

2018 Mississippi On-Farm Cotton Variety Trials

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Mississippi State University Extension



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2018 County Trial Locations and Cooperators

Trials arranged and conducted by: Dr. Darrin Dodds

Assistance provided by: Savana Davis, Lucas Franca, Steven Hall, William Rutland, Tyler Soignier, Brint Lindsey, and Joseph Hayes

Special thanks to: Dr. Tyson Raper – University of Tennessee – West Tennessee Research and Education Center

Table 1. Locations, growers, and cooperating agronomists for 2018 Mississippi State University County Variety Trial Program.

<i>Location</i>	<i>Grower</i>	<i>MSU Agronomist</i>
<i>Ashland</i>	Mr. Heath Byrd	Mr. Michael Pruitt
<i>Brooksville</i>	Darrin Dodds	Darrin Dodds
<i>Bruce</i>	Mr. Trey Brower	Darrin Dodds
<i>Calhoun City</i>	Mr. Seth Davis	Dr. Bill Burdine
<i>Coffeerville</i>	Mr. Coley Bailey	Darrin Dodds
<i>Crawford</i>	Mr. Rodney Mast/Lowell Mullett	Darrin Dodds
<i>Edwards</i>	Mr. Kendall Garraway	Darrin Dodds
<i>Ellistown</i>	Mr. Larry Coker	Mr. Charlie Stokes
<i>Eupora</i>	Mr. Matt Knight	Dr. Dennis Reginelli
<i>Glendora</i>	Mr. Mike Sturdivant	Darrin Dodds
<i>Greenwood</i>	Mr. John Moor	Mr. Andy Braswell
<i>Greenwood</i>	Mr. Travis Dunn	Mr. Andy Braswell
<i>Louise</i>	Mr. Byron Seward	Darrin Dodds
<i>Mattson</i>	Mr. Bowen Flowers	Darrin Dodds
<i>Mayersville</i>	Mr. Chase Mahalitic	Darrin Dodds
<i>Mississippi State</i>	Darrin Dodds	Darrin Dodds
<i>Natchez</i>	Mr. Matthew Guedon	Darrin Dodds
<i>West Point</i>	Mr. Ben Harlow	Mr. Charlie Stokes

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, Crop Production Services/Dyna-Gro – Mr. Scott Cummings, Dow AgroSciences/Phytogen Cottonseed – Dr. Tom Eubank, Americot/NexGen – Mr.

Chase Samples, 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. OVT 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 8- or 12-row sets utilizing planting equipment provided by each respective grower. In some cases, 4- or 6-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 2018 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 nematocide 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 2018, Monsanto/Delta and Pine Land was allotted three spots; Dow AgroSciences/Phytogen Cottonseed was allotted three spots, Bayer CropScience was allotted two spots; and two additional “at-large” entries were given to provide parody between smaller companies with less resources than larger companies. Entries in the 2018 Mississippi State University County Trial Program were as follows:

Table 2. 2018 Mississippi State University County Variety Trial Program entry list.

Slot #	Criteria/Company	Variety
1	At – Large Entry – Crop Production Services/Dyna-Gro	DG 3526 B2XF
2	At – Large Entry – Americot	NG 3729 B2XF
3	BASF	ST 5122GLT
4	BASF	ST 5471GLTP
5	Dow AgroSciences/Phytogen Cottonseed	PHY 320 W3FE
6	Dow AgroSciences/Phytogen Cottonseed	PHY 430 W3FE
7	Dow AgroSciences/Phytogen Cottonseed	PHY 480 W3FE
8	Delta and Pine Land	DP 1646 B2XF
9	Delta and Pine Land	DP 1835 B3XF
10	Delta and Pine Land	DP 1845 B3XF

Site Characteristics

Locations for the 2018 Mississippi State University County Yield Trial Program are listed on page 3. Yield trials were conducted at a total of 18 locations. Six locations were located in the Delta and twelve were in the hills. All Delta locations were irrigated and eleven of twelve 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 (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.

