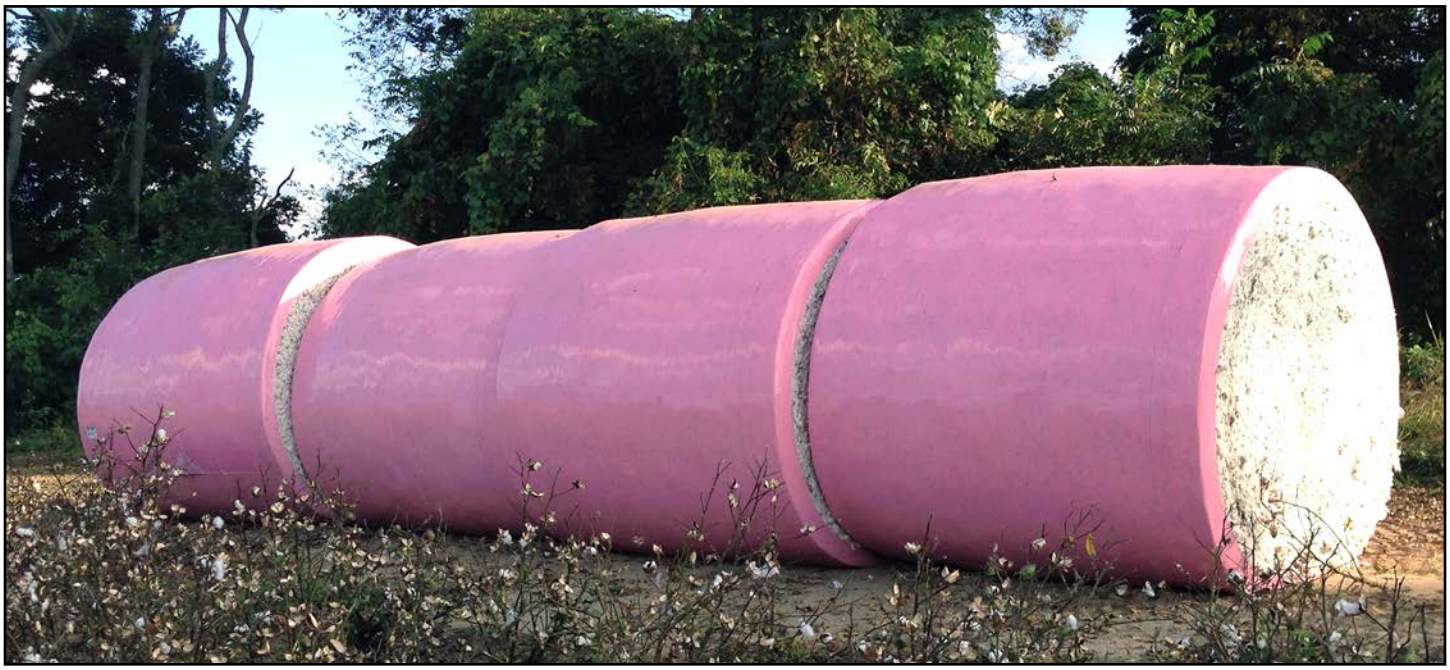
2017 Mississippi On-Farm Cotton Variety Trial Program

MISSISSIPPI STATE UNIVERSITY EXTENSION



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2017 County Trial Locations and Cooperators

Trials arranged and conducted by Dr. Darrin Dodds

Assistance provided by Michael Plumblee, Savana Davis, Lucas Franca, and Steven Hall

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

Table 1. Locations, growers, and cooperating agronomists for 2017 Mississippi State University On-Farm Cotton Variety Trial Program.

Location	Grower	MSU Agronomist
Clarksdale	Bowen Flowers	Darrin Dodds
Coffeeville	Coley Bailey	Darrin Dodds
Columbus	Lowell Mullet	Dennis Reginelli
Como	David Taylor	Darrin Dodds
Dundee	Douglas Hood	Darrin Dodds
Edwards	Kendall Garraway	Darrin Dodds
Ellistown	Larry Coker	Charlie Stokes
Eupora	Matt Knight	Dennis Reginelli
Glendora	Mike Sturdivant	Darrin Dodds
Greenwood	John Moor	Andy Braswell
Louise	Byron Seward	Darrin Dodds
Mayersville	Chase Mahalitic	Jon Carson
Mississippi State	Darrin Dodds	Darrin Dodds
Money	Chris Bush	Andy Braswell
Natchez	Matthew Guedon	Darrin Dodds
Vaiden	Jerry Shirley	Ernie Flint
West Point	Ben Harlow	Charlie Stokes

Mississippi State University Extension sincerely appreciates the time and effort of the cooperating growers and MSU agronomists. In addition, several independent consultants provided a tremendous level of assistance with these trials, including Ty Edwards, Jason Grafton, Bert Falkner, Tucker Miller, and Tim Richards.

