2016 Mississippi On-Farm Cotton Variety Trial Program

MISSISSIPPI STATE UNIVERSITY EXTENSION

Contents

2016 County Trial Locations and Cooperators

Trials arranged and conducted by Dr. Darrin Dodds.

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Special thanks to Andrea Jones, University of Missouri Delta Research and Extension Center.

Table 1. Locations, growers, and cooperating agronomists for 2016 Mississippi State University On-Farm Cotton Variety Trial Program.

Location	Grower	MSU Agronomist
Bolton	Kendall Garraway	Darrin Dodds
Coffeeville	Coley Bailey	Darrin Dodds
Como	David Taylor	Darrin Dodds
Dublin	Bowen Flowers	Darrin Dodds
Dundee	Douglas Hood	Darrin Dodds
Ellistown	Larry Coker	Charlie Stokes
Glendora	Mike Sturdivant	Darrin Dodds
Greenwood	John Moor	Andy Braswell
Itta Bena	Travis Dunn	Andy Braswell
Louise	Byron Seward	Darrin Dodds
Mayersville	Chase Mahalitic	John Carson
Mississippi State	Darrin Dodds	Darrin Dodds
Money	Chris Bush	Andy Braswell
Natchez	Matthew Guedon	Darrin Dodds
Stewart	Stan Rogers	Dennis Reginelli
Vaiden	Shirley Farms	Ernie Flint
West Point	Ben Harlow	Charlie Stokes

The Mississippi State University Extension Service 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 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 aforementioned parties is essential for success of the Mississippi State University County On-Farm Cotton Variety Trial Program. In addition, Cotton Incorporated provided partial financial support for this project.

Introduction

The cotton variety selection process is often difficult and, in many cases, leaves growers wondering for the remainder of the growing season whether or not 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 4 to 6 years. One that does not perform well will likely remain on the market for less than 3 years. In addition, the historical standard for variety testing information was to have 2 to 3 years of data prior to release of any given variety. Today, 1 to 2 years of "broad-scale" variety testing is common prior to a new variety being released. Therefore, greater demand has been placed upon testing a variety in as many environments as possible as a substitute for multiple years of data. In most cases, variety testing prior to release is conducted by private industry through a series of testing methods and through university official variety trial (OVT) programs. OVT data is typically available for 1 year prior to release of a given variety.

Our on-farm testing program is not designed to replace or compete with small-plot OVT testing programs; rather, it is designed to complement the data that is provided by OVT programs. The use of large-plot variety trial data in conjunction with small-plot OVT data provides a tremendous resource with respect to variety performance to the growers of Mississippi.

Methodology

The on-farm testing program at 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 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 using 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 600 to 3,600 feet in 2016, 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 System Scale in Greenwood, Mississippi, 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 one and two were composited into a single sample. Seed cotton was ginned at the University of Missouri Delta Research and Extension Center near Portageville, Missouri. Ginning equipment at the University of Missouri consists of a 20-saw Continental Eagle gin equipped with a stick machine, incline cleaners, a single lint cleaner, 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.

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 2016, Monsanto/Delta and Pine Land was allotted three spots; Bayer CropScience, including the FiberMax and Stoneville brands, was allotted a total of three spots; Dow AgroSciences/Phytogen Cottonseed was allotted two spots; and two additional "at-large" entries were given to provide parity between smaller companies with less resources than larger companies. Entries in the 2016 Mississippi State University On-Farm Cotton Variety Trial Program were as follows:

Table 2. 2016 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 3522 B2XF
3	Bayer CropScience	ST 4848GLT
4	Bayer CropScience	ST 4946GLB2
5	Bayer CropScience	ST 6182GLT
6	Dow AgroSciences/Phytogen Cottonseed	PHY 312 WRF
7	Dow AgroSciences/Phytogen Cottonseed	PHY 444 WRF
8	Monsanto/Delta and Pine Land	DP 1518 B2XF
9	Monsanto/Delta and Pine Land	DP 1522 B2XF
10	Monsanto/Delta and Pine Land	DP 1646 B2XF

Site Characteristics

Locations for the 2016 Mississippi State University On-Farm Cotton Variety Trial Program are listed on page 4. Yield trials were conducted at a total of 17 locations. Eight locations were located in the Delta and nine were in the Hill region. All Delta locations were irrigated, whereas eight of nine Hill locations were dryland. Field sites were chosen based upon grower preference and required elements to conduct a yield trial.