2018 Mississippi State University On-Farm Variety Trial Program

Yield and Fiber Quality Data Pooled Across 18 Locations

Table 3. Yield and fiber quality data pooled across 18 locations.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1206*	40.7	4.6	1.21	30.4	82.4	4.0
NG 3729 B2XF	1122	39.1	4.8	1.19	30.9	83.2	4.1
DP 1845 B3XF	1119	40.7	4.3	1.24	32.2	83.1	4.7
DG 3526 B2XF	1115	40.9	4.8	1.12	29.1	82.7	3.5
ST 5471GLTP	1107	38.5	4.4	1.14	31.3	81.7	3.9
PHY 430 W3FE	1105	40.4	4.5	1.12	31.6	82.9	3.9
PHY 320 W3FE	1083	37.8	4.4	1.16	32.2	83.4	4.2
DP 1835 B3XF	1081	41.7	4.7	1.16	30.7	82.0	3.9
PHY 480 W3FE	1044	39.1	4.5	1.15	31.0	83.4	3.9
ST 5122GLT	1031	38.0	4.4	1.13	30.7	81.3	3.8
Grand Mean	1101	39.7	4.5	1.16	31.0	82.6	4.0
LSD (0.05)	54	0.5	0.1	0.01	0.8	0.5	0.4

* Yield not statistically different than the top yielding variety.

Delta Region Locations Included: Glendora, Greenwood (2 Locations), Louise, Mayersville, and Mattson

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 1646 B2XF	1424*	40.0	4.5	1.24	30.8	83.1	4.3
NG 3729 B2XF	1302	38.0	4.7	1.22	30.8	83.9	4.3
DP 1845 B3XF	1278	39.9	4.2	1.27	32.2	83.6	4.8
PHY 320 W3FE	1259	36.7	4.3	1.19	33.1	83.8	4.5
PHY 430 W3FE	1257	39.4	4.4	1.14	32.1	83.3	4.0
ST 5471GLTP	1215	37.6	4.4	1.15	32.3	82.0	3.8
DP 1835 B3XF	1199	40.9	4.6	1.19	31.9	82.6	4.0
DG 3526 B2XF	1187	39.4	4.7	1.13	29.6	82.8	3.3
PHY 480 W3FE	1162	38.1	4.4	1.18	31.2	83.9	3.8
ST 5122GLT	1104	37.0	4.4	1.15	31.5	81.7	3.7
Grand Mean	1239	38.7	4.4	1.18	31.5	83.1	4.1
LSD (0.05)	97	0.6	0.2	0.02	0.9	0.8	0.7

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Hill Region Locations Included: Ashland, Brooksville, Bruce, Calhoun City, Coffeeville, Crawford, Edwards, Ellistown, Eupora, Mississippi State, Natchez, and West Point

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1042*	41.3	4.6	1.19	30.0	81.9	3.8
DG 3526 B2XF	1024*	41.7	4.8	1.11	28.7	82.6	3.5
ST 5471GLTP	1000*	39.2	4.4	1.13	30.7	81.5	3.9
DP 1845 B3XF	986*	41.2	4.3	1.23	32.0	82.8	4.6
NG 3729 B2XF	978	39.9	4.8	1.17	30.9	82.8	4.0
PHY 430 W3FE	975	41.1	4.6	1.11	31.1	82.6	3.9
DP 1835 B3XF	968	42.3	4.7	1.14	29.8	81.6	3.9
ST 5122GLT	941	38.7	4.4	1.12	30.1	81.0	3.8
PHY 320 W3FE	938	38.5	4.4	1.13	31.5	83.2	4.0
PHY 480 W3FE	931	39.8	4.6	1.13	30.8	83.0	4.0
Grand Mean	978	40.4	4.6	1.15	30.6	82.3	4.0
LSD (0.05)	62	0.6	0.1	0.02	1.1	0.6	0.5

* Yield not statistically different than the top yielding variety.

