2022 Mississippi On-Farm Cotton Variety Trials

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Mississippi State University Extension

MISSISSIPPI STATE UNIVERSITY
EXTENSION

Table of Contents

2022 County Trial Locations and Cooperators

Trials arranged and conducted by: Dr. Brian Pieralisi
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Special thanks to: Dr. Tyson Raper – University of Tennessee – West Tennessee Research and Education Center

Table 1. Locations, growers, and cooperating agronomists for 2022 Mississippi State University County Variety Trial Program.

Location	*Grower*	*MSU Agronomist*
Coffeeville	**Mr. Coley Bailey**	**Dr. Brian Pieralisi**
Crawford	**Mr. Rodney Mast/Lowell Mullett**	**Dr. Brian Pieralisi**
Delta Island	**Mr. Travis and Clint Dunn**	**Mr. Andy Braswell**
Edwards	**Mr. Kendall Garraway**	**Dr. Brian Pieralisi**
Ellistown	**Mr. Kerry Coker**	**Dr. Brian Pieralisi**
Greenwood	**Mr. John Moor**	**Mr. Andy Braswell**
Louise	**Mr. Byron Seward**	**Dr. Brian Pieralisi**
Lyon	**Bryan Fife/Clif Heaton**	**Dr. Brian Pieralisi**
Mayersville	**Mr. Chase Mahalitc**	**Dr. Brian Pieralisi**
Natchez	**Mr. Matthew Guedon**	**Dr. Brian Pieralisi**
Sledge	**Mr. Sledge Taylor**	**Dr. Brian Pieralisi**
West Point	**Mr. Ben Harlow**	**Dr. 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 provided a tremendous level of assistance with these trials including: Mr. Ty Edwards, Mr. Jason Grafton, Mr. Bert Falkner, Mr. Tucker Miller, and Mr. 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 – Mr. Scott Cummings, Phytogen Cottonseed – Dr. Jonathan Siebert, Americot/NexGen – Dr. Chase Samples and Terry Campbell, and Delta and Pine Land – Mr. Greg Ferguson. Cooperation from all aforementioned parties is essential for success of the Mississippi State University County Research and Demonstration Yield Trial 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 selection decisions. Furthermore, the rapid introduction of new varieties and discontinued production of "older" varieties 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 four to six years. One that does not perform well will likely remain on the market for less than three years. In addition, the historical standard for variety testing information was to have two to three years of data prior to release of any given variety. Today, one to two 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. Official Variety Trial data is typically available for one 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 Mississippi State University 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 given company is given is dependent upon market share. In addition, one to two at-large entries are given to smaller companies in order 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 utilizing 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 2600 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 he/she 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. Prior to all harvest operations, each boll buggy or trailer was calibrated by the Mississippi Department of Agriculture to ensure that accurate harvest weights were collected. An 8- to 10-pound seed cotton sample was collected for each variety tested. In order 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 Research and Education Center. 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 United States Department of Agriculture Classing Office in Memphis, TN.

Entries

A maximum of 10 core variety entries per year are allowed in the Mississippi State University on-farm variety trial 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-AMS. In 2022, Delta and Pine Land was allotted three spots; Phytogen Cottonseed, Americot, and Stoneville cottonseed was allotted two spots; and one additional "at-large" entry was given to Dyna-Gro to provide parody between smaller companies with less resources than larger companies. Entries in the 2022 Mississippi State University County Trial Program were as follows:

Table 2. 2022 Mississippi State University County Variety Trial 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

Site Characteristics

Locations for the 2022 Mississippi State University County Yield Trial Program are listed on page 3. Yield trials were conducted at a total of twelve locations. Six locations were located in the Delta and six were in the Hills. All Delta locations were irrigated, and five of 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 & Analysis

Each data table includes the following: variety, lint yield, lint percent, micronaire, 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). Least Significant Differences 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, LSD's 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.