Sincere gratitude is also extended to the following seed companies and representatives for providing seed for these trials: Bayer CropScience, Dr. Andy White; Crop Production Services/Dyna-Gro, Scott Cummings; Dow AgroSciences/Phytogen Cottonseed, Dr. Brooks Blanche; Americot/NexGen, Dr. Tom Brooks; and Monsanto Company/Delta and Pine Land, Greg Ferguson.

Cooperation from all of these people is essential for success of the MSU 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 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 time. However, a variety that performs well today typically has a life span of 4–6 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 2–3 years of data before release of any given variety. Today, 1–2 years of "broad scale" variety testing is common before 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 before 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 before release of a 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 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 company is allowed depends upon its market share. In addition, smaller companies are allowed one to two at-large entries 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, we use 4- or 6-row sets, 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 2017, depending on field characteristics where the trial was conducted. 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 or she would manage any given field on his or her 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 contained. 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. 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's West Tennessee Research 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 Texas Tech Fiber and Biopolymer Research Institute in Lubbock, Texas.

Entries

A maximum of 10 core variety entries per year are allowed in the Mississippi State 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 2017, Monsanto/Delta and Pine Land was allotted three spots; Bayer CropScience was allotted three spots; Dow AgroSciences/Phytogen Cottonseed was allotted two spots; and two additional "at-large" entries were allowed to provide parity between smaller companies with less resources than larger companies. Table 2 shows entries in the 2017 Mississippi State University County Trial Program.

Table 2. 2017 Mississippi State University On-Farm Cotton Variety Trial Program entry list.		
Slot #	**Criteria/Company**	**Variety**
1	At-Large Entry — Crop Production Services/Dyna-Gro	DG 3385 B2XF
2	At-Large Entry — Americot	NG 4601 B2XF
3	Bayer CropScience	ST 4949GLT
4	Bayer CropScience	ST 5020GLT
5	Bayer CropScience	ST 5517GLTP
6	Dow AgroSciences/Phytogen Cottonseed	PHY 330 W3FE
7	Dow AgroSciences/Phytogen Cottonseed	PHY 450 W3FE
8	Monsanto/Delta and Pine Land	DP 1518 B2XF
9	Monsanto/Delta and Pine Land	DP 1646 B2XF
10	Monsanto/Delta and Pine Land	DP 1725 B2XF

Site Characteristics

Locations for the 2017 MSU County Yield Trial Program are listed in Table 1. Yield trials were conducted at a total of 17 locations. Eight locations were located in the Delta, and nine were in the Hills region. All Delta locations were irrigated, but eight of the Hill locations were dryland. One Hill location (Columbus) 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 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 along with least significant differences (LSD). An LSD is 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 nonreplicated 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.

Yield and Fiber Data Pooled Across Multiple Locations

Table 3. Yield and fiber quality data pooled across 17 locations.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1207***	38.8	4.1	1.24	30.5	82.5	3.6
PHY 330 W3FE	1082	38.4	4.2	1.18	32.6	83.1	4.2
DP 1725 B2XF	1073	39.6	4.2	1.17	31.3	82.3	3.3
DP 1518 B2XF	1059	36.4	4.1	1.18	30.6	82.6	4.4
DG 3385 B2XF	1052	37.9	4.5	1.16	30.3	83.1	3.2
ST 4949 GLT	1046	39.3	4.2	1.14	31.4	82.3	4.2
ST 5517 GLTP	1036	34.8	4.1	1.19	33.1	81.9	3.4
NG 4601 B2XF	1010	38.2	4.3	1.18	33.7	82.9	3.2
ST 5020 GLT	970	35.2	4.1	1.22	33.5	83.2	4.4
PHY 450 W3FE	925	35.9	4.4	1.15	34.6	83.8	4.0
Grand Mean	1046	37.5	4.2	1.18	32.2	82.8	3.8
LSD (0.05)	53	0.5	0.2	0.01	0.7	0.6	0.4

*Yield not statistically different than the top-yielding variety.