Irrigated Locations Included: Crawford, Glendora, Greenwood (2 Locations), Louise, Mayersville, and Mattson

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 1646 B2XF	1534*	41.0	4.6	1.24	30.9	83.1	4.2
NG 3729 B2XF	1403	38.8	4.8	1.21	31.1	83.7	4.1
DP 1845 B3XF	1373	40.9	4.3	1.26	32.1	83.4	4.7
PHY 430 W3FE	1371	40.3	4.5	1.14	32.3	83.3	4.0
PHY 320 W3FE	1365	37.7	4.4	1.18	33.1	83.7	4.2
ST 5471GLTP	1334	38.6	4.5	1.15	32.4	82.1	3.7
DP 1835 B3XF	1313	41.8	4.6	1.18	32.0	82.6	4.0
PHY 480 W3FE	1294	39.0	4.5	1.18	31.3	83.8	3.7
DG 3526 B2XF	1290	40.3	4.7	1.13	29.9	83.0	3.2
ST 5122GLT	1244	38.1	4.4	1.15	31.7	81.7	3.5
Grand Mean	1352	39.7	4.5	1.18	31.7	83.0	3.9
LSD (0.05)	88	0.5	0.2	0.02	0.9	0.7	0.6

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Dryland Locations Included: Ashland, Brooksville, Bruce, Calhoun City, Coffeeville, Edwards, Ellistown, Eupora, Mississippi State, Natchez, and West Point

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DG 3526 B2XF	991*	41.8	4.8	1.11	28.4	82.5	3.6
DP 1646 B2XF	986*	41.2	4.6	1.18	29.9	81.9	3.8
ST 5471GLTP	953*	39.1	4.4	1.13	30.5	81.3	4.0
DP 1845 B3XF	948*	41.1	4.3	1.23	32.1	82.8	4.7
NG 3729 B2XF	933*	39.9	4.8	1.16	30.7	82.8	4.1
PHY 430 W3FE	926	41.0	4.6	1.10	30.9	82.4	3.9
DP 1835 B3XF	923	42.3	4.7	1.14	29.5	81.5	3.9
PHY 320 W3FE	890	38.5	4.4	1.13	31.4	83.2	4.1
ST 5122GLT	886	38.6	4.4	1.12	29.8	80.9	3.9
PHY 480 W3FE	874	39.8	4.6	1.13	30.7	83.0	4.1
Grand Mean	931	40.3	4.6	1.14	30.4	82.2	4.0
LSD (0.05)	65	0.7	0.1	0.02	1.2	0.7	0.5

* Yield not statistically different than the top yielding variety.

Individual Trial Location Data

Location: Ashland
Grower: Heath Byrd
MSU Agronomist: M. Pruitt

Row width: 38"
Irrigated: Dryland
Planting date: May 11, 2018

Harvest date: October 23, 2018
Soil series: Cascilla Silt Loam

Table 8. Yield and fiber quality data at Ashland.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 430 W3FE	891	42.3	4.1	1.08	29.1	82.6	4
ST 5122GLT	848	39.6	4.0	1.16	30.6	81.2	5
ST 5471GLTP	842	42.4	3.8	1.15	30.1	81.6	5
NG 3729 B2XF	830	39.0	4.2	1.19	29.5	83.6	5
DP 1646 B2XF	817	39.9	4.2	1.20	31.0	82.4	4
DP 1835 B3XF	812	42.5	4.2	1.15	28.5	80.7	4
PHY 480 W3FE	804	40.0	4.2	1.13	30.4	83.9	4
DG 3526 B2XF	756	41.8	4.3	1.14	28.5	83.7	2
DP 1845 B3XF	745	40.8	3.8	1.26	31.8	83.6	5
PHY 320 W3FE	637	38.0	3.8	1.12	29.6	83.3	5
Grand Mean	798	40.6	4.1	1.16	29.9	82.7	4.3

* No statistical analysis performed as only one replication was planted.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Brooksville
Grower: Darrin Dodds
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Dryland
Planting date: May 25, 2018

Harvest date: October 30, 2018
Soil series: Brooksville Silty Clay

Table 9. Yield and fiber quality data at Brooksville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DG 3526 B2XF	1241*	42.3	4.9	1.09	26.6	82.5	4
DP 1646 B2XF	1222*	41.1	4.4	1.23	31.5	81.5	3
DP 1835 B3XF	1219*	41.3	4.7	1.15	32.3	81.0	3
ST 5471GLTP	1151*	38.8	4.4	1.17	33.0	83.1	4
NG 3729 B2XF	1105*	42.2	4.7	1.17	32.0	81.5	4
PHY 480 W3FE	1044	38.4	4.2	1.12	29.1	82.4	4
DP 1845 B3XF	1037	40.1	4.0	1.25	33.4	82.2	4
PHY 430 W3FE	1015	41.6	4.4	1.14	31.7	82.5	4
PHY 320 W3FE	963	39.0	4.2	1.13	31.6	82.2	4
ST 5122GLT	913	38.3	4.4	1.10	28.4	80.3	4
Grand Mean	1091	40.3	4.4	1.16	31.0	81.9	3.8
LSD (0.05)	171	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Bruce
Grower: Trey Brower
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Dryland
Planting date: May 15, 2018

