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Cotton Variety Trial Results|2018

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Tennessee Cotton Variety Trial Results|2018

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Introduction

The University of Tennessee Cotton Agronomy Program provides an unbiased evaluation of experimental and commercial varieties available for production in Tennessee each year. The 2018 program consisted of two types of trials: Official Variety Trials (OVTs), and the County Standard Trials (CSTs). The OVTs are small plot, replicated variety trials located on producer farms or on AgResearch and Education Centers and are composed of experimental and commercial varieties. The CSTs are large plot variety trials located throughout the Western and Central regions of Tennessee and are only composed of major commercial cultivars. Seven OVTs and thirteen CSTs were conducted during the 2018 season. Information reported from these trials within this report includes yield, fiber quality, and Commodity Credit Corporation (CCC) Loan values. Additionally, selected in-season measurements of growth and development are also reported from the OVTs. A glossary is included at the end of this report to define technical terms and abbreviations used.

This publication is intended to help cotton producers identify varieties that are high yielding, are stable in yield performance across years, and produce high quality fiber; therein, included information should provide those in the seed industry, crop consultants, and the UT Extension service insight into varietal adaptation of all tested varieties to Tennessee field environments.

General Procedures

Official Variety Trials

Seven OVTs were planted in the 2018 growing season. These included four locations on University of Tennessee Research and Education Centers and two locations on producer farms. Seed of commercial cultivars and experimental lines was provided by respective companies. In all, 60 varieties were evaluated. Each variety was randomly assigned to four plots at each location and each plot was arranged in a randomized complete block design. Individual plots consisted of two 30 ft rows. Soil samples were collected prior to planting and fertilizer and lime were applied according to test results and UT recommendations. At planting, a systemic insecticide and fungicide were applied in-furrow.

Between 120 and 130 days after planting (DAP), plant height, node of first fruiting branch, total nodes, and a

rating of percent open was collected in each plot. Weed and pest control measures were uniformly applied to all plots per UT-recommendations. Seed cotton was harvested from each plot by either a two row picker outfitted with an in-basket, catch-and-weigh system or a catch-system. Each plot was subsequently harvested, weighed, and subsampled for turnout and fiber quality. Subsamples from each location were then air-dried, bulked by varietal entry and weighed prior to ginning.

Large Plot Variety Trials

Thirteen CSTs were conducted in the 2018 growing season. These included one location on the West Tennessee Research and Education Center, one location on the Ames Plantation Research and Education Center, and 11 locations on production fields. Seed of commercial varieties was provided by each respective company. In all, 18 varieties were submitted. Each variety was planted in a single plot at each location and was maintained per the individual producer's production practices. Plot size ranged from two to eight rows wide and 125 to 2500 ft+ in length, depending on producer equipment and field size.

At harvest, plots were picked with the producer's equipment. If using a basket-style picker, weights were collected by catching harvested plots from the picker with a weighing boll buggy prior to dumping into the module builder. If using an on-board round module picker, modules were wrapped at the end of each plot and weighed on a set of transportable scales. Regardless of picker type, an 8-12 lb sub-sample was collected after the picked plot weight was determined. These samples were then air dried and weighed prior to ginning.

Ginning

Samples were ginned at the University of Tennessee Cotton MicroGin located at the West Tennessee Research and Education Center in Jackson, TN. This is a 20-saw gin equipped with a stick machine, incline cleaners, and two lint cleaners. No heat was applied at ginning. Lint yields on a per-plot basis were then calculated from gin turnouts and harvested plot areas. A subsample of lint from each ginned sample was submitted to the USDA Cotton Classing Office in Memphis, TN for HVI analysis.

Statistical analysis

For OVT locations, mean separation of fiber quality was calculated for the combined dataset including all analyzed locations by considering location as replication. Mean separation of OVT variety yield by location was calculated by a PROC MIXED model (SAS Institute, Inc., Cary, NC) considering replication to be random. Combined analysis was also calculated by a PROC GLM model, with location and replication nested in location considered to be random. Mean separation of fiber quality and lint yield for the CST combined dataset was calculated by considering location as replication. This analysis was calculated by a PROC GLM model considering replication as a random factor and variety as a fixed factor. Similarly, the replicated CI trials were analyzed considering location and replication nested in location to be random.