Table 4. Yield and fiber quality data pooled over seven Delta locations: Clarksdale, Dundee, Glendora, Greenwood, Louise, Mayersville, and Money.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1183***	38.0	3.9	1.25	30.5	82.6	3.6
PHY 330 W3FE	1081	37.8	4.0	1.20	32.5	82.9	4.6
DG 3385 B2XF	1036	37.5	4.2	1.19	31.1	83.3	3.1
ST 4949 GLT	1034	38.8	4.0	1.16	31.9	82.4	4.0
DP 1725 B2XF	1025	38.7	4.0	1.19	31.7	82.2	3.6
DP 1518 B2XF	1014	35.4	4.0	1.19	30.7	82.7	4.1
ST 5517 GLTP	964	33.7	4.0	1.20	33.6	82.0	3.4
NG 4601 B2XF	960	37.7	4.0	1.19	33.6	82.4	3.6
ST 5020 GLT	936	34.4	3.7	1.22	34.0	82.8	4.6
PHY 450 W3FE	882	35.3	4.0	1.16	34.4	83.7	3.9
Grand Mean	1011	36.7	4.0	1.20	32.4	82.7	3.8
LSD (0.05)	90	0.9	0.2	.03	1.3	1.1	0.7

*Yield not statistically different than the top-yielding variety.

Table 5. Yield and fiber quality data pooled over 10 Hill region locations: Coffeeville, Columbus, Como, Edwards, Ellistown, Eupora, Mississippi State, Natchez, Vaiden, and West Point

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1223***	39.6	4.3	1.23	30.4	82.5	3.6
DP 1725 B2XF	1108	40.5	4.3	1.15	31.1	82.3	3.1
DP 1518 B2XF	1092	37.3	4.2	1.17	30.6	82.5	4.6
ST 5517 GLTP	1091	35.8	4.1	1.18	32.7	81.9	3.4
PHY 330 W3FE	1079	39.1	4.3	1.17	32.8	83.2	4.0
DG 3385 B2XF	1062	38.5	47	1.14	29.8	82.9	3.2
ST 4949 GLT	1053	39.9	4.4	1.24	31.0	82.3	4.3
NG 4601 B2XF	1047	38.7	4.5	1.18	33.7	83.2	3.0
ST 5020 GLT	995	36.0	4.4	1.22	33.1	83.4	4.3
PHY 450 W3FE	955	36.6	4.7	1.14	34.7	83.8	4.1
Grand Mean	1070	38.2	4.4	1.18	32.0	82.8	3.76
LSD (0.05)	63	0.7	0.2	0.02	0.8	0.6	0.5

*Yield not statistically different than the top-yielding variety.

Table 6. Yield and fiber quality data pooled over eight irrigated locations: Clarksdale, Columbus, Dundee, Glendora, Greenwood, Louise, Mayersville, and Money.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1182***	37.6	3.9	1.26	30.6	82.6	3.6
PHY 330 W3FE	1069	37.2	3.9	1.20	32.4	82.8	4.5
ST 4949 GLT	1036	38.3	4.0	1.16	32.1	82.3	4.0
DG 3385 B2XF	1021	36.9	4.3	1.19	31.2	83.3	3.1
DP 1518 B2XF	1018	35.1	3.9	1.20	30.9	82.7	4.1
DP 1725 B2XF	1014	38.2	3.9	1.19	31.7	82.1	3.5
ST 5517 GLTP	974	33.4	4.0	1.20	33.7	82.2	3.5
NG 4601 B2XF	956	37.5	4.0	1.19	33.5	82.3	3.5
ST 5020 GLT	942	33.8	3.8	1.23	33.9	82.9	4.7
PHY 450 W3FE	885	34.9	4.0	1.16	34.6	83.7	4.0
Grand Mean	1010	36.3	4.0	1.20	32.5	82.7	3.9
LSD (0.05)	81	0.8	0.2	0.02	1.1	1.0	0.6

*Yield not statistically different than the top-yielding variety.

Table 7. Yield and fiber quality data pooled over nine dryland locations: Coffeeville, Como, Edwards, Ellistown, Eupora, Mississippi State, Natchez, Vaiden, and West Point.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1228***	40.0	4.3	1.23	30.4	82.5	3.6
DP 1725 B2XF	1129	40.9	4.4	1.15	30.9	82.4	3.1
DP 1518 B2XF	1095	37.6	4.3	1.16	30.4	82.5	4.7
ST 5517 GLTP	1095	36.0	4.1	1.18	32.6	81.7	3.3
PHY 330 W3FE	1090	39.5	4.4	1.16	32.8	83.4	4.0
DG 3385 B2XF	1079	38.9	4.7	1.14	29.6	82.9	3.2
NG 4601 B2XF	1060	38.7	4.6	1.18	33.8	83.4	3.0
ST 4949 GLT	1053	40.1	4.4	1.12	30.7	82.3	4.3
ST 5020 GLT	995	36.5	4.5	1.22	33.1	83.4	4.2
PHY 450 W3FE	960	36.8	4.7	1.13	34.6	83.8	4.0
Grand Mean	1062	38.3	4.5	1.17	31.9	82.8	3.7
LSD (0.05)	69	0.7	0.2	0.02	0.8	0.7	0.5

*Yield not statistically different than the top-yielding variety.