Harvest date: October 29, 2018
Soil series: Collins/Falaya Silt Loam

Table 10. Yield and fiber quality data at Bruce.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 320 W3FE	791	38.2	4.5	1.09	33.3	81.2	5
DP 1835 B3XF	728	42.6	4.3	1.21	34.6	83.0	6
PHY 430 W3FE	728	39.3	4.5	1.12	29.4	82.1	6
ST 5471GLTP	670	36.6	4.7	1.16	30.7	81.4	5
ST 5122GLT	662	36.1	4.3	1.10	32.9	81.0	5
PHY 480 W3FE	627	38.7	4.5	1.10	29.2	80.1	4
NG 3729 B2XF	576	38.6	4.4	1.13	34.1	84.0	5
DP 1646 B2XF	561	39.9	4.7	1.12	28.7	81.7	4
DG 3526 B2XF	552	39.3	4.7	1.15	30.9	81.8	5
DP 1845 B3XF	425	39.1	5.1	1.14	32.5	82.1	5
Grand Mean	632	38.8	4.6	1.13	31.6	81.8	5
LSD (0.05)	NS	•	•	•	•	•	•

2018 Mississippi State University On-Farm Variety Trial Program

Location: Calhoun City
Grower: Seth Davis
MSU Agronomist: B. Burdine

Row width: 38”
Irrigated: Dryland
Planting date: May 3, 2018

Harvest date: October 2, 2018
Soil series: Collins/Falaya/
Hatchie Silt Loam

Table 11. Yield and fiber quality data at Calhoun City.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1407*	43.1	5.0	1.14	29.1	83.8	4
DG 3526 B2XF	1335*	42.4	4.9	1.12	28.8	83.2	4
NG 3729 B2XF	1295*	39.2	4.8	1.18	31.7	83.3	3
DP 1845 B3XF	1265*	42.3	4.4	1.23	31.5	84.7	5
ST 5471GLTP	1260*	39.3	4.8	1.13	30.8	81.5	4
PHY 430 W3FE	1259*	41.4	5.0	1.12	32.7	84.6	4
PHY 320 W3FE	1252*	38.5	4.8	1.14	33.7	83.4	3
DP 1835 B3XF	1164	41.2	4.8	1.17	31.4	83.1	5
PHY 480 W3FE	1156	39.7	4.8	1.14	33.4	83.0	4
ST 5122GLT	1072	38.7	4.6	1.13	31.4	82.2	4
Grand Mean	1246	40.6	4.8	1.15	31.5	83.3	4
LSD (0.05)	161	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Coffeeville
Grower: Coley Bailey
MSU Agronomist: D. Dodds

Row width: 38”
Irrigated: Dryland
Planting date: May 14, 2018

Harvest date: November 21, 2018
Soil series: Collins Silt Loam

Table 12. Yield and fiber quality data at Coffeeville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	- Lbs/Acre -	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1403*	41.0					
DP 1835 B3XF	1304*	41.2					
DG 3526 B2XF	1284*	40.7					
PHY 430 W3FE	1231*	43.4					
DP 1845 B3XF	1228*	40.3					
ST 5471GLTP	1178	40.7					
ST 5122GLT	1109	38.3					
PHY 480 W3FE	1079	39.5					
NG 3729 B2XF	1066	37.8					
PHY 320 W3FE	971	35.5					
Grand Mean	1185	39.8					
LSD (0.05)	178	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

**No fiber quality data available – samples were lost at USDA Classing Office – Memphis, TN.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Crawford
Grower: Rodney Mast/Lowell
 Mullett

MSU Agronomist: D. Dodds
Row width: 38"
Irrigated: Pivot

Planting date: May 7, 2018
Harvest date: October 2, 2018
Soil series: Vaiden Silty Clay