Seed Sources

Companies which participated in the 2018 University of Tennessee Cotton Variety Testing Program and their subsequent entries are listed below:

- American Cotton Breeders, Inc. 5210 88th Street, Lubbock, TX 79424

NG 3517 B2XF	NG 3522 B2XF	NG 3699 B2XF	NG 3729 B2XF
NG 3780 B2XF	NG 4601 B2XF	NG 4689 B2XF	NG 4777 B2XF
NG 5007 B2XF	AMX 1801 B3XF	AMX 1815 B3XF	AMX 1816 B3XF
AMX 1817 B3XF	AMX 1818 B3XF	AMX 1819 B3XF	

- Bayer CropScience, 311 Poplar View Lane West, Collierville, TN 38017

ST 4949 GLT	ST 5020 GLT	ST 5122 GLT	ST 5471 GLTP
ST 5517 GLTP	ST 5818 GLT	BX 1973 GLTP	BX 1974 GLTP
BX 1975 GLTP	BX 1976 GLTP		

- Croplan Genetics, 8700 Trail Lake Dr., Suite 100, Memphis, TN 38125

CP 3475 B2XF	CP 9608 B3XF	CP 9178 B3XF	CP 18XC9 B3XF

- Crop Production Services, 3005 Rocky Mountain Ave., Loveland, CO 80538

DG 3214 B2XF	DG 3385 B2XF	CPS 18864 GLTP	CPS 18507-B B3XF
CPS 18817 B3XF			

- Monsanto, P.O. Box 157, Scott, MS 38772

DP 1518 B2XF	DP 1614 B2XF	DP 1646 B2XF	DP 1725 B2XF
DP 1820 B3XF	DP 1835 B3XF	MON 17R818B3XF	MON 17R821B3XF

- Phytogen Seed Co., P.O. Box 27, Leland, MS 38756

PHY 300 W3FE	PHY 320 W3FE	PHY 330 W3FE	PHY 340 W3FE
PHY 350 W3FE	PHY 430 W3FE	PHY 440 W3FE	PHY 480 W3FE
PX5C09W3FE	PX3B07W3FE	PX3B09W3FE	PX3C06W3FE
PX4A64W3FE	PX4A69W3FE	PX5D28BW3FE	PX5B73W3FE

- Seed Source Genetics, 5159 FM 3354, Bishop, TX 78343

SSG UA 222	SSG UA 114

Acknowledgements

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This program was partially funded by Cotton Incorporated State Support Project No. 15-917TN and Cotton Incorporated Core Project No. 15-929. Additionally, all entrant companies provided financial support to the TN Cotton Research Program during the 2018 season. Their contributions are vital to covering costs of conducting this research and are greatly appreciated. We also gratefully acknowledge donations of other inputs used in conducting this research from AMVAC Chemical, Bayer CropScience, Cannon Packing Company, Dow AgroSciences, DuPont, FMC Corp., Monsanto Co., Sanders Inc., Syngenta Crop Protection, Inc., and Valent USA Corp.

Finally, we would like to recognize the USDA-AMS Cotton Division Classing Office in Memphis, TN which provided the fiber quality data reported herein and all who were involved in plot establishment, maintenance and harvest. Thank you.

2018 Official Variety Trial Results

Table 1. 2018 Official Variety Trial details.

Location	Planting Date	Soil Type	Tillage	Fertility	Irrigation
Agricenter Int.	05/25/2018	Falaya Silt Loam	Conventional	100-60-60	None
Ames Plantation[1]	05/04/2018	Memphis Silt Loam	No-Till	80-var P&K	None
Maury City	05/09/2018	Grenada Silt Loam	Minimal Till	90 var P&K	None
MREC[2]	05/14/2018	Collins Silt Loam	Raised Bed	80-0-90-10	None
Ridgely	05/08/2018	Reelfoot Silt Loam	No-Till	90- var P&K	None
WTREC[3]	05/01/2018	Collins Silt Loam	Minimal-Till	107-40-90-12.5	None
WTREC[3,4]	06/01/2018	Collins Silt Loam	Minimal-Till	107-40-90-12.5	None

[1]Ames Plantation, Grand Junction, TN

[2]Milan Research and Education Center, Milan, TN

[3]West Tennessee Research and Education Center, Jackson, TN.

[4]The late planted West Tennessee Research and Education Center OVT data is still being processed and will be released later this winter.