2022 Mississippi State University On-Farm Variety Trial Program

Yield and Fiber Quality Data Pooled Across 12 Locations

Table 3. Yield and fiber quality data pooled across all 12 locations.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1303**	40.6	4.8	1.17	31.2	84.1	3.2
ST 4595 B3XF	**1278**	40.9	4.6	1.21	30.8	82.8	4.0
ST 5091 B3XF	**1238**	39.5	4.3	1.19	31.3	82.6	3.4
DP 2115 B3XF	**1232**	40.6	4.8	1.19	31.7	84.1	3.2
NG 3195 B3XF	1225	39.4	4.5	1.18	31.7	82.7	3.2
PHY 411 W3FE	1220	39.6	4.3	1.15	32.5	82.7	3.9
NG 4190 B3XF	1197	39.3	4.4	1.21	31.7	84.7	3.4
DP 2239 B3XF	1179	39.9	4.5	1.24	31.2	83.0	3.2
PHY 443 W3FE	1171	39.2	4.4	1.16	33.4	83.4	3.5
DG 3511 B3XF	1136	40.1	4.6	1.20	33.4	84.1	3.0
Grand Mean	1218	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

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

Delta Region Locations Included: Delta Island, Greenwood, Louise, Mayersville, Lyon, and Sledge

Table 4. Yield and fiber quality data pooled over six Delta locations

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1522**	40.1	4.8	1.19	31.5	84.3	3.0
ST 4595 B3XF	**1483**	39.9	4.6	1.24	30.7	83.1	3.9
DP 2115 B3XF	1444	39.9	4.8	1.20	31.3	84.8	3.3
ST 5091 B3XF	1419	39.0	4.4	1.22	31.0	83.1	3.1
PHY 411 W3FE	1402	39.2	4.3	1.17	32.7	83.1	3.7
NG 3195 B3XF	1388	38.5	4.5	1.21	31.8	82.9	2.9
PHY 443 W3FE	1361	39.1	4.3	1.18	32.9	84.1	3.4
DP 2239 B3XF	1349	39.3	4.5	1.26	31.3	83.2	3.0
NG 4190 B3XF	1303	38.5	4.4	1.23	32.3	85.0	3.3
DG 3511 B3XF	1276	39.4	4.7	1.22	33.3	84.5	2.8
Grand Mean	1395	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

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

2022 Mississippi State University On-Farm Variety Trial Program

Hill Region Locations Included: Coffeeville, Crawford, Edwards, Ellistown, Natchez, and West Point

Table 5. Yield and fiber quality data pooled over six Hill region locations.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 4190 B3XF	1103	39.9	4.3	1.21	31.1	84.5	3.5
DP 2127 B3XF	1070	40.9	4.7	1.17	30.8	84.0	3.4
NG 3195 B3XF	1063	40.1	4.4	1.17	31.7	82.6	3.4
ST 4595 B3XF	1060	41.8	4.5	1.20	30.9	82.6	4.0
ST 5091 B3XF	1053	39.8	4.3	1.17	30.3	82.2	3.8
PHY 411 W3FE	1036	39.8	4.2	1.14	32.4	82.3	4.2
DP 2115 B3XF	1012	41.1	4.7	1.19	31.3	83.5	3.2
DP 2239 B3XF	1009	40.3	4.4	1.24	31.3	82.9	3.3
DG 3511 B3XF	1002	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	1039	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

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

Irrigated Locations Included: Crawford, Delta Island, Greenwood, Louise, Lyon, Mayersville, and Sledge

Table 6. Yield and fiber quality data pooled over seven irrigated locations

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1295**	40.1	4.8	1.18	31.5	84.3	3.3
ST 4595 B3XF	**1247**	39.9	4.7	1.24	30.7	83.1	4.2
DP 2115 B3XF	1205	39.9	4.8	1.19	31.2	84.6	3.6
ST 5091 B3XF	1184	39.0	4.4	1.22	30.9	83.1	3.4
PHY 411 W3FE	1175	39.3	4.4	1.17	32.7	83.0	4.0
NG 3195 B3XF	1171	38.6	4.5	1.20	31.9	83.0	3.3
PHY 443 W3FE	1134	39.1	4.3	1.18	32.9	84.1	3.8
DP 2239 B3XF	1127	39.4	4.5	1.26	31.3	83.2	3.3
NG 4190 B3XF	1091	38.5	4.4	1.23	32.2	84.9	3.6
DG 3511 B3XF	1047	39.4	4.7	1.21	33.2	84.4	3.2
Grand Mean	1168	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

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

2022 Mississippi State University On-Farm Variety Trial Program

Dryland Locations Included: Coffeeville, Edwards, Ellistown, Natchez, and West Point