Reported Data and 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 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.

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1368*	0.40	4.4	1.25	30.6	83.6	3.0
PHY 444 WRF	1315	0.39	3.9	1.26	32.2	84.6	2.6
NG 3522 B2XF	1261	0.39	4.5	1.12	28.0	82.5	2.1
PHY 312 WRF	1256	0.38	4.3	1.20	31.3	84.3	3.7
DP 1522 B2XF	1241	0.38	4.7	1.17	31.7	84.0	4.0
DP 1518 B2XF	1232	0.37	4.2	1.17	30.1	83.4	3.9
ST 6182 GLT	1196	0.42	4.5	1.17	29.8	83.1	2.4
ST 4946 GLB2	1175	0.37	4.5	1.18	33.2	84.2	3.3
DG 3385 B2XF	1163	0.38	4.6	1.16	29.9	84.2	2.4
ST 4848 GLT	1145	0.39	4.5	1.17	31.8	83.8	3.9
Grand Mean	1235	0.39	4.4	1.19	30.9	83.8	3.1
LSD (0.05)	50	0.01	0.1	0.01	0.4	0.3	0.4

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

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1353*	0.39	4.4	1.28	31.2	84.3	2.9
DP 1518 B2XF	1339*	0.36	4.2	1.20	30.5	83.7	4.0
PHY 444 WRF	1306*	0.38	3.8	1.28	32.3	84.7	2.8
DP 1522 B2XF	1281	0.37	4.6	1.19	32.0	84.2	4.0
NG 3522 B2XF	1277	0.38	4.3	1.13	28.4	82.3	2.2
PHY 312 WRF	1249	0.36	4.1	1.22	31.9	84.8	3.8
ST 4946 GLB2	1194	0.36	4.4	1.19	33.7	84.5	3.3
DG 3385 B2XF	1166	0.36	4.5	1.19	30.2	84.9	2.4
ST 6182 GLT	1145	0.41	4.3	1.18	30.1	83.3	2.5
ST 4848 GLT	1135	0.38	4.4	1.19	32.5	84.1	4.3
Grand Mean	1245	0.37	4.3	1.20	31.3	84.1	3.2
LSD (0.05)	62	0.01	0.1	0.01	0.6	0.4	0.6

*Yield not statistically different than the top-yielding variety.
Delta region locations included Dublin, Dundee, Glendora, Greenwood, Itta Bena, Louise, Mayersville, and Money.

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1383*	0.41	4.4	1.23	30.1	83.0	3.1
PHY 444 WRF	1326*	0.40	4.0	1.25	32.0	84.6	2.5
PHY 312 WRF	1265	0.39	4.4	1.19	30.7	83.9	3.6
NG 3522 B2XF	1250	0.40	4.6	1.11	27.8	82.8	2.0
ST 6182 GLT	1243	0.42	4.6	1.16	29.5	82.9	2.2
DP 1522 B2XF	1208	0.39	4.8	1.16	31.4	83.9	3.9
DG 3385 B2XF	1164	0.39	4.7	1.14	29.6	83.6	2.3
ST 4946 GLB2	1160	0.38	4.6	1.17	32.8	84.0	3.2
ST 4848 GLT	1155	0.40	4.5	1.16	31.2	83.6	3.6
DP 1518 B2XF	1139	0.38	4.3	1.15	29.9	83.1	3.8
Grand Mean	1229	0.40	4.5	1.17	30.5	83.5	3.0
LSD (0.05)	71	0.01	0.1	0.01	0.6	0.4	0.5

*Yield not statistically different than the top-yielding variety.
Hill region locations included Bolton, Coffeeville, Como, Ellistown, Mississippi State, Natchez, Stewart, Vaiden, and West Point.