Table OVT1. Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trials conducted at the Agricenter, Ames Plantation, Crockett Co, Lake Co, Milan, and Jackson (early) locations, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)†	Mic‡	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
1	PX3C06W3FE	1289a¥	39.5	4.6	1.16	30.2	81.7	51	4
2	PX3B07W3FE	1279ab	40.9	4.5	1.17	32.1	81.9	41	4
3	PX3B09W3FE	1267a-c	40.8	4.4	1.16	31.8	82.4	41	4
4	BX 1973GLTP	1264a-d	42.8	4.8	1.16	32.5	83.4	41	3
5	CP 9608 B3XF	1251a-e	43.7	4.7	1.16	29.7	81.7	41	4
6	DP 1646 B2XF	1249a-f	40.7	4.6	1.24	30.5	82.9	41	3
7	NG 3522 B2XF	1239a-g	40.8	4.8	1.12	29.0	82.0	41	3
8	DP 1725 B2XF	1238a-g	42.5	4.8	1.16	30.6	81.9	41	3
9	PHY 330 W3FE	1234a-h	41.0	4.6	1.16	32.1	82.6	41	4
10	PHY 340 W3FE	1232a-h	41.5	4.7	1.18	32.0	82.9	41	4
11	PHY 430 W3FE	1229a-h	41.3	4.6	1.11	31.7	82.4	41	4
12	PHY 480 W3FE	1217a-i	39.8	4.6	1.15	30.9	83.1	41	4
13	PHY 300 W3FE	1204a-j	40.6	4.7	1.15	31.7	82.7	41	3
14	DP 1835 B3XF	1198a-k	42.6	4.7	1.18	32.0	82.2	41	4
15	PHY 320 W3FE	1189b-l	39.2	4.5	1.16	32.0	83.5	41	4
16	DG 3385 B2XF	1184c-m	38.5	4.9	1.13	29.2	83.1	41	4
17	PX5C09W3FE	1179c-n	42.1	4.8	1.15	31.4	82.2	41	4
18	ST 4949GLT	1177c-n	42.2	4.9	1.12	29.8	82.2	41	3
19	DP 1820 B3XF	1177c-n	41.3	4.8	1.22	33.8	82.8	41	4
20	PHY 350 W3FE	1173d-n	38.9	4.7	1.18	31.2	83.5	41	4
21	NG 5007 B2XF	1168e-o	40.3	4.6	1.16	29.0	81.9	41	3
22	DP 1614 B2XF	1165e-p	41.2	5.1	1.20	30.7	83.2	41	4
23	CPS 18817 B3XF	1159f-p	40.3	4.9	1.16	31.2	83.3	41	4
24	PX4A64W3FE	1156g-p	40.0	4.6	1.14	33.0	82.9	41	4
25	AMX 1817 B3XF	1153g-p	41.0	4.9	1.17	30.1	81.9	41	4
26	ST 5020GLT	1151g-p	38.4	4.6	1.21	33.2	83.2	41	4
27	PX4A69W3FE	1149g-p	41.7	4.2	1.17	32.0	82.5	41	4
28	CPS 18507-B B3XF	1143h-p	41.2	5.0	1.15	30.5	83.1	41	3
29	PX5B73W3FE	1143h-p	39.9	4.6	1.15	31.0	82.0	41	4
30	PX5D28BW3FE	1134i-q	40.1	4.5	1.16	33.7	82.7	41	4
31	BX 1975GLTP	1121j-r	41.4	4.9	1.15	30.9	82.0	41	3
32	CP 9178 B3XF	1121j-r	41.6	4.9	1.17	32.8	83.3	41	3
33	ST 5471GLTP	1116j-r	38.6	4.6	1.14	31.5	81.6	41	4
34	MON 17R821B3XF	1116j-r	40.4	4.8	1.14	30.1	82.3	41	3
35	DG 3214 B2XF	1112j-r	38.8	4.9	1.18	30.5	84.0	41	4
36	PHY 440 W3FE	1107k-r	40.4	4.3	1.20	34.1	82.4	41	4
37	DP 1518 B2XF	1107k-r	39.0	4.4	1.16	29.6	82.2	41	4
38	BX 1974GLTP	1101l-r	41.9	4.9	1.18	30.8	83.1	41	3
39	NG 3729 B2XF	1098l-s	37.9	4.8	1.21	30.5	83.5	41	4
40	CP 3475 B2XF	1097m-s	37.2	4.7	1.14	31.4	83.2	41	4