Individual Trial Location Data

Location: Clarksdale
Grower: Bowen Flowers
MSU agronomist: D. Dodds

Row width: 40"
Irrigation: Furrow
Planting date: May 18, 2017

Harvest date: October 30, 2017
Soil series: Dubbs Very Fine Sandy Loam

Table 8. Yield and fiber quality data at Clarksdale.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1017***	38.7	3.8	1.24	28.9	81.2	3.0
DG 3385 B2XF	**952***	36.3	3.9	1.17	30.2	83.4	3.0
ST 5517 GLTP	901	34.9	3.9	1.18	33.2	82.2	3.0
PHY 330 W3FE	899	37.9	3.9	1.18	32.8	82.8	4.0
ST 5020 GLT	866	35.0	3.7	1.21	33.0	84.1	4.0
DP 1725 B2XF	849	38.5	3.9	1.16	30.7	82.7	4.0
ST 4949 GLT	793	38.0	3.9	1.12	30.2	82.0	4.0
DP 1518 B2XF	780	34.2	3.6	1.20	31.4	82.0	4.0
NG 4601 B2XF	768	36.1	4.1	1.20	33.1	83.4	3.0
PHY 450 W3FE	648	33.4	3.9	1.15	32.5	83.7	3.0
Grand Mean	847	36.3	3.9	1.18	31.6	82.8	3.5
LSD (0.05)	107	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Coffeeville
Grower: Coley Bailey Jr.
MSU agronomist: D. Dodds

Row width: 38"
Irrigation: Dryland
Planting date: May 16, 2017

Harvest date: October 22, 2017
Soil series: Collins Silt Loam

Table 9. Yield and fiber quality data at Coffeeville.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1725 B2XF	**1589***	43.2	4.1	1.14	29.5	82.3	3.0
DP 1646 B2XF	**1504***	39.3	4.0	1.27	31.5	83.0	4.0
DP 1518 B2XF	**1450***	37.1	4.1	1.17	30.5	82.9	4.0
PHY 330 W3FE	**1383***	39.2	4.3	1.20	33.6	83.9	4.0
ST 4949 GLT	**1347***	40.6	3.9	1.15	32.2	82.8	5.0
DG 3385 B2XF	**1291***	37.7	4.7	1.18	29.8	83.4	3.0
NG 4601 B2XF	1268	37.9	4.6	1.19	35.7	84.3	3.0
ST 5517 GLTP	1220	36.4	3.8	1.15	32.9	81.0	3.0
ST 5020 GLT	1114	36.4	4.4	1.25	32.5	85.0	4.0
PHY 450 W3FE	1085	35.7	4.6	1.15	34.5	84.5	4.0
Grand Mean	1325	38.3	4.3	1.19	32.3	83.3	3.7
LSD (0.05)	246	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Columbus
Grower: R. Mast/L. Mullet
MSU agronomist: D. Reginelli

Row width: 38″
Irrigation: Pivot
Planting date: April 25, 2017

Harvest date: October 17, 2017
Soil series: Okolona Silty Clay

Table 10. Yield and fiber quality data at Columbus.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1178***	36.9	3.5	1.27	30.9	82.5	4.0
DP 1518 B2XF	1056	35.1	3.4	1.20	31.8	82.5	4.0
ST 5517 GLTP	1050	33.5	3.9	1.23	33.8	83.5	4.0
ST 4949 GLT	1049	37.6	3.7	1.16	33.5	82.1	4.0
ST 5020 GLT	987	31.9	3.9	1.27	33.2	83.3	5.0
PHY 330 W3FE	979	35.5	3.5	1.21	32.3	81.8	4.0
NG 4601 B2XF	933	38.2	3.8	1.19	32.7	81.6	3.0
DP 1725 B2XF	928	36.7	3.4	1.17	32.1	81.4	3.0
PHY 450 W3FE	913	34.5	4.2	1.16	36.0	83.7	5.0
DG 3385 B2XF	909	35.1	4.6	1.17	31.6	82.7	3.0
Grand Mean	998	35.5	3.8	1.20	32.8	82.5	3.9
LSD (0.05)	91	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Como
Grower: David Taylor
MSU agronomist: D. Dodds