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1552*	0.39	4.3	1.28	31.1	84.1	3.0
DP 1518 B2XF	1527*	0.37	4.2	1.20	30.3	83.8	4.0
PHY 444 WRF	1505*	0.38	3.8	1.28	32.1	84.7	2.7
NG 3522 B2XF	1456	0.38	4.3	1.13	28.3	82.4	2.2
DP 1522 B2XF	1455	0.37	4.6	1.19	31.8	84.2	4.1
PHY 312 WRF	1451	0.37	4.1	1.22	31.6	84.6	3.9
ST 4946 GLB2	1361	0.36	4.5	1.20	33.4	84.4	3.3
DG 3385 B2XF	1350	0.36	4.4	1.19	30.2	84.9	2.5
ST 6182 GLT	1344	0.41	4.3	1.19	29.8	83.2	2.7
ST 4848 GLT	1330	0.38	4.4	1.19	32.1	84.1	4.3
Grand Mean	1433	0.38	4.3	1.21	31.1	84.0	3.3
LSD (0.05)	60	0.01	0.1	0.01	0.6	0.4	0.5

*Yield not statistically different than the top-yielding variety.
Irrigated locations included Como, Dublin, Dundee, Glendora, Greenwood, Itta Bena, Louise, Mayersville, and Money.

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

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1321*	0.42	4.5	1.22	30.1	83.0	3.0
PHY 444 WRF	1263*	0.41	4.0	1.24	32.2	84.5	2.5
NG 3522 B2XF	1203	0.40	4.6	1.11	27.7	82.7	2.0
PHY 312 WRF	1197	0.39	4.4	1.18	30.8	84.0	3.4
ST 6182 GLT	1188	0.42	4.6	1.15	29.7	82.9	2.0
DP 1522 B2XF	1162	0.39	4.8	1.15	31.5	83.8	3.8
ST 4946 GLB2	1125	0.38	4.6	1.17	32.9	84.1	3.2
DG 3385 B2XF	1114	0.39	4.7	1.13	29.5	83.4	2.3
ST 4848 GLT	1097	0.40	4.5	1.16	31.3	83.5	3.5
DP 1518 B2XF	1062	0.38	4.3	1.14	29.9	83.0	3.7
Grand Mean	1173	0.40	4.5	1.17	30.5	83.5	3.0
LSD (0.05)	75	0.01	0.1	0.01	0.6	0.4	0.5

*Yield not statistically different than the top yielding variety.
Dryland locations included Bolton, Coffeeville, Ellistown, Mississippi State, Natchez, Stewart, Vaiden, and West Point.

Individual Trial Location Data

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

Row width: 38″
Irrigated: Dryland
Planting date: May 10, 2016

Harvest date: October 10, 2016
Soil series: Memphis/Reidtown Silt Loam

Table 8. Yield and fiber quality data at Bolton.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1117	0.41	5.1	1.21	30.2	83.3	2
NG 3522 B2XF	1104	0.41	5.1	1.08	27.2	82.4	2
DP 1522 B2XF	1035	0.39	5.1	1.13	31.7	83.8	3
DP 1518 B2XF	1018	0.38	4.9	1.16	30.1	83.6	2
DG 3385 B2XF	1001	0.39	5.2	1.11	28.1	82.6	2
PHY 312 WRF	997	0.39	4.9	1.17	31.7	83.8	2
ST 4946 GLB2	992	0.37	5.2	1.16	33.9	84.5	2
PHY 444 WRF	954	0.40	4.5	1.23	32.4	85.6	3
ST 4848 GLT	951	0.40	5.1	1.17	33.0	84.4	2
ST 6182 GLT	897	0.42	4.8	1.16	29.7	83.5	1
Grand Mean	1007	0.40	5.0	1.16	30.8	83.8	2.1
LSD (0.05)	NSD*	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

