

2023 Mississippi On-Farm Cotton Variety Trials

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Mississippi State University Extension



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2023 County Trial Locations and Cooperators

Trials arranged and conducted by: Dr. Brian Pieralisi

Assistance provided by: Bryce Bullock, Luke Noah, Ty Dixon, 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 – University of Tennessee – West Tennessee Research and Education Center

Table 1. Locations, growers, and cooperating agronomists for 2023 Mississippi State University County Variety Trial Program.

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

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 – Mr. Shawn Butler, 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 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 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 2023, 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 parity between smaller companies with less resources than larger companies. Entries in the 2023 Mississippi State University County Trial Program were as follows:

Table 2. 2023 Mississippi State University County Variety Trial 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

Site Characteristics

Locations for the 2023 Mississippi State University County Yield Trial Program are listed on page 3. Yield trials were conducted at a total of six-teen locations. Seven locations were located 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 & 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.

2023 Mississippi State University On-Farm Variety Trial Program

Yield and Fiber Quality Data Pooled Across 16 Locations

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
PHY 411 W3FE	1288	41.3	4.6	1.13	33.5	83.5	4.5
DP 2127 B3XF	1197	41.0	4.9	1.14	31.4	83.9	3.3
ST 5091B3XF	1168	40.5	4.4	1.15	31.1	82.4	3.5
ST 4595B3XF	1156	40.7	4.8	1.17	31.8	83.6	4.1
NG 4190 B3XF	1123	39.4	4.6	1.18	32.1	84.1	3.6
DP 2115 B3XF	1113	40.5	4.7	1.15	32.8	83.6	3.3
DP 2239 B3XF	1107	41.1	4.6	1.19	31.7	83.4	3.2
NG 3195 B3XF	1083	39.2	4.6	1.16	32.6	83.9	3.5
PHY 443 W3FE	1081	38.7	4.7	1.17	35.6	83.3	2.9
DG 4530 B3TXF	1070	39.2	4.4	1.19	31.7	83.9	3.4
Grand Mean	1138	40.1	4.6	1.16	32.4	83.6	3.5
LSD (0.05)	66	0.5	0.1	0.01	0.8	0.6	0.4

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

Delta Region Locations Included: Clarksdale, Delta Island, Greenwood, Louise, Mayersville, Sledge, Tallahatchie

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
PHY 411 W3FE	1726	41.7	4.5	1.14	33.0	84.0	4.4
DP 2127 B3XF	1428	40.0	4.9	1.15	32.1	84.0	3.4
ST 5091B3XF	1405	40.3	4.4	1.16	31.5	82.8	3.3
ST 4595B3XF	1402	40.4	4.8	1.19	32.3	83.5	4.2
PHY 443 W3FE	1355	38.9	4.6	1.18	36.8	85.1	3.4
NG 4190 B3XF	1337	38.8	4.6	1.19	32.9	83.9	3.8
DP 2239 B3XF	1331	40.6	4.6	1.21	32.2	83.8	3.6
DP 2115 B3XF	1322	39.6	4.8	1.16	33.4	84.4	3.7
DG 4530 B3TXF	1310	38.4	4.4	1.20	32.1	84.2	3.5
NG 3195 B3XF	1305	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

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

2023 Mississippi State University On-Farm Variety Trial Program

Hill Region Locations Included: Aberdeen, Coffeerville, Crawford, Ellistown, Mississippi State, Natchez, Prairie, Raymond, West Point

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	1045	41.7	4.9	1.14	31.1	83.9	3.2
PHY 411 W3FE	1034	41.2	4.8	1.13	34.0	83.3	4.5
ST 5091B3XF	1012	40.7	4.4	1.15	31.0	82.2	3.6
ST 4595B3XF	993	41.0	4.8	1.16	31.6	83.6	4.1
NG 4190 B3XF	984	39.8	4.7	1.18	31.8	84.3	3.4
DP 2115 B3XF	977	41.2	4.7	1.14	32.6	83.0	3.1
DP 2239 B3XF	960	41.5	4.6	1.17	31.5	83.1	2.9
NG 3195 B3XF	937	39.4	4.6	1.15	32.8	83.8	3.5
DG 4530 B3TXF	912	39.9	4.5	1.18	31.7	83.7	3.3
PHY 443 W3FE	908	38.8	4.7	1.16	35.2	82.4	2.6
Grand Mean	976	40.5	4.7	1.16	32.3	83.3	3.4
LSD (0.05)	71	0.7	0.2	0.02	1.0	0.7	0.5