Row width: 38″
Irrigation: Dryland
Planting date: May 22, 2017

Harvest date: November 15, 2017
Soil series: Collins Silt Loam

Table 11. Yield and fiber quality data at Como.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	1417	40.5	4.0	1.25	30.7	83.1	4.0
DP 1518 B2XF	1288	36.5	4.0	1.17	30.5	82.8	5.0
DP 1725 B2XF	1236	39.7	4.3	1.17	31.3	83.1	3.0
DG 3385 B2XF	1182	37.3	4.6	1.17	30.4	83.7	3.0
PHY 330 W3FE	1175	37.9	4.3	1.17	33.3	83.9	5.0
ST 5517 GLTP	1171	33.9	4.1	1.21	32.9	81.9	4.0
ST 4949 GLT	1119	39.6	4.5	1.13	30.6	83.1	5.0
NG 4601 B2XF	1082	38.3	4.7	1.2	33.4	83.2	3.0
PHY 450 W3FE	928	36.3	4.7	1.14	34.7	84.4	4.0
ST 5020 GLT	861	33.7	4.5	1.25	33.4	83.6	6.0
Grand Mean	1146	37.4	4.4	1.19	32.1	83.3	4.2

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

Location: Dundee
Grower: Douglas Hood
MSU agronomist: D. Dodds

Row width: 38"
Irrigation: Furrow
Planting date: May 18, 2017

Harvest date: November 16, 2017
Soil series: Dundee Silt Loam/Askew Very Fine Sandy Loam

Table 12. Yield and fiber quality data at Dundee.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
PHY 450 W3FE	**971***	35.8	3.8	1.13	33.5	81.8	3.0
ST 4949 GLT	**955***	40.2	3.8	1.14	30.1	81.5	4.0
DP 1646 B2XF	**922***	36.7	3.8	1.25	28.5	82.8	4.0
ST 5517 GLTP	891	34.8	4.0	1.18	33.1	81.2	3.0
PHY 330 W3FE	870	36.2	3.7	1.19	30.5	82.5	4.0
DP 1725 B2XF	797	38.3	3.6	1.19	29.7	81.7	4.0
NG 4601 B2XF	789	38.1	4.0	1.22	33.0	82.5	3.0
DG 3385 B2XF	784	36.4	4.0	1.19	30.5	83.4	4.0
ST 5020 GLT	748	33.9	3.5	1.18	34.0	80.8	4.0
DP 1518 B2XF	497	34.7	3.7	1.18	29.9	84.1	5.0
Grand Mean	822	36.5	3.8	1.19	31.3	82.2	3.8
LSD (0.05)	79	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38"
Irrigation: Dryland
Planting date: May 17, 2017

Havest date: November 13, 2017
Soil series: Calloway/Grenada Loam

Table 13. Yield and fiber quality data at Edwards.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**978***	39.1	4.4	1.20	30.2	83.3	3.0
PHY 330 W3FE	**951***	40.3	4.3	1.17	32.4	83.5	4.0
DP 1725 B2XF	**908***	41.3	4.5	1.13	29.9	81.6	3.0
DP 1518 B2XF	875	36.9	4.3	1.19	30.0	82.8	5.0
DG 3385 B2XF	845	41.0	4.6	1.10	29.9	80.9	4.0
NG 4601 B2XF	808	39.2	4.8	1.16	31.4	82.6	2.0
ST 5517 GLTP	752	34.2	4.2	1.17	31.4	82.3	4.0
ST 4949 GLT	749	39.5	4.4	1.11	28.7	81.8	6.0
ST 5020 GLT	745	35.6	4.5	1.20	32.5	82.6	4.0
PHY 450 W3FE	669	35.7	4.7	1.09	32.8	82.7	4.0
Grand Mean	828	38.3	4.5	1.15	30.9	82.4	3.9
LSD (0.05)	86	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38"
Irrigation: Dryland
Planting date: May 10, 2017

Harvest date: October 18, 2017
Soil series: Mantachie/Talla Silt Loam

Table 14. Yield and fiber quality data at Ellistown.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
ST 4949 GLT	**1273***	42.5	4.9	1.12	30.9	83.2	4.0
DP 1518 B2XF	**1264***	39.9	4.7	1.14	31.2	82.2	5.0
DP 1646 B2XF	**1260***	41.2	5.0	1.20	30.6	82.2	4.0
NG 4601 B2XF	**1255***	40.9	4.4	1.17	34.5	84.6	3.0
PHY 330 W3FE	**1228***	41.9	5.0	1.15	32.3	83.6	4.0
DP 1725 B2XF	**1197***	41.0	4.9	1.18	31.3	84.2	3.0
DG 3385 B2XF	**1190***	41.5	5.1	1.14	30.2	83.1	3.0
PHY 450 W3FE	1155	39.3	4.9	1.15	34.2	85.4	4.0
ST 5517 GLTP	1122	37.4	4.0	1.19	33.7	82.3	3.0
ST 5020 GLT	1074	39.2	4.6	1.2	34.2	83.3	4.0
Grand Mean	1202	40.5	4.8	1.16	32.3	83.4	3.7
LSD (0.05)	114	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38"
Irrigation: Dryland
Planting date: May 17, 2017