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

Row width: 38″
Irrigated: Dryland
Planting date: April 26, 2016

Harvest date: October 1, 2016
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/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1525	0.43	4.8	1.26	30.0	84.0	1
PHY 444 WRF	1509	0.41	4.0	1.28	33.2	84.4	2
PHY 312 WRF	1398	0.38	4.7	1.19	30.9	83.9	2
ST 6182 GLT	1330	0.42	4.9	1.17	28.5	83.7	1
ST 4946 GLB2	1314	0.38	4.7	1.17	32.9	85.0	2
DP 1522 B2XF	1311	0.39	4.9	1.16	31.6	83.9	3
NG 3522 B2XF	1289	0.38	4.8	1.10	27.8	82.4	1
ST 4848 GLT	1282	0.38	4.7	1.15	31.5	83.5	3
DP 1518 B2XF	1223	0.37	4.4	1.14	29.3	83.1	3
DG 3385 B2XF	1170	0.38	4.9	1.13	29.6	83.0	1
Grand Mean	1335	0.39	4.7	1.18	30.5	83.7	1.9
LSD (0.05)	NSD	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

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

Row width: 38″
Irrigated: Furrow
Planting date: May 13, 2016

Harvest date: October 27, 2016
Soil series: Collins Silt Loam

Table 10. Yield and fiber quality data at Como.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	- Lb/Acre -	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1872*	0.41	3.8	1.27	30.5	83.1	4
PHY 444 WRF	1823*	0.40	3.9	1.29	30.8	84.8	2
PHY 312 WRF	1806*	0.38	4.0	1.21	30.0	83.3	5
DP 1518 B2XF	1751	0.38	4.2	1.21	29.6	84.4	4
ST 6182 GLT	1669	0.43	4.4	1.20	28.4	82.8	4
ST 4848 GLT	1615	0.40	4.6	1.20	30.4	84.2	4
NG 3522 B2XF	1611	0.39	4.4	1.16	28.8	83.8	2
DP 1522 B2XF	1566	0.38	4.6	1.20	31.0	84.4	5
DG 3385 B2XF	1546	0.37	4.4	1.20	30.8	85.0	3
ST 4946 GLB2	1411	0.37	4.8	1.21	32.3	83.8	3
Grand Mean	1667	0.39	4.3	1.22	30.3	84.0	3.6
LSD (0.05)	103	•	•	•	•	•	•

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

Location: Dublin
Grower: Bowen Flowers
MSU Agronomist: D. Dodds

Row width: 40″
Irrigated: Furrow
Planting date: May 11, 2016

Harvest date: October 13, 2016
Soil series: Dundee Very Fine Sandy Loam/Silt Loam

Table 11. Yield and fiber quality data at Dublin.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1518 B2XF	1529	0.37	4.2	1.21	31.2	84.1	4
NG 3522 B2XF	1424	0.39	4.4	1.14	27.8	82.6	3
DG 3385 B2XF	1347	0.37	4.1	1.20	30.4	84.8	2
PHY 312 WRF	1311	0.37	4.0	1.24	32.5	85.3	4
DP 1646 B2XF	1308	0.40	4.0	1.29	30.2	84.1	3
DP 1522 B2XF	1260	0.37	4.6	1.21	31.7	84.4	3
PHY 444 WRF	1239	0.38	3.6	1.30	32.8	84.9	3
ST 4946 GLB2	1183	0.37	4.4	1.20	33.0	83.9	4
ST 6182 GLT	1089	0.40	4.2	1.17	30.2	82.1	1
ST 4848 GLT	1047	0.37	4.8	1.18	30.6	84.0	4
Grand Mean	1274	0.38	4.2	1.21	31.0	84.0	3.1
LSD (0.05)	NSD	•	•	•	•	•	•