***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	%	
PHY 411 W3FE	1593	42.3	4.5	1.14	33.0	84.0	4.3
DP 2127 B3XF	1296	40.6	4.8	1.16	32.5	84.0	3.4
ST 5091B3XF	1269	40.6	4.3	1.16	31.6	82.8	3.4
ST 4595B3XF	1267	40.9	4.8	1.19	32.5	83.5	4.2
PHY 443 W3FE	1221	39.4	4.6	1.19	36.9	85.0	3.3
DP 2115 B3XF	1211	40.3	4.8	1.16	33.1	84.2	3.6
DP 2239 B3XF	1195	41.3	4.6	1.21	32.4	83.9	3.4
NG 4190 B3XF	1195	39.5	4.6	1.19	33.0	84.2	3.6
NG 3195 B3XF	1180	39.4	4.6	1.17	32.8	84.4	3.5
DG 4530 B3TXF	1157	39.1	4.4	1.20	32.1	84.1	3.5
Grand Mean	1258	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

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

2023 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	%	
DP 2127 B3XF	1033	41.8	5.0	1.13	30.3	83.8	3.2
PHY 411 W3FE	1025	41.1	4.8	1.13	33.6	83.1	4.5
ST 5091B3XF	1002	40.8	4.4	1.14	30.6	82.0	3.6
NG 4190 B3XF	991	39.6	4.7	1.17	31.3	83.9	3.5
ST 4595B3XF	977	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
NG 3195 B3XF	921	39.3	4.6	1.14	32.6	83.3	3.5
DG 4530 B3TXF	920	39.8	4.5	1.18	31.6	83.8	3.3
PHY 443 W3FE	899	38.7	4.7	1.16	34.9	82.3	2.6
Grand Mean	967	40.4	4.7	1.15	32.0	83.2	3.4
LSD (0.05)	79	0.8	0.2	0.01	1.1	0.7	0.5

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

Individual Trial Location Data

Location: Aberdeen
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2115 B3XF	1267	39.9	4.6	1.17	33.3	83.5	4.0
ST 5091B3XF	1081	39.2	4.5	1.23	34.2	84.3	3.0
ST 4595B3XF	1060	39.8	4.5	1.21	33.9	83.9	6.0
PHY 411 W3FE	1044	38.4	4.3	1.13	32.7	82.4	6.0
NG 3195 B3XF	1033	36.4	4.1	1.18	33.2	82.9	4.0
DP 2239 B3XF	1031	39.6	4.2	1.21	32.0	83.5	3.0
DP 2127 B3XF	1020	38.8	4.7	1.17	31.2	84.0	3.0
DG 4530 B3TXF	1008	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	1037	38.5	4.5	1.19	32.7	83.6	4.2
LSD (0.05)	•	•	•	•	•	•	•

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

2023 Mississippi State University On-Farm Variety Trial Program

Location: Clarksdale
Grower: Mr. Brian Fyfe
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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
PHY 411 W3FE	2220	40.1	4.3	1.08	29.6	81.0	3.0
DP 2127 B3XF	1890	42.0	4.3	1.14	29.6	83.9	3.0
PHY 443 W3FE	1826	39.2	4.4	1.14	34.5	83.4	3.0
ST 4595B3XF	1789	40.6	4.6	1.15	30.5	81.7	4.0
DG 4530 B3TXF	1776	38.3	4.6	1.23	29.4	82.7	3.0
NG 4190 B3XF	1689	39.4	4.0	1.14	29.3	79.8	3.0
DP 2239 B3XF	1668	40.6	4.6	1.19	30.0	82.1	3.0
DP 2115 B3XF	1654	39.8	5.0	1.17	32.9	85.1	3.0
ST 5091B3XF	1624	40.6	4.2	1.12	28.6	80.8	2.0
NG 3195 B3XF	1445	39.6	4.6	1.15	29.3	82.4	2.0
Grand Mean	1758	40.0	4.5	1.15	30.4	82.3	2.9
LSD (0.05)	298	•	•	•	•	•	•

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

Location: Coffeeville
Grower: Mr. 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 Coffeeville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 5091B3XF	1108	42.4	4.4	1.18	32.3	83.4	3.0
NG 4190 B3XF	1045	41.5	4.6	1.19	31.8	85.2	3.0
ST 4595B3XF	1040	41.7	4.7	1.18	29.7	83.6	3.0
DP 2127 B3XF	1032	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	1003	41.4	4.6	1.18	31.8	83.5	2.5
LSD (0.05)	223	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

2023 Mississippi State University On-Farm Variety Trial Program

Location: Crawford
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 4595B3XF	1240	40.7	4.6	1.18	32.8	83.1	5.0
DP 2115 B3XF	1212	40.5	4.6	1.16	31.8	83.6	4.0
DP 2127 B3XF	1189	40.3	5.0	1.14	33.1	83.9	3.0
ST 5091B3XF	1189	40.0	4.1	1.15	31.8	81.8	4.0
NG 3195 B3XF	1141	39.4	4.4	1.17	31.7	86.0	3.0
DP 2239 B3XF	1092	42.3	4.7	1.18	32.4	83.6	3.0
NG 4190 B3XF	1050	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	1137	40.2	4.6	1.17	32.2	83.8	3.6
LSD (0.05)	132	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