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Average	**1124**	**39.8**	**4.7**	**1.17**	**31.5**	**82.6**	**41**	**3.8**
LSD (p<0.05)	92	1.0	0.2	0.02	0.8	0.8		
CV (%)	14.1	2.5	3.7	1.9	2.9	1.0		

¥Means followed by the same letter are not significantly different (p=0.05).
†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
‡Fiber quality calculated from four replicates of entire plot lengths at Ames Plantation and Lake Co, grab samples from one replicate in Jackson.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT1 (continued). Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trials conducted at the Agricenter, Ames Plantation, Crockett Co, Lake Co, Milan, and Jackson (early planted) locations, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)†	Mic‡	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
41	NG 4601 B2XF	1091n-t	40.6	5.0	1.19	33.1	83.1	41	3
42	ST 5818GLT	1078o-u	38.5	4.6	1.17	31.8	81.9	41	4
43	ST 5517GLTP	1073p-v	37.9	4.5	1.18	32.0	81.8	41	4
44	ST 5122GLT	1049q-w	38.6	4.5	1.15	31.2	81.4	41	3
45	MON 17R818B3XF	1045r-w	39.9	4.8	1.19	32.6	82.7	41	4
46	BX 1976GLTP	1038r-w	41.5	5.1	1.16	32.9	83.4	41	3
47	AMX 1816 B3XF	1033r-w	35.7	4.0	1.20	31.1	83.1	41	4
48	AMX 1819 B3XF	1008s-w	37.8	4.7	1.16	30.1	82.2	41	4
49	NG 4777 B2XF	1007s-w	37.8	4.5	1.15	32.0	81.5	41	3
50	AMX 1801 B3XF	1003t-w	38.9	4.8	1.22	30.5	83.9	41	3
51	NG 4689 B2XF	993u-w	38.3	4.8	1.16	32.5	82.5	41	4
52	NG 3517 B2XF	993u-w	36.0	4.6	1.18	33.0	82.9	41	4
53	CP 18XC9 B3XF	983vw	38.1	4.7	1.25	32.5	83.6	41	4
54	AMX 1818 B3XF	976w	39.4	4.7	1.21	33.0	83.3	41	4
55	NG 3780 B2XF	975w	37.1	4.8	1.17	31.7	82.2	41	4
56	CPS 18864 GLTP	963wx	38.1	4.6	1.19	33.0	82.7	41	4
57	NG 3699 B2XF	962wx	36.9	4.6	1.22	32.1	82.4	41	4
58	AMX 1815 B3XF	882x	35.0	3.9	1.14	33.3	82.9	51	6
	Average	**1124**	**39.8**	**4.7**	**1.17**	**31.5**	**82.6**	**41**	**3.8**
	LSD (p<0.05)	92	1.0	0.2	0.02	0.8	0.8		
	CV (%)	14.1	2.5	3.7	1.9	2.9	1.0		