Table 13. Yield and fiber quality data at Crawford.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1661*	42.1	4.8	1.24	31.5	82.9	4
PHY 480 W3FE	1566*	40.0	4.8	1.16	32.2	83.3	3
ST 5122GLT	1558*	40.3	4.6	1.16	33.0	82.1	3
PHY 430 W3FE	1520	41.4	4.8	1.14	33.6	83.9	4
ST 5471GLTP	1517	39.9	4.6	1.17	32.9	82.7	3
NG 3729 B2XF	1466	39.2	5.2	1.19	32.8	82.7	3
PHY 320 W3FE	1466	39.0	4.6	1.16	32.9	83.0	3
DP 1835 B3XF	1464	42.9	4.7	1.17	32.8	82.5	4
DP 1845 B3XF	1400	41.9	4.5	1.25	31.7	82.4	4
DG 3526 B2XF	1376	40.8	4.9	1.15	31.6	83.9	3
Grand Mean	1499	40.8	4.8	1.18	32.5	82.9	3.4
LSD (0.05)	121	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Edwards
Grower: Kendall Garraway
 MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Dryland
Planting date: May 9, 2018

Harvest date: October 11, 2018
Soil series: Reidtown Silt Loam

Table 14. Yield and fiber quality data at Edwards.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1187*	39.6	4.6	1.22	29.4	82.7	4
DG 3526 B2XF	1170*	39.7	4.7	1.13	29.7	82.0	3
NG 3729 B2XF	1137*	37.9	5.0	1.22	31.7	84.1	3
DP 1845 B3XF	1136*	40.5	4.2	1.27	32.2	82.9	3
DP 1835 B3XF	1099*	43.1	4.8	1.18	32.1	81.7	3
PHY 320 W3FE	1089*	37.8	4.1	1.18	34.5	85.3	4
PHY 430 W3FE	976	41.5	4.7	1.15	31.5	82.6	3
ST 5471GLTP	925	37.5	4.7	1.14	32.2	81.8	3
PHY 480 W3FE	904	38.6	4.6	1.18	32.0	84.6	3
ST 5122GLT	866	36.6	4.2	1.14	30.6	81.5	3
Grand Mean	1049	39.3	4.6	1.18	31.6	82.9	3.2
LSD (0.05)	107	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Ellistown
Grower: Larry Coker
MSU Agronomist: C. Stokes

Row width: 38"
Irrigated: Dryland
Planting date: May 8, 2018

Harvest date: October 8, 2018
Soil series: Mantachie/Talla Silt Loam

Table 15. Yield and fiber quality data at Ellistown.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
NG 3729 B2XF	999	39.4	4.9	1.15	31.5	83.3	4
DP 1646 B2XF	939	41.2	5.0	1.17	30.6	81.8	4
PHY 320 W3FE	871	37.9	4.8	1.11	32.0	82.5	4
PHY 480 W3FE	869	39.9	5.1	1.13	29.9	82.6	4
PHY 430 W3FE	868	40.1	4.9	1.09	31.6	82.9	4
ST 5471GLTP	843	38.0	4.8	1.12	27.9	81.5	4
DP 1845 B3XF	839	41.4	4.7	1.23	34.1	82.8	5
DG 3526 B2XF	833	41.1	5.4	1.08	28.8	82.5	3
ST 5122GLT	821	36.7	4.7	1.10	29.1	80.4	4
DP 1835 B3XF	804	42.7	5.0	1.13	29.6	81.7	3
Grand Mean	869	39.8	4.9	1.13	30.5	82.2	3.9
LSD (0.05)	NS	•	•	•	•	•	•