Table 7. Yield and fiber quality data pooled over five dryland locations.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 4190 B3XF	1127	40.2	4.3	1.20	31.1	84.4	3.4
DP 2127 B3XF	1100	41.1	4.7	1.16	30.8	83.9	3.3
ST 4595 B3XF	1096	42.2	4.5	1.19	31.0	82.5	4.0
ST 5091 B3XF	1093	40.0	4.2	1.16	30.3	82.1	3.7
NG 3195 B3XF	1081	40.3	4.3	1.16	31.6	82.5	3.3
PHY 411 W3FE	1066	40.0	4.1	1.13	32.4	82.2	4.1
DP 2115 B3XF	1049	41.3	4.6	1.18	31.5	83.5	3.1
DG 3511 B3XF	1042	40.7	4.4	1.18	33.8	83.9	3.0
DP 2239 B3XF	1033	40.5	4.3	1.23	31.3	82.9	3.2
PHY 443 W3FE	1010	39.2	4.4	1.15	34.0	82.6	3.4
Grand Mean	1070	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

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

Individual Trial Location Data

Location: Coffeeville **Row width: 38”** **Harvest date: October 22, 2022**
Grower: Coley Bailey **Irrigated: Dryland** **Soil series: Collins Silt Loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 9,2022**

Table 8. Yield and fiber quality data at Coffeeville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 4190 B3XF	**1086**	41.2	4.3	1.22	31.7	84.9	3
ST 4595 B3XF	**1086**	41.4	4.6	1.19	31.2	84.1	4
DP 2127 B3XF	**1044**	42.8	5	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	●	●	●	●	●	●

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

Phytogen varieties omitted per the grower’s request

2022 Mississippi State University On-Farm Variety Trial Program

Location: Crawford **Row width: 30”** **Harvest date: October 28, 2022**
Grower: R. Mast/L. Mullett **Irrigated: Dryland** **Soil series: Vaiden Silty Clay**
MSU Agronomist: Brian Pieralisi **Planting date: May 3, 2022**

Table 9. Yield and fiber quality data at Crawford.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 3195 B3XF	1024	38.3	4.5	1.25	30.7	82.8	4
NG 4190 B3XF	1015	39.2	4.6	1.22	32.8	84	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	4
ST 5091 B3XF	810	38.3	4.6	1.22	31.5	84.7	4
DP 2115 B3XF	787	40.4	5	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

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

Phytogen varieties omitted per the grower’s request

Location: Delta Island **Row width: 38”** **Harvest date: October 3, 2022**
Grower: Travis/Clint Dunn **Irrigated: Furrow** **Soil series: Tensas silty clay loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 4, 2022**

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1699**	41.2	4.5	1.19	30.6	85.9	3
ST 4595 B3XF	**1630**	41.7	4.8	1.19	32.6	83.2	4
DP 2115 B3XF	**1618**	40.9	4.8	1.16	31.3	84.5	4
ST 5091 B3XF	**1569**	38.7	4	1.19	30	82	3
NG 3195 B3XF	**1542**	38.7	4.4	1.19	32.4	82.8	3
DP 2239 B3XF	**1454**	40.2	4.4	1.25	31.5	81.7	3
DG 3511 B3XF	1384	39.9	4.6	1.19	36	85.1	3
NG 4190 B3XF	1356	38.6	4.1	1.25	30.2	85.3	4
Grand Mean	1508	39.8	4.4	1.20	32.0	83.5	3.4
LSD (0.05)	298	●	●	●	●	●	●

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

Phytogen varieties omitted per the grower’s request

2022 Mississippi State University On-Farm Variety Trial Program

Location: Edwards **Row width: 38”** **Harvest date: October 9, 2022**
Grower: Kendall Garraway **Irrigated: Dryland** **Soil series: McRaven Silt Loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 6, 2022**

Table 11. Yield and fiber quality data at Edwards.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
PHY 411 W3FE	**1097**	40.4	4.9	1.06	31	81	3
PHY 443 W3FE	**1000**	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	1.09	29	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	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	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	●	●	●	●	●	●

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

Location: Ellistown **Row width: 38”** **Harvest date: November 4, 2022**
Grower: Kerry Coker **Irrigated: Dryland** **Soil series: Mantachie Silt Loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 31, 2022**

Table 12. Yield and fiber quality data at Ellistown.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 3195 B3XF	**1176**	43.2	3.7	1.19	31.3	84.2	3
ST 5091 B3XF	**1131**	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	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	●	●	●	●	●	●