Harvest date: November 10, 2017
Soil series: Oaklimter Silt Loam

Table 15. Yield and fiber quality data at Eupora.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
ST 4949 GLT	**1390***	40.5	4.4	1.14	31.1	83.6	4.0
DP 1725 B2XF	**1370***	41.6	4.2	1.17	32.5	82.8	3.0
PHY 330 W3FE	**1337***	39.1	4.0	1.17	33.8	83.2	4.0
ST 5517 GLTP	**1310***	34.7	4.0	1.21	32.9	82.7	4.0
DP 1518 B2XF	**1310***	38.6	3.9	1.17	31.0	82.8	5.0
DP 1646 B2XF	**1304***	37.1	3.8	1.25	29.9	83.3	5.0
NG 4601 B2XF	1289	38.5	4.4	1.19	34.6	84.3	4.0
DG 3385 B2XF	1263	37.3	4.4	1.15	30.2	83.7	3.0
ST 5020 GLT	1260	35.6	4.2	1.23	34.3	83.3	4.0
PHY 450 W3FE	1179	35.4	4.6	1.17	37.2	84.0	4.0
Grand Mean	1301	37.8	4.2	1.19	32.8	83.4	4.0
LSD (0.05)	86	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38″
Irrigation: Furrow
Planting date: May 16, 2017

Harvest date: October 19, 2017
Soil series: Dundee Silt Loam/Silty Clay Loam

Table 16. Yield and fiber quality data at Glendora.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
ST 4949 GLT	1351	38.4	3.3	1.15	32.1	82.2	4.0
DP 1646 B2XF	1172	37.7	3.2	1.27	31.6	82.4	4.0
DP 1725 B2XF	1149	39.8	3.6	1.18	32.3	81.9	3.0
DP 1518 B2XF	1141	34.9	3.4	1.19	32.2	82.3	4.0
PHY 330 W3FE	1071	37.3	3.2	1.20	33.6	83.5	5.0
ST 5517 GLTP	998	31.2	3.6	1.17	33.1	81.5	4.0
ST 5020 GLT	956	34.8	3.5	1.25	33.2	82.5	4.0
NG 4601 B2XF	873	36.9	3.2	1.20	33.3	82.5	5.0
PHY 450 W3FE	793	34.5	3.4	1.16	33.3	84.1	5.0
DG 3385 B2XF	585	36.1	3.7	1.19	30.7	83.5	3.0
Grand Mean	1009	36.2	3.4	1.20	32.5	82.6	4.1

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

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

Row width: 38″
Irrigation: Furrow
Planting date: May 9, 2017

Harvest date: October 19, 2017
Soil series: Dubbs Loam/Tensas Silty Clay Loam

Table 17. Yield and fiber quality data at Greenwood.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1299***	38.5	4.4	1.14	30.2	80.5	3.0
DG 3385 B2XF	**1286***	41.9	4.7	1.19	31.8	83.1	3.0
PHY 330 W3FE	**1230***	39.7	4.3	1.19	31.9	82.1	4.0
DP 1518 B2XF	1133	35.5	4.4	1.19	30.2	83.2	3.0
DP 1725 B2XF	1070	39.0	4.2	1.2	31.2	82.3	3.0
ST 5020 GLT	1030	35.0	4.5	1.21	33.9	82.9	5.0
ST 4949 GLT	1027	37.7	4.4	1.20	33.9	82.9	4.0
NG 4601 B2XF	1012	38.8	3.9	1.20	32.2	82.4	4.0
PHY 450 W3FE	995	38.3	4.1	1.16	33.8	83.0	4.0
ST 5517 GLTP	884	31.1	4.3	1.19	34.6	81.4	4.0
Grand Mean	1097	37.5	4.3	1.19	32.4	82.4	3.7
LSD (0.05)	121	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 30" 2x1 Skip
Irrigation: Furrow
Planting date: May 18, 2017