Location: Eupora
Grower: Matt Knight
MSU Agronomist: D. Reginelli

Row width: 38"
Irrigated: Dryland
Planting date: May 11, 2018

Harvest date: November 20, 2018
Soil series: Oaklimter Silt Loam

Table 16. Yield and fiber quality data at Eupora.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1845 B3XF	1253*	42.2	4.6	1.20	30.6	82.3	3
DG 3526 B2XF	1191	44.5	4.9	1.08	27.2	83.1	3
ST 5122GLT	1080	40.2	4.2	1.12	27.9	80.1	3
PHY 480 W3FE	1042	39.9	4.5	1.11	29.1	82.9	3
NG 3729 B2XF	1025	39.5	4.8	1.17	28.5	82.5	3
ST 5471GLTP	1018	38.4	4.3	1.12	28.1	81.1	3
PHY 320 W3FE	1012	38.7	4.1	1.11	29.1	83.5	3
DP 1835 B3XF	998	43.3	4.6	1.14	29.0	82.6	3
PHY 430 W3FE	961	42.2	4.7	1.06	29.4	82.1	3
DP 1646 B2XF	865	41.4	4.5	1.18	28.7	81.3	3
Grand Mean	1044	41.0	4.5	1.13	28.8	82.2	3
LSD (0.05)	32	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Glendora
Grower: Mike Sturdivant Jr.
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Furrow
Planting date: May 14, 2018

Harvest date: October 24, 2018
Soil series: Dubbs Loam/Tensas
Silty Clay Loam

Table 17. Yield and fiber quality data at Glendora.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre-	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1733*	40.3	4.3	1.24	30.3	82.7	4
NG 3729 B2XF	1569	39.4	4.7	1.26	30.4	84.3	5
PHY 430 W3FE	1519	39.2	4.2	1.15	33.3	82.7	4
DP 1845 B3XF	1463	40.0	4.0	1.28	33.2	83.4	5
PHY 320 W3FE	1454	36.6	4.2	1.23	33.2	85.2	5
DG 3526 B2XF	1405	39.3	4.5	1.16	29.6	83.1	5
DP 1835 B3XF	1371	40.2	4.3	1.24	33.4	83.5	4
ST 5471GLTP	1239	38.0	4.2	1.19	32.9	83.0	4
PHY 480 W3FE	1224	35.4	4.3	1.18	32.0	83.6	5
ST 5122GLT	1072	36.3	4.3	1.19	32.7	81.6	3
Grand Mean	1405	38.5	4.3	1.21	32.1	83.3	4.4
LSD (0.05)	93	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Greenwood
Grower: John Moor
MSU Agronomist: A. Braswell

Row width: 38"
Irrigated: Furrow
Planting date: May 14, 2018

Harvest date: October 24, 2018
Soil series: Dubbs Loam/Tensas
Silty Clay Loam

Table 18. Yield and fiber quality data at Greenwood.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1515*	37.6	4.2	1.23	29.8	82.0	5
ST 5471GLTP	1307	36.7	4.1	1.16	31.2	80.8	3
NG 3729 B2XF	1303	39.5	4.6	1.20	31.1	82.8	4
PHY 320 W3FE	1281	38.5	3.9	1.18	32.8	82.5	4
DP 1845 B3XF	1218	36.3	3.8	1.26	31.0	82.4	5
DG 3526 B2XF	1198	37.6	4.3	1.13	30.4	82.6	3
PHY 430 W3FE	1164	39.8	3.9	1.14	31.4	82.3	4
PHY 480 W3FE	1118	40.1	4.2	1.17	30.7	82.5	3
ST 5122GLT	1072	40.2	4.1	1.17	32.0	81.2	3
DP 1835 B3XF	1004	39.0	4.1	1.16	30.8	81.9	4
Grand Mean	1218	38.5	4.1	1.18	31.1	82.1	3.8
LSD (0.05)	86	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Greenwood
Grower: Travis Dunn
MSU Agronomist: A. Braswell

Row width: 38"
Irrigated: Irrigated
Planting date: May 11, 2018

Harvest date: October 15, 2018
**Soil series: Dundee Loam/
 Tensas Silty Clay Loam**

Table 19. Yield and fiber quality data at Greenwood.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
NG 3729 B2XF	1521*	37.6	4.7	1.20	30.7	83.5	5
PHY 320 W3FE	1355*	36.0	3.9	1.19	34.0	85.1	5
ST 5122GLT	1346*	37.7	4.4	1.14	29.5	82.5	5
DP 1845 B3XF	1343*	38.8	4.1	1.24	31.6	83.4	6
DP 1835 B3XF	1331*	40.7	4.6	1.20	32.1	81.9	5
ST 5471GLTP	1330	37.2	4.4	1.15	31.3	82.8	5
DP 1646 B2XF	1322	38.6	4.2	1.24	31.0	83.5	5
PHY 430 W3FE	1299	38.1	4.5	1.14	31.6	82.8	4
DG 3526 B2XF	1216	39.1	4.5	1.11	30.0	82.8	3
PHY 480 W3FE	1144	37.1	4.0	1.19	31.4	84.9	4
Grand Mean	1321	38.1	4.3	1.18	31.3	83.3	4.7
LSD (0.05)	191	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Louise
Grower: Byron Seward
MSU Agronomist: D. Dodds