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

Phytogen varieties omitted per the grower’s request

2022 Mississippi State University On-Farm Variety Trial Program

Location: Greenwood **Row width: 38”** **Harvest date: October 6, 2022**
Grower: John Moor **Irrigated: Dryland** **Soil series: Dubbs Loam/Tensas**
MSU Agronomist: Brian Pieralisi **Planting date: May 2, 2022** **Silty Clay Loam**

Table 13. Yield and fiber quality data at Greenwood.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1651**	40.9	4.1	1.19	33.7	83.5	4
ST 4595 B3XF	**1645**	40.5	4.8	1.19	31.7	83.9	4
DP 2115 B3XF	**1644**	40.4	4.7	1.28	30.4	82.9	3
PHY 411 W3FE	**1578**	39.9	4.6	1.22	32.8	83.9	3
NG 3195 B3XF	1527	38.5	4.6	1.22	31.1	82.5	4
ST 5091 B3XF	1511	39.1	4.6	1.25	34.6	84.1	3
PHY 443 W3FE	1504	39.3	5	1.16	30.5	85.5	3
DP 2239 B3XF	1480	39.5	4.2	1.19	30.2	80.2	4
NG 4190 B3XF	1470	39.1	4.1	1.16	32.9	83.4	4
DG 3511 B3XF	1365	39.2	4.3	1.25	31	83.8	4
Grand Mean	1538	39.6	4.5	1.21	31.9	83.4	3.6
LSD (0.05)	95	●	●	●	●	●	●

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

Location: Louise **Row width: 30” 2x1 skip** **Harvest date: November 8, 2021**
Grower: Byron Seward **Irrigated: Furrow** **Soil series: Forestdale-Brittain**
MSU Agronomist: Brian Pieralisi **Planting date: May 5, 2022** **Silt Loam**

Table 14. Yield and fiber quality data at Louise.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1360**	40.5	4.9	1.22	32.5	84.5	3
ST 4595 B3XF	**1353**	40.7	4.6	1.22	32.0	84.0	3
DP 2115 B3XF	**1333**	40.5	4.7	1.25	29.9	83.8	5
ST 5091 B3XF	**1313**	40.0					
NG 3195 B3XF	**1305**	40.0	4.8	1.22	31.9	85.2	4
DP 2239 B3XF	**1295**	40.7	4.7	1.25	29.7	83.1	3
NG 4190 B3XF	**1294**	40.5	4.7	1.19	31.9	85.8	4
DG 3511 B3XF	1216	40.5	4.9	1.19	33.3	84.7	3
Grand Mean	1309	40.4	4.8	1.22	31.6	84.4	3.6
LSD(0.05)	91	●	●	●	●	●	●

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

Phytogen varieties omitted per the grower’s request

2022 Mississippi State University On-Farm Variety Trial Program

Location: Lyon **Row width: 38”** **Harvest date: October 20, 2022**
Grower: Bryan Fife/ Clif Heaton **Irrigated: Furrow** **Soil series: Forestdale-Brittain Silt Loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 10, 2022**

Table 15. Yield and fiber quality data at Lyon.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	**1953**	39.4	4.3	1.19	31.8	83.3	3
ST 4595 B3XF	**1806**	38.3	4.3	1.28	29.6	83.6	5
PHY 443 W3FE	**1744**	39.3	4.3	1.19	31.6	83.8	3
PHY 411 W3FE	**1714**	37.0	4.2	1.19	30.5	81.4	4
DP 2115 B3XF	1680	39.3					
NG 4190 B3XF	1648	37.1	4	1.28	31.5	84.6	3
DP 2239 B3XF	1627	37.6	4	1.31	31.5	83.2	3
ST 5091 B3XF	1626	37.0	4.1	1.28	31.3	83.5	3
NG 3195 B3XF	1596	38.0	4.5	1.19	29.2	81.4	3
DG 3511 B3XF	1509	38.5	4.7	1.22	33.3	84.1	2
Grand Mean	1690	38.2	4.3	1.24	31.1	83.2	3.2
LSD(0.05)	242	●	●	●	●	●	●

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

Location: Mayersville **Row width: 38”** **Harvest date: October 17, 2022**
Grower: Chase Mahalitc **Irrigated: Dryland** **Soil series: Commerce Silty Clay Loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 2, 2022**