Harvest date: November 10, 2017
Soil series: Dundee/Pearson Silt Loam

Table 18. Yield and fiber quality data at Louise.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1304***	38.9	4.1	1.29	30.2	83.6	3.0
DP 1518 B2XF	**1274***	37.1	4.5	1.2	29.4	82.7	4.0
DP 1725 B2XF	**1262***	39.6	4.5	1.18	31.9	82.7	3.0
PHY 330 W3FE	**1196***	38.6	4.4	1.19	32.0	83.6	5.0
NG 4601 B2XF	**1184***	38.7	4.8	1.11	31.1	79.3	2.0
DG 3385 B2XF	**1159***	37.0	4.5	1.2	31.3	81.6	3.0
ST 4949 GLT	1061	40.0	4.5	1.16	31.1	82.5	4.0
ST 5517 GLTP	1009	35.3	4.4	1.25	33.7	83.7	3.0
ST 5020 GLT	941	35.4	3.1	1.19	36.7	82.0	5.0
PHY 450 W3FE	826	35.0	4.4	1.17	34.0	84.1	3.0
Grand Mean	1122	37.6	4.3	1.19	32.1	82.6	3.5
LSD (0.05)	160	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Mayersville
Grower: Chase Mahalitic
MSU agronomist: J. Carson

Row width: 38"
Irrigation: Furrow
Planting date: May 20, 2017

Harvest date: November 15, 2017
Soil series: Commerce Silty Clay Loam/Bowdre Clay

Table 19. Yield and fiber quality data at Mayersville.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1330***	36.7	4.3	1.29	30.9	83.5	4.0
DP 1518 B2XF	**1290***	35.4	4.2	1.19	30.8	81.0	4.0
PHY 330 W3FE	**1249***	37.3	4.3	1.23	33.6	83.7	6.0
ST 4949 GLT	**1178***	38.1	4.4	1.18	32.8	82.9	4.0
NG 4601 B2XF	1163	37.2	4.5	1.21	37.9	84.0	4.0
ST 5517 GLTP	1131	33.7	4.2	1.21	33.9	82.5	3.0
DP 1725 B2XF	1122	37.8	4.4	1.19	31.9	81.5	4.0
DG 3385 B2XF	1104	36.2	4.7	1.21	32.4	84.1	3.0
ST 5020 GLT	1066	33.0	4.3	1.25	33.4	84.3	4.0
PHY 450 W3FE	971	33.3	4.4	1.16	36.0	83.7	4.0
Grand Mean	1160	35.9	4.4	1.21	33.4	83.1	4.0
LSD (0.05)	155	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38″
Irrigation: Dryland
Planting date: April 25, 2017

Harvest date: October 6, 2017
Soil series: Catalpa/Leeper Silty Clay Loam

Table 20. Yield and fiber quality data at Mississippi State.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**827***	42.4	4.5	1.21	31.2	82.1	4.0
ST 5517 GLTP	**826***	38.5	4.1	1.15	32.9	80.5	3.0
NG 4601 B2XF	**823***	41.6	4.8	1.18	33.6	82.2	3.0
ST 5020 GLT	**762***	40.0	4.5	1.18	34.4	83.1	3.0
PHY 450 W3FE	**751***	40.7	4.8	1.12	34.8	82.8	4.0
DG 3385 B2XF	689	40.1	4.9	1.08	28.4	81.2	3.0
ST 4949 GLT	678	42.1	4.7	1.07	30.7	80.8	3.0
DP 1725 B2XF	671	41.8	4.7	1.12	30.9	81.6	3.0
PHY 330 W3FE	636	41.0	4.6	1.09	30.7	81.4	3.0
DP 1518 B2XF	554	38.1	4.5	1.12	29.6	80.3	3.0
Grand Mean	722	40.6	4.6	1.13	31.7	81.6	3.2
LSD (0.05)	77	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Money
Grower: Chris Bush
MSU agronomist: A. Braswell

Row width: 38″
Irrigation: Furrow
Planting date: May 10, 2017

Harvest date: Sept. 28, 2017
Soil series: Dubbs Loam/Tensas Silty Clay Loam

Table 21. Yield and fiber quality data at Money.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1252***	39.7	3.8	1.29	33.2	83.9	4.0
DP 1518 B2XF	1193	36.7	3.9	1.21	31.2	83.7	5.0
DG 3385 B2XF	1109	36.5	4.0	1.19	30.7	84.2	3.0
DP 1725 B2XF	1034	39.2	3.5	1.22	34.0	82.8	4.0
PHY 330 W3FE	1031	37.3	3.9	1.19	32.8	82.0	4.0
ST 4949 GLT	1029	39.2	3.6	1.18	33.1	82.6	4.0
ST 5517 GLTP	978	34.8	3.6	1.20	33.9	81.3	4.0
ST 5020 GLT	950	34.6	3.6	1.26	33.8	83.1	6.0
NG 4601 B2XF	894	37.6	3.4	1.20	34.8	82.4	4.0
PHY 450 W3FE	776	35.3	3.7	1.20	37.8	85.5	5.0
Grand Mean	1025	37.1	3.7	1.21	33.5	83.1	4.3
LSD (0.05)	25	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