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

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

Row width: 38"
Irrigated: Furrow
Planting date: May 11, 2016

Harvest date: October 26, 2016
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/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1201*	0.40	4.7	1.23	29.0	82.8	4
DP 1522 B2XF	1048	0.36	4.5	1.15	31.6	82.9	5
PHY 444 WRF	1027	0.37	3.9	1.23	33.1	84.0	5
ST 4848 GLT	1023	0.39	4.7	1.13	30.9	83.4	4
ST 6182 GLT	989	0.43	4.5	1.15	27.9	82.7	6
NG 3522 B2XF	985	0.38	4.3	1.07	26.3	80.6	3
DG 3385 B2XF	959	0.38	4.4	1.15	29.6	84.8	4
PHY 312 WRF	956	0.36	3.8	1.18	31.4	83.2	4
ST 4946 GLB2	901	0.36	4.2	1.15	34.3	83.8	4
DP 1518 B2XF	829	0.36	4.3	1.12	28.1	82.0	4
Grand Mean	992	0.38	4.3	1.16	30.2	83.0	4.3
LSD (0.05)	68	•	•	•	•	•	•

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

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

Row width: 38"
Irrigated: Dryland
Planting date: May 9, 2016

Harvest date: October 5, 2016
Soil series: Mantachie/Talla Silt Loam

Table 13. Yield and fiber quality data at Ellistown.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1580	0.43	4.4	1.25	30.6	84.0	4
NG 3522 B2XF	1552	0.43	4.7	1.14	29.0	83.6	2
PHY 444 WRF	1522	0.41	3.9	1.28	31.6	85.7	2
ST 4946 GLB2	1457	0.39	4.5	1.17	33.8	84.7	3
ST 4848 GLT	1411	0.41	4.6	1.15	30.1	84.1	4
PHY 312 WRF	1389	0.40	4.1	1.19	32.0	84.4	4
ST 6182 GLT	1384	0.42	4.5	1.18	31.2	84.4	2
DG 3385 B2XF	1350	0.41	4.7	1.15	29.9	84.4	3
DP 1522 B2XF	1333	0.41	4.8	1.18	31.2	84.2	3
DP 1518 B2XF	1317	0.38	4.2	1.13	29.2	82.1	5
Grand Mean	1430	0.41	4.4	1.18	30.9	84.2	3.2
LSD (0.05)	NSD	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

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

Row width: 38″
Irrigated: Furrow
Planting date: May 9, 2016

Harvest date: October 28, 2016
Soil series: Dundee Silt Loam

Table 14. Yield and fiber quality data at Glendora.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 312 WRF	1401*	0.36	4.3	1.23	30.4	84.3	4
PHY 444 WRF	1299	0.37	3.7	1.30	30.5	84.7	2
ST 4946 GLB2	1282	0.36	4.5	1.22	32.3	84.8	3
DP 1518 B2XF	1237	0.34	4.2	1.23	31.1	84.4	4
NG 3522 B2XF	1203	0.36	4.4	1.13	27.8	82.5	3
DP 1646 B2XF	1158	0.37	4.2	1.30	31.7	84.2	4
DP 1522 B2XF	1152	0.36	4.6	1.19	29.7	84.6	4
DG 3385 B2XF	1098	0.35	4.5	1.17	28.8	83.7	2
ST 4848 GLT	1053	0.37	4.4	1.19	30.8	83.6	4
Grand Mean	1188	0.36	4.3	1.22	30.3	83.9	3.1
LSD (0.05)	50	•	•	•	•	•	•
LSD (0.05)	68	•	•	•	•	•	•

*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 10, 2016

Harvest date: October 7, 2016
Soil series: Dubbs loam/Tensas silty clay loam

Table 15. Yield and fiber quality data at Greenwood.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1539*	0.40	4.5	1.24	31.8	83.8	1
DP 1522 B2XF	1533*	0.39	4.8	1.18	31.7	83.9	3
DP 1518 B2XF	1509*	0.37	4.3	1.18	29.8	83.4	3
NG 3522 B2XF	1445	0.40	4.5	1.12	29.1	81.8	2
PHY 444 WRF	1422	0.40	3.6	1.26	32.1	84.6	2
PHY 312 WRF	1368	0.38	4.2	1.21	30.7	85.2	3
ST 4946 GLB2	1309	0.37	4.5	1.18	33.6	84.4	3
DG 3385 B2XF	1272	0.36	4.8	1.16	28.8	84.4	1
ST 4848 GLT	1205	0.38	4.6	1.17	33.1	83.1	3
ST 6182 GLT	1146	0.41	4.3	1.17	29.6	83.2	2
Grand Mean	1375	0.39	4.4	1.19	31.0	83.8	2.3
LSD (0.05)	77	•	•	•	•	•	•