Row width: 30" 2x1 Skip
Irrigated: Furrow
Planting date: May 8, 2018

Harvest date: October 6, 2018
**Soil series: Forestdale-Brittain
 Silt Loam**

Table 20. Yield and fiber quality data at Louise.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1384*	41.2	4.8	1.21	32.7	82.9	4
DP 1835 B3XF	1279	42.7	5.0	1.18	31.4	82.9	4
DP 1845 B3XF	1278	41.4	4.6	1.28	33.4	84.5	4
NG 3729 B2XF	1224	39.4	4.8	1.17	30.8	84.4	4
DG 3526 B2XF	1221	41.1	4.9	1.13	29.5	82.5	3
PHY 480 W3FE	1179	39.9	4.7	1.18	33.3	84.2	4
PHY 430 W3FE	1135	40.1	4.7	1.15	33.3	83.2	3
PHY 320 W3FE	1089	37.9	4.9	1.18	33.9	83.8	4
ST 5471GLTP	1062	38.0	4.5	1.14	33.6	82.8	4
ST 5122GLT	900	36.7	4.4	1.15	33.3	81.7	4
Grand Mean	1175	39.8	4.7	1.18	32.5	83.3	3.8
LSD (0.05)	96	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

2018 Mississippi State University On-Farm Variety Trial Program

Location: Mayersville
Grower: Chase Mahalitic
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Furrow
Planting date: May 15, 2018

Harvest date:
Soil series: Commerce Silty Clay
Loam/Tunica Clay

Table 21. Yield and fiber quality data at Mayersville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1306*	40.0	4.7	1.23	29.9	83.4	3
PHY 430 W3FE	1266*	40.8	4.8	1.11	30.4	83.3	3
PHY 480 W3FE	1265*	39.1	4.6	1.15	28.5	83.2	3
DP 1845 B3XF	1214*	40.3	4.4	1.25	30.4	82.3	4
ST 5122GLT	1156	37.1	4.4	1.11	29.5	80.9	3
DP 1835 B3XF	1142	40.9	4.6	1.16	30.0	82.5	3
ST 5471GLTP	1133	37.1	4.5	1.11	30.4	81.1	3
NG 3729 B2XF	1125	38.0	5.0	1.17	29.5	83.0	3
PHY 320 W3FE	1094	36.4	4.3	1.14	31.2	82.4	4
DG 3526 B2XF	1027	38.9	4.8	1.10	27.9	81.8	3
Grand Mean	1173	38.9	4.6	1.15	29.8	82.4	3.2
LSD (0.05)	97	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Mattson
Grower: B. Flowers
MSU Agronomist: D. Dodds

Row width: 40"
Irrigated: Furrow
Planting date: May 14, 2018

Harvest date: October 3, 2018
Soil series: Dundee Silt
Loam/Very Fine Sandy Loam

Table 22. Yield and fiber quality data at Mattson.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 320 W3FE	1260	37.3	4.6	1.20	33.7	83.8	5
DP 1646 B2XF	1225	39.6	4.7	1.26	31.2	84.0	5
PHY 430 W3FE	1194	40.0	4.5	1.16	32.5	85.2	6
DP 1845 B3XF	1171	39.3	4.2	1.28	33.5	85.3	5
ST 5471GLTP	1163	37.6	4.7	1.14	34.3	81.3	4
DP 1835 B3XF	1158	41.1	4.8	1.17	33.6	82.8	4
ST 5122GLT	1087	37.8	4.6	1.13	31.9	82.2	4
NG 3729 B2XF	1062	36.1	4.2	1.29	32.1	85.3	5
PHY 480 W3FE	1052	36.6	4.5	1.20	31.2	85.1	4
DG 3526 B2XF	986	39.5	4.9	1.15	30.1	84.2	3
Grand Mean	1136	38.5	4.6	1.20	32.4	83.9	4.5
LSD (0.05)	NS	•	•	•	•	•	•

