1.16	31.5	83.2	2
ST 5091 B3XF	1,022*	39.4	4.7	1.25	31.5	83.7	3
NG 3195 B3XF	1,002*	38.8	4.7	1.25	34.7	85.0	2
DP 2239 B3XF	968*	39.9	4.9	1.28	33.5	84.7	3
DP 2115 B3XF	923*	38.9	5.2	1.22	33.4	85.1	3
DG 3511 B3XF	878*	39.4	5.2	1.19	33.7	83.9	3
NG 4190 B3XF	843	38.5	4.7	1.22	33.8	85.6	3
Grand Mean	965	39.2	5.0	1.23	33.0	84.4	2.9
LSD (0.05)	198	—	—	—	—	—	—

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

Location: Natchez
 Grower: Matthew Guedon
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 20, 2022

Harvest Date: October 10, 2022
 Soil Series: Morganfield silt loam

Table 17. Yield and fiber quality data at Natchez.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
DP 2115 B3XF	1,466*	40.4	4.6	1.19	32.6	83.4	3
ST 4595 B3XF	1,357*	37.7	4.2	1.22	31.3	81.9	4
ST 5091 B3XF	1,355*	37.7	4.0	1.19	31.3	82.9	3
DP 2127 B3XF	1,331*	38.6	4.5	1.16	30.3	84.0	3
DP 2239 B3XF	1,260*	38.2	3.9	1.31	33.1	84.8	4
DG 3511 B3XF	1,226	38.7	4.2	1.22	35.4	84.6	3
NG 3195 B3XF	1,170	36.5	4.1	1.16	33.3	82.9	3
NG 4190 B3XF	1,147	37.4	3.8	1.22	32.5	85.1	3
PHY 443 W3FE	967	35.9	4.1	1.22	38.1	83.9	4
PHY 411 W3FE	915	37.3	3.8	1.16	34.7	83.8	5
Grand Mean	1,219	37.8	4.1	1.20	33.3	83.7	3.5
LSD (0.05)	237	—	—	—	—	—	—

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

Location: Sledge
 Grower: Sledge Taylor
 MSU Agronomist: Brian Pieralisi

Irrigation: Pivot
 Row Width: 38"
 Planting Date: May 14, 2022

Harvest Date: October 25, 2022
 Soil Series: Falaya silty clay

Table 18. Yield and fiber quality data at Sledge.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
ST 5091 B3XF	1,678*	40.1	4.2	1.19	29.3	82.5	3
DP 2115 B3XF	1,618*	39.0	4.6	1.22	29.6	85.1	3
DP 2127 B3XF	1,612*	39.2	4.9	1.19	31.9	84.6	3
ST 4595 B3XF	1,590	38.6	4.5	1.22	30.2	81.4	3
NG 3195 B3XF	1,538	37.1	4.6	1.22	32.0	83.3	2
DG 3511 B3XF	1,512	38.8	4.7	1.25	32.6	84.8	2
PHY 411 W3FE	1,462	39.2	4.5	1.16	32.7	83.3	3
DP 2239 B3XF	1,455	38.2	4.5	1.28	30.7	83.9	2
PHY 443 W3FE	1,399	37.3	4.3	1.22	32.7	84.5	3
NG 4190 B3XF	1,374	37.2	4.3	1.25	31.7	85.4	3
Grand Mean	1,524	38.5	4.5	1.22	31.3	83.9	2.7
LSD (0.05)	78	—	—	—	—	—	—

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

Location: West Point
 Grower: Ben Harlow
 MSU Agronomist: Brian Pieralisi

Irrigation: Dryland
 Row Width: 38"
 Planting Date: May 12, 2022

Harvest Date: November 9, 2022
 Soil Series: Okolona silty clay

Table 19. Yield and fiber quality data at West Point.

Variety	Lint yield (lb/acre)	Lint percent	Mic	Staple (in)	Strength (g/tex)	Uniformity (%)	Leaf
NG 4190 B3XF	1,512*	40.6	4.7	1.19	30.4	85.0	4
DP 2127 B3XF	1,400*	41.8	5	1.16	30.2	84.9	4
DG 3511 B3XF	1,373	40.3	4.8	1.19	35.9	84.4	3
DP 2239 B3XF	1,358	40.4	5.1	1.25	31.3	83.9	3
PHY 411 W3FE	1,355	40.6	4.4	1.16	31.3	81.4	4
NG 3195 B3XF	1,346	39.9	4.8	1.19	31.8	83.8	4
DP 2115 B3XF	1,311	42.8	5.1	1.16	30.8	83.0	3
ST 5091 B3XF	1,309	40.0	4.8	1.16	28.9	83.5	4
ST 4595 B3XF	1,306	41.2	5.1	1.16	31.2	81.9	4
PHY 443 W3FE	1,230	39.4	4.8	1.16	32.7	82.6	3
Grand Mean	1,350	40.7	4.9	1.18	31.5	83.4	3.6
LSD (0.05)	122	—	—	—	—	—	—

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

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