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

Row width: 38"
Irrigation: Dryland
Planting date: May 9, 2017

Harvest date: October 17, 2017
Soil series: Waverly/Tippo/ Falaya Silt Loam

Table 22. Yield and fiber quality data at Natchez.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1220***	38.3	4.2	1.26	30.1	82.7	3.0
DP 1518 B2XF	1019	35.7	4.4	1.18	31.2	82.8	5.0
ST 5517 GLTP	975	33.6	4.1	1.15	32.3	80.7	3.0
DG 3385 B2XF	905	36.0	4.6	1.14	28.2	82.6	4.0
PHY 330 W3FE	905	35.7	4.4	1.18	32.6	83.4	4.0
DP 1725 B2XF	875	37.3	4.2	1.14	30.6	81.1	4.0
ST 4949 GLT	809	36.6	4.4	1.12	31.4	82.7	4.0
ST 5020 GLT	753	32.5	4.5	1.24	32.1	83.4	4.0
NG 4601 B2XF	743	34.0	4.5	1.15	33.1	82.0	3.0
PHY 450 W3FE	686	32.2	4.5	1.14	35.1	83.4	4.0
Grand Mean	889	35.2	4.4	1.17	31.7	82.5	3.8
LSD (0.05)	148	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Location: Vaiden
Grower: Jerry Shirley
MSU agronomist: E. Flint

Row width: 38"
Irrigation: Dryland
Planting date: May 11, 2017

Harvest date: November 13, 2017
Soil series: Adler Silt Loam

Table 23. Yield and fiber quality data at Vaiden.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DG 3385 B2XF	1291	38.8	4.7	1.17	29.9	83.5	3.0
DP 1725 B2XF	1272	42.7	4.8	1.14	30.7	82.0	3.0
DP 1646 B2XF	1263	41.5	4.4	1.21	29.9	81.2	3.0
ST 5517 GLTP	1255	37.3	4.6	1.17	31.2	81.7	3.0
ST 5020 GLT	1217	36.7	4.5	1.21	31.4	82.5	5.0
PHY 330 W3FE	1172	40.3	4.2	1.16	33.3	82.4	4.0
DP 1518 B2XF	1142	38.7	4.5	1.16	28.6	82.1	5.0
NG 4601 B2XF	1095	39.4	4.7	1.19	32.6	83.3	3.0
ST 4949 GLT	1046	39.7	4.3	1.13	30.1	81.4	4.0
PHY 450 W3FE	900	38.1	4.8	1.13	35.0	83.9	4.0
Grand Mean	1165	39.3	4.6	1.17	31.3	82.4	3.7

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

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

Row width: 30″
Irrigation: Dryland
Planting date: May 10, 2017

Harvest date: November 24, 2017
Soil series: Houston Clay

Table 24. Yield and fiber quality data at West Point.

Variety	Lint yield	Lint percent	Mic	Staple	Strength	Uniformity	Leaf
	lb/A	*%*		*in*	*g/tex*	*%*	
DP 1646 B2XF	**1344***	40.9	4.7	1.21	29.3	81.9	2.0
ST 5517 GLTP	**1226***	37.7	4.4	1.19	33.1	82.5	3.0
DG 3385 B2XF	1159	39.8	4.5	1.14	29.0	84.4	3.0
DP 1725 B2XF	1146	40.5	4.3	1.14	31.7	82.6	3.0
PHY 450 W3FE	1095	37.3	4.7	1.11	33.0	83.2	4.0
DP 1518 B2XF	1094	37.6	4.4	1.17	31.1	83.9	5.0
PHY 330 W3FE	1085	40.4	4.7	1.15	33.2	85.0	4.0
ST 5020 GLT	1077	37.0	4.4	1.21	32.8	83.8	4.0
NG 4601 B2XF	1073	38.6	4.7	1.15	34.9	84.1	3.0
ST 4949 GLT	1030	39.6	4.4	1.11	30.7	81.7	4.0
Grand Mean	1133	39.0	4.5	1.16	31.9	83.3	3.5
LSD (0.05)	152	•	•	•	•	•	•

*Yield not statistically different than the top-yielding variety.

Publication 3229 (POD-06-18)

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Produced by Agricultural Communications.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director