2018 Mississippi State University On-Farm Variety Trial Program

Location: Mississippi State
Grower: Darrin Dodds
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Dryland
Planting date: May 2, 2018

Harvest date: October 24, 2018
Soil series: Catalpa/Leeper Silty Clay Loam

Table 23. Yield and fiber quality data at Mississippi State.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
ST 5471GLTP	828*	40.4	3.8	1.12	30.0	79.6	4
ST 5122GLT	727*	39.6	4.3	1.12	29.5	80.0	4
DP 1845 B3XF	669	40.9	4.1	1.22	30.8	82.2	5
DG 3526 B2XF	659	42.9	4.8	1.11	27.0	81.5	3
NG 3729 B2XF	654	40.8	4.5	1.12	29.3	81.6	4
DP 1646 B2XF	641	42.7	4.2	1.18	28.5	81.0	3
PHY 430 W3FE	635	39.4	4.1	1.13	28.6	81.9	4
PHY 320 W3FE	618	40.3	4.7	1.17	28.7	81.4	4
PHY 480 W3FE	550	42.5	4.4	1.11	29.7	81.3	4
DP 1835 B3XF	435	43.4	4.5	1.10	26.5	80.1	4
Grand Mean	642	41.3	4.3	1.14	28.9	81.1	3.9
LSD (0.05)	104	•	•	•	•	•	•

* Yield not statistically different than the top yielding variety.

Location: Natchez
Grower: Matthew Guedon
MSU Agronomist: D. Dodds

Row width: 38"
Irrigated: Dryland
Planting date: May 2, 2018

Harvest date: October 3, 2018
Soil series: Convent Silt Loam

Table 24. Yield and fiber quality data at Natchez.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1845 B3XF	1001	41.5	4.9	1.18	30.0	82.2	5
DP 1646 B2XF	956	41.0	4.8	1.17	30.5	82.1	5
DG 3526 B2XF	931	41.5	4.8	1.11	27.4	82.7	4
DG 3526 B2XF	931	41.5	4.6	1.19	29.6	81.0	4
ST 5122GLT	834	42.7	4.6	1.12	30.6	81.7	4
PHY 430 W3FE	813	40.6	4.4	1.20	33.9	81.8	5
DP 1835 B3XF	812	38.8	4.4	1.26	31.1	83.3	5
ST 5471GLTP	776	38.7	4.5	1.13	30.4	81.8	4
NG 3729 B2XF	769	41.5	4.6	1.15	33.3	84.0	4
PHY 480 W3FE	694	39.8	4.5	1.18	32.2	83.9	4
Grand Mean	843	40.7	4.6	1.17	30.9	82.5	4.4
LSD (0.05)	NS	•	•	•	•	•	•

2018 Mississippi State University On-Farm Variety Trial Program

Location: West Point
 Grower: Ben Harlow
 MSU Agronomist: C. Stokes

Row width: 30"
 Irrigated: Dryland
 Planting date: May 25, 2018

Harvest date: October 29, 2018
 Soil series: Houston Clay

Table 25. Yield and fiber quality data at West Point.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lbs/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
ST 5471GLTP	903	42.0	4.8	1.08	29.3	80.4	4
PHY 430 W3FE	893	41.8	4.8	1.03	27.8	80.0	4
PHY 480 W3FE	886	42.4	4.9	1.08	31.4	82.9	5
DG 3526 B2XF	870	41.2	5.0	1.09	29.3	81.8	5
ST 5122GLT	854	40.1	4.6	1.10	30.6	81.8	4
DP 1835 B3XF	818	41.4	4.9	1.09	26.8	80.4	5
DP 1845 B3XF	817	44.2	4.7	1.13	30.7	80.9	6
DP 1646 B2XF	812	45.0	5.0	1.16	29.9	81.6	4
NG 3729 B2XF	811	41.3	5.0	1.12	30.3	84.0	5
PHY 320 W3FE	784	43.5	4.7	1.08	28.9	82.8	5
Grand Mean	845	42.3	4.8	1.10	29.5	81.7	4.7
LSD (0.05)	NS	•	•	•	•	•	•