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

Location: Itta Bena
Grower: Travis Dunn
MSU Agronomist: A. Braswell

Row width: 38"
Irrigated: Irrigated
Planting date: May 16, 2016

Harvest date: October 17, 2016
Soil series: Dubbs/Dundee Loam

Table 16. Yield and fiber quality data at Itta Bena.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1518 B2XF	1437*	0.38	4.0	1.22	31.0	84.3	4
DP 1646 B2XF	1405*	0.41	4.2	1.29	31.6	84.9	4
PHY 444 WRF	1381*	0.38	3.5	1.28	31.4	84.3	2
NG 3522 B2XF	1343*	0.38	4.2	1.12	28.2	81.3	1
PHY 312 WRF	1310*	0.37	3.8	1.23	32.7	84.5	5
DP 1522 B2XF	1258	0.38	4.2	1.18	31.9	84.3	6
DG 3385 B2XF	1191	0.37	4.2	1.22	31.2	85.5	2
ST 4946 GLB2	1187	0.37	4.4	1.17	32.8	82.8	3
ST 4848 GLT	1162	0.38	3.9	1.21	31.7	83.9	7
ST 6182 GLT	1110	0.40	4.3	1.16	30.3	82.8	2
Grand Mean	1278	0.38	4.1	1.21	31.3	83.9	3.6
LSD (0.05)	130	•	•	•	•	•	•

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

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

Row width: 30" 2x1 Skip
Irrigated: Irrigated
Planting date: May 10, 2016

Harvest date: October 19, 2016
Soil series: Forrestdale/Brittain Silt Loam

Table 17. Yield and fiber quality data at Louise.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1518 B2XF	1637*	0.37	4.3	1.18	30.3	83.3	5
DP 1646 B2XF	1538	0.38	4.4	1.27	30.9	83.6	2
NG 3522 B2XF	1519	0.41	4.4	1.13	30.2	83.7	1
PHY 444 WRF	1502	0.39	3.9	1.28	33.8	84.6	3
DP 1522 B2XF	1442	0.37	4.9	1.21	33.1	85.4	4
ST 6182 GLT	1423	0.44	4.5	1.18	31.1	83.7	2
ST 4946 GLB2	1381	0.37	4.8	1.18	34.5	85.3	4
PHY 312 WRF	1364	0.37	4.4	1.24	33.0	85.9	4
DG 3385 B2XF	1341	0.37	4.6	1.20	30.8	85.5	2
ST 4848 GLT	1298	0.38	4.5	1.20	34.5	84.7	5
Grand Mean	1444	0.39	4.5	1.21	32.2	84.6	3.2
LSD (0.05)	48	•	•	•	•	•	•

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

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

Row width: 38″
Irrigated: Irrigated
Planting date: May 13, 2016

Harvest date: October 19, 2016
Soil series: Commerce Silty Clay Loam/Bowdre Clay

Table 18. Yield and fiber quality data at Mayersville.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1518 B2XF	1514*	0.36	4.3	1.22	31.6	83.5	5
DP 1646 B2XF	1470*	0.38	4.5	1.30	32.5	85.2	3
ST 6182 GLT	1378	0.42	4.6	1.23	32.9	84.1	3
DP 1522 B2XF	1362	0.35	4.8	1.17	33.2	83.9	4
PHY 444 WRF	1338	0.38	4.2	1.31	33.7	86.1	2
NG 3522 B2XF	1253	0.37	4.3	1.15	29.1	83.5	3
DG 3385 B2XF	1237	0.36	4.5	1.20	31.7	84.8	3
ST 4946 GLB2	1224	0.35	4.4	1.23	34.5	84.3	4
PHY 312 WRF	1195	0.35	4.4	1.24	32.9	85.0	4
ST 4848 GLT	1122	0.36	4.3	1.20	32.8	84.4	3
Grand Mean	1309	0.37	4.4	1.23	32.5	84.5	3.4
LSD (0.05)	55	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