Table 16. Yield and fiber quality data at Mayersville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 4595 B3XF	**1046**	39.2	4.9	1.25	31.7	84.1	4
DP 2127 B3XF	**1041**	39.3	5.3	1.16	31.5	83.2	2
ST 5091 B3XF	**1022**	39.4	4.7	1.25	31.5	83.7	3
NG 3195 B3XF	**1002**	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	●	●	●	●	●	●

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

Phytogen varieties omitted per the grower’s request

2022 Mississippi State University On-Farm Variety Trial Program

Location: Natchez **Row width: 38”** **Harvest date: October 10, 2022**
Grower: Matthew Guedon **Irrigated: Dryland** **Soil series: Morganfield silt loam**
MSU Agronomist: Brian Pieralisi **Planting date: May 20, 2022**

Table 17. Yield and fiber quality data at Natchez.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2115 B3XF	**1466**	40.4	4.6	1.19	32.6	83.4	3
ST 4595 B3XF	**1357**	37.7	4.2	1.22	31.3	81.9	4
ST 5091 B3XF	**1355**	37.7	4	1.19	31.3	82.9	3
DP 2127 B3XF	**1331**	38.6	4.5	1.16	30.3	84	3
DP 2239 B3XF	**1260**	38.2	3.9	1.31	33.1	84.8	4
DG 3511 B3XF	1226	38.7	4.2	1.22	35.4	84.6	3
NG 3195 B3XF	1170	36.5	4.1	1.16	33.3	82.9	3
NG 4190 B3XF	1147	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	1219	37.8	4.1	1.20	33.3	83.7	3.5
LSD(0.05)	237	●	●	●	●	●	●

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

Location: Sledge **Row width: 38”** **Harvest date: October 25, 2022**
Grower: Sledge Taylor **Irrigated: Pivot** **Soil series: Falaya Silty Clay**
MSU Agronomist: Brian Pieralisi **Planting date: May 14, 2022**

Table 18. Yield and fiber quality data at Sledge.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 5091 B3XF	**1678**	40.1	4.2	1.19	29.3	82.5	3
DP 2115 B3XF	**1618**	39.0	4.6	1.22	29.6	85.1	3
DP 2127 B3XF	**1612**	39.2	4.9	1.19	31.9	84.6	3
ST 4595 B3XF	1590	38.6	4.5	1.22	30.2	81.4	3
NG 3195 B3XF	1538	37.1	4.6	1.22	32	83.3	2
DG 3511 B3XF	1512	38.8	4.7	1.25	32.6	84.8	2
PHY 411 W3FE	1462	39.2	4.5	1.16	32.7	83.3	3
DP 2239 B3XF	1455	38.2	4.5	1.28	30.7	83.9	2
PHY 443 W3FE	1399	37.3	4.3	1.22	32.7	84.5	3
NG 4190 B3XF	1374	37.2	4.3	1.25	31.7	85.4	3
Grand Mean	1524	38.5	4.5	1.22	31.3	83.9	2.7
LSD (0.05)	78	●	●	●	●	●	●

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

2022 Mississippi State University On-Farm Variety Trial Program

Location: West Point **Row width: 38”** **Harvest date: November 9, 2022**
Grower: Ben Harlow **Irrigated: Dryland** **Soil series: Okolona Silty Clay**
MSU Agronomist: Brian Pieralisi **Planting date: May 12, 2022**

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
NG 4190 B3XF	**1512**	40.6	4.7	1.19	30.4	85.0	4
DP 2127 B3XF	**1400**	41.8	5	1.16	30.2	84.9	4
DG 3511 B3XF	1373	40.3	4.8	1.19	35.9	84.4	3
DP 2239 B3XF	1358	40.4	5.1	1.25	31.3	83.9	3
PHY 411 W3FE	1355	40.6	4.4	1.16	31.3	81.4	4
NG 3195 B3XF	1346	39.9	4.8	1.19	31.8	83.8	4
DP 2115 B3XF	1311	42.8	5.1	1.16	30.8	83.0	3
ST 5091 B3XF	1309	40.0	4.8	1.16	28.9	83.5	4
ST 4595 B3XF	1306	41.2	5.1	1.16	31.2	81.9	4
PHY 443 W3FE	1230	39.4	4.8	1.16	32.7	82.6	3
Grand Mean	1350	40.7	4.9	1.18	31.5	83.4	3.6
LSD (0.05)	122	●	●	●	●	●	●

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

Notes