Location: Delta Island
Grower: Mr. 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 Island.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 5091B3XF	1463	40.1	4.1	1.17	31.2	82.3	4.0
NG 3195 B3XF	1307	40.2	4.7	1.13	32.3	83.8	4.0
ST 4595B3XF	1221	40.4	4.5	1.22	34.2	84.5	5.0
DP 2127 B3XF	1220	39.8	4.7	1.14	31.6	84.9	5.0
DP 2239 B3XF	1209	40.7	4.4	1.26	32.8	84.1	4.0
DG 4530 B3TXF	1201	39.6	4.0	1.21	31.0	83.9	4.0
NG 4190 B3XF	1151	39.3	4.3	1.17	32.0	82.5	3.0
DP 2115 B3XF	1124	40.7	4.8	1.18	31.9	84.3	5.0
Grand Mean	1237	40.1	4.4	1.19	32.1	83.8	4.3
LSD (0.05)	•	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

2023 Mississippi State University On-Farm Variety Trial Program

Location: Louise
Grower: Mr. 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's silt loam

Table 15. Yield and fiber quality data at Louise.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
ST 5091B3XF	1612	40.5	4.3	1.18	32.4	83.1	3.0
DP 2127 B3XF	1542	39.4	4.9	1.18	33.1	85.2	4.0
DG 4530 B3TXF	1504	38.0	4.2	1.23	31.6	84.6	5.0
DP 2239 B3XF	1474	41.4	4.3	1.16	30.0	83.4	4.0
NG 4190 B3XF	1452	39.0	4.7	1.21	31.9	84.9	5.0
ST 4595B3XF	1438	40.2	5.0	1.17	31.8	82.4	5.0
NG 3195 B3XF	1426	38.7	4.4	1.20	30.5	85.3	5.0
DP 2115 B3XF	1401	38.8	4.7	1.15	32.6	83.9	4.0
Grand Mean	1481	39.5	4.6	1.19	31.7	84.1	4.4
LSD(0.05)	445	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phyto-gen varieties omitted per the growers request.

Location: Mayersville
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
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)	•	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phyto-gen varieties omitted per the growers request.

2023 Mississippi State University On-Farm Variety Trial Program

Location: Starkville
Grower: Dr. Brian Pieralisi
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 Mississippi State University.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	1399	44.2	4.7	1.12	28.6	83.7	3.0
PHY 411 W3FE	1373	42.9	4.6	1.12	33.0	82.4	5.0
DP 2239 B3XF	1367	42.9	4.4	1.15	29.5	84.1	3.0
NG 4190 B3XF	1346	41.3	4.5	1.13	28.9	82.8	4.0
DP 2115 B3XF	1334	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	•	•	•	•	•	•

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

Location: Natchez
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
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	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

2023 Mississippi State University On-Farm Variety Trial Program

Location: Prairie
Grower: Mr. Brandon Litwiller
Region: Hills

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

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

Table 19. Yield and fiber quality data at Prairie.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	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	856	41.8	4.5	1.21	33.2	84.5	3.0
LSD (0.05)	•	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytogen varieties omitted per the growers request.

Location: Raymond
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
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	•	•	•	•	•	•

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

2023 Mississippi State University On-Farm Variety Trial Program

Location: Sledge
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
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	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

Location: Tallahatchie
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
DP 2115 B3XF	1290	40.9	5.2	1.20	34.5	85.5	4.0
ST 5091B3XF	1231	40.6	4.6	1.23	31.7	84.2	3.0
DP 2127 B3XF	1191	39.9	5.2	1.20	34.2	85.1	3.0
ST 4595B3XF	1181	39.5	4.9	1.25	32.4	85.4	4.0
NG 4190 B3XF	1173	40.2	4.7	1.22	34.5	83.7	3.0
NG 3195 B3XF	1168	39.8	4.8	1.20	36.6	84.7	4.0
DP 2239 B3XF	1075	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	1151	40.0	4.9	1.23	33.8	84.9	3.5
LSD (0.05)	•	•	•	•	•	•	•

*Yield in bold type are not significantly different from the highest yielding variety.
 Phytoen varieties omitted per the growers request.

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Location: West Point
Grower: Mr. 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	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	%		Inches	Grams/Tex	%	
DP 2127 B3XF	1104	42.7	5.5	1.16	31.1	84.3	3.0
ST 4595B3XF	1061	42.9	5.2	1.20	31.3	85.7	4.0
ST 5091B3XF	1044	41.8	4.6	1.16	30.5	83.1	3.0
DP 2239 B3XF	1030	42.0	5.2	1.19	32.7	82.3	2.0
DP 2115 B3XF	1026	42.1	5.1	1.17	32.0	84.0	2.0
NG 4190 B3XF	1014	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	1001	41.5	5.0	1.18	32.4	84.1	2.9
LSD (0.05)	152	•	•	•	•	•	•

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

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Notes