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

Row width: 38″
Irrigated: Dryland
Planting date: April 28, 2016

Harvest date: October 6, 2016
Soil series: Catalpa/Leeper Silty Clay Loam

Table 19. Yield and fiber quality data at Mississippi State.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 444 WRF	983*	0.39	3.5	1.22	32.9	84.1	3
PHY 312 WRF	971*	0.38	3.9	1.17	30.4	84.2	5
NG 3522 B2XF	944*	0.38	4.5	1.07	26.3	81.5	1
ST 6182 GLT	941*	0.41	4.4	1.11	28.9	81.3	3
DP 1646 B2XF	912*	0.40	4.0	1.16	30.5	81.9	3
DP 1522 B2XF	862*	0.38	4.3	1.12	30.2	83.2	5
DG 3385 B2XF	799	0.37	4.0	1.11	31.3	82.5	3
ST 4946 GLB2	689	0.37	3.9	1.15	31.7	82.4	3
DP 1518 B2XF	678	0.35	3.8	1.13	29.5	82.9	4
ST 4848 GLT	653	0.37	3.8	1.12	30.4	82.3	4
Grand Mean	843	0.38	4.0	1.14	30.2	82.6	3.4
LSD (0.05)	164	•	•	•	•	•	•

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

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

Row width: 38"
Irrigated: Irrigated
Planting date: May 10, 2016

Harvest date: Sept. 30, 2016
Soil series: Dubbs Loam/Tensas Silty Clay Loam

Table 20. Yield and fiber quality data at Money.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 444 WRF	1215*	0.36	3.6	1.29	30.8	84.6	3
DP 1518 B2XF	1213*	0.34	3.9	1.23	32.1	85.0	4
PHY 312 WRF	1128	0.34	4.1	1.23	32.4	84.9	3
NG 3522 B2XF	1106	0.36	4.3	1.15	28.4	82.8	2
DP 1522 B2XF	1098	0.34	4.4	1.21	33.0	84.3	3
ST 4946 GLB2	1096	0.34	4.5	1.22	33.3	86.0	2
DP 1646 B2XF	1091	0.35	4.0	1.32	32.0	85.7	3
ST 4848 GLT	1074	0.35	4.0	1.21	34.4	85.5	5
ST 6182 GLT	1004	0.36	4.1	1.21	30.5	84.1	1
DG 3385 B2XF	949	0.33	4.3	1.21	31.2	85.6	3
Grand Mean	1097	0.35	4.1	1.23	31.8	84.9	2.9
LSD (0.05)	66	•	•	•	•	•	•

*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: April 26, 2016

Harvest date: Sept. 21, 2016
Soil series: Convent Silt Loam

Table 21. Yield and fiber quality data at Natchez.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 444 WRF	884	0.39	4.0	1.26	30.7	84.1	2
ST 4848 GLT	872	0.40	4.3	1.21	30.7	83.8	4
DP 1646 B2XF	860	0.39	4.2	1.24	29.2	82.8	2
PHY 312 WRF	827	0.38	4.5	1.21	29.3	81.8	2
DP 1518 B2XF	801	0.37	4.1	1.20	29.5	84.3	4
ST 4946 GLB2	791	0.36	4.8	1.23	30.3	83.7	5
NG 3522 B2XF	769	0.38	4.3	1.18	27.4	83.3	4
DP 1522 B2XF	761	0.38	4.8	1.19	31.6	84.0	5
DG 3385 B2XF	739	0.37	4.5	1.18	28.1	83.7	3
ST 6182 GLT	738	0.41	4.1	1.17	29.1	82.5	3
Grand Mean	804	0.38	4.4	1.21	29.6	83.4	3.4
LSD (0.05)	NSD	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

Location: Stewart
Grower: Stan Rogers
MSU Agronomist: D. Reginelli

Row width: 38"
Irrigated: Dryland
Planting date: May 13, 2016

Harvest date: October 1, 2016
Soil series: Providence Silt Loam

Table 22. Yield and fiber quality data at Stewart.

Variety	Lint Yield	Lint Percent	Mic	Staple	Strength	Uniformity	Leaf
	Lb/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
PHY 444 WRF	1148	0.43	4.5	1.18	33.1	83.4	3
ST 6182 GLT	1061	0.44	5.0	1.14	32.3	82.7	2
ST 4946 GLB2	1026	0.39	5.0	1.10	33.4	84.1	3
ST 4848 GLT	1025	0.41	4.8	1.16	34.8	83.3	4
PHY 312 WRF	947	0.39	4.8	1.15	31.1	84.5	3
DG 3385 B2XF	932	0.42	5.0	1.10	30.0	83.6	2
NG 3522 B2XF	932	0.41	4.7	1.07	27.4	83.3	2
DP 1522 B2XF	909	0.41	5.2	1.13	33.3	84.1	3
DP 1646 B2XF	907	0.41	4.9	1.19	31.3	83.1	3
DP 1518 B2XF	861	0.40	4.9	1.13	31.3	82.2	4
Grand Mean	975	0.41	4.9	1.14	31.8	83.4	2.9
LSD (0.05)	NSD	•	•	•	•	•	•

*NSD = No statistical differences in yield among varieties.

Location: Vaiden
Grower: Shirley Farms
MSU Agronomist: E. Flint

Row width: 38"
Irrigated: Dryland
Planting date: May 13, 2016

Harvest date: October 12, 2016
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/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1819*	0.43	4.3	1.24	29.6	82.6	4
DP 1522 B2XF	1505	0.40	4.5	1.16	31.0	83.8	4
ST 6182 GLT	1443	0.45	4.4	1.16	28.1	82.7	3
PHY 312 WRF	1429	0.38	4.0	1.20	31.1	84.0	5
NG 3522 B2XF	1401	0.41	4.2	1.11	28.1	82.3	3
DG 3385 B2XF	1389	0.42	4.6	1.16	28.4	84.1	3
PHY 444 WRF	1301	0.40	3.5	1.23	30.9	84.2	3
ST 4946 GLB2	1289	0.40	3.9	1.17	33.5	84.2	5
DP 1518 B2XF	1234	0.39	3.8	1.12	31.0	82.3	4
ST 4848 GLT	1081	0.40	4.4	1.13	29.5	83.0	3
Grand Mean	1389	0.41	4.2	1.17	30.1	83.3	3.7
LSD (0.05)	20	•	•	•	•	•	•

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

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

Row width: 30″
Irrigated: Dryland
Planting date: May 11, 2016

Harvest date: October 4, 2016
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/Acre	----- % -----		--- Inches ---	- grams/tex -	---- % ----	
DP 1646 B2XF	1907*	0.43	4.6	1.23	28.9	82.7	5
PHY 444 WRF	1791	0.41	4.1	1.24	32.0	84.5	2
ST 6182 GLT	1690	0.43	4.6	1.14	29.8	83.0	1
NG 3522 B2XF	1612	0.40	4.6	1.11	28.6	83.0	2
PHY 312 WRF	1582	0.40	4.6	1.17	29.7	84.8	4
DP 1522 B2XF	1579	0.40	4.8	1.16	31.5	83.4	4
ST 4848 GLT	1572	0.40	4.8	1.16	30.3	83.8	4
DG 3385 B2XF	1540	0.39	4.8	1.12	29.3	83.4	1
ST 4946 GLB2	1514	0.38	4.6	1.19	34.2	84.3	3
DP 1518 B2XF	1408	0.38	4.2	1.14	29.2	82.8	4
Grand Mean	1620	0.40	4.6	1.17	30.4	83.6	3.0
LSD (0.05)	85	•	•	•	•	•	•

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

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Publication 3109 (POD-08-17)

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MISSISSIPPI STATE UNIVERSITY EXTENSION

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