¥Means followed by the same letter are not significantly different (p=0.05).
†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
‡Fiber quality calculated from four replicates of entire plot lengths at Ames Plantation and Lake Co, grab samples from one replicate at Jackson.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT2. Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trials conducted at the Ames Plantation location, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
1	CP 9608 B3XF	1443	44.4	4.4	1.16	28.9	80.5	51	4
2	PHY 340 W3FE	1402	41.8	4.4	1.19	30.7	81.8	51	4
3	NG 3522 B2XF	1379	41.0	4.5	1.14	28.5	81.9	51	3
4	DG 3385 B2XF	1366	38.1	4.5	1.13	28.4	82.3	51	3
5	PHY 480 W3FE	1362	40.1	4.3	1.14	29.3	82.2	41	4
6	PX3B07W3FE	1354	40.7	4.2	1.17	30.3	80.8	51	4
7	DP 1725 B2XF	1352	43.3	4.4	1.17	29.8	81.4	51	4
8	DP 1646 B2XF	1300	40.8	4.3	1.23	29.9	81.9	51	4
9	PHY 350 W3FE	1297	38.0	4.3	1.19	30.1	83.0	51	4
10	PX5D28BW3FE	1292	40.7	4.2	1.17	32.3	82.6	41	4
11	DP 1820 B3XF	1275	42.5	4.5	1.21	32.0	81.4	51	4
12	AMX 1817 B3XF	1261	42.2	4.6	1.15	28.3	80.9	41	4
13	PX3C06W3FE	1257	40.0	4.3	1.17	29.4	80.9	51	4
14	PHY 430 W3FE	1254	41.4	4.3	1.12	30.5	82.2	41	4
15	CPS 18817 B3XF	1252	41.4	4.6	1.15	29.7	82.9	51	4
16	NG 5007 B2XF	1247	41.0	4.4	1.14	28.3	80.7	41	3
17	PX5C09W3FE	1241	42.3	4.4	1.15	29.6	81.2	51	4
18	PHY 320 W3FE	1236	39.0	4.1	1.18	30.8	83.2	51	4
19	BX 1973GLTP	1235	43.1	4.4	1.16	31.1	82.7	41	3
20	CPS 18507-B B3XF	1234	41.8	4.8	1.15	29.1	82.0	41	3
21	PX4A69W3FE	1222	41.1	3.9	1.17	30.7	82.1	41	4
22	PHY 300 W3FE	1219	40.6	4.5	1.15	29.9	81.4	41	3
23	PX3B09W3FE	1217	41.4	4.1	1.17	30.5	82.0	51	4
24	PHY 330 W3FE	1215	41.3	4.2	1.17	30.4	81.4	51	4
25	NG 3729 B2XF	1215	38.2	4.4	1.22	29.1	82.6	51	4
26	CP 3475 B2XF	1214	37.2	4.3	1.15	30.8	82.9	51	4
27	ST 5020GLT	1211	38.8	4.2	1.21	31.9	81.8	51	4
28	NG 4601 B2XF	1202	40.9	4.7	1.20	30.7	81.8	51	3
29	DP 1614 B2XF	1201	42.9	4.8	1.20	29.1	82.5	51	3
30	ST 5517GLTP	1194	38.0	4.1	1.18	31.2	81.6	51	4
31	DP 1835 B3XF	1189	43.1	4.6	1.17	30.3	81.1	51	4
32	BX 1974GLTP	1183	42.5	4.6	1.17	28.7	82.4	41	4
33	PX5B73W3FE	1175	39.9	4.4	1.15	29.5	81.2	51	4
34	AMX 1818 B3XF	1164	40.4	4.4	1.18	30.5	82.2	51	3
35	CP 9178 B3XF	1162	41.8	4.5	1.17	31.1	82.8	41	4
36	MON 17R821B3XF	1157	41.4	4.7	1.14	28.6	81.6	51	4
37	PHY 440 W3FE	1150	41.3	4.0	1.20	32.3	81.2	51	4
38	NG 3517 B2XF	1148	36.8	4.2	1.18	31.6	82.1	51	4
39	ST 4949GLT	1139	42.3	4.6	1.13	28.7	81.6	51	3
40	PX4A64W3FE	1128	39.9	4.3	1.14	31.1	82.5	41	3

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Average	**1178**	**40.2**	**4.3**	**1.17**	**30.1**	**81.8**	**41**	**3.7**
LSD (p<0.05)	211	1.3	0.2	0.03	1.1	1.3		
CV (%)	12.8	2.3	3.3	1.8	2.6	1.1		

Tennessee AgResearch data of Raper et al. (2018).

Table OVT2 (continued). Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trials conducted at the Ames Plantation location, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
41	ST 5818GLT	1115	38.3	4.3	1.16	29.6	80.7	51	4
42	ST 5471GLTP	1104	38.6	4.1	1.15	30.0	80.8	41	4
43	BX 1976GLTP	1091	41.9	4.7	1.15	31.1	82.7	41	4
44	NG 3780 B2XF	1086	38.1	4.3	1.17	30.5	81.7	51	5
45	MON 17R818B3XF	1085	40.8	4.3	1.18	30.7	81.7	41	4
46	BX 1975GLTP	1080	41.7	4.5	1.14	29.7	80.4	41	3
47	DP 1518 B2XF	1070	39.0	4.0	1.16	28.3	81.0	51	4
48	DG 3214 B2XF	1062	39.5	4.5	1.19	29.1	82.8	51	3
49	ST 5122GLT	1061	39.3	4.2	1.14	29.2	80.0	51	3
50	CP 18XC9 B3XF	1028	40.0	4.3	1.25	30.5	82.9	51	3
51	AMX 1816 B3XF	1022	35.3	3.7	1.19	30.3	82.0	41	4
52	AMX 1801 B3XF	1015	39.5	4.6	1.21	29.3	83.0	41	3
53	NG 4777 B2XF	1009	38.0	4.1	1.16	30.9	80.6	41	4
54	AMX 1819 B3XF	1007	38.2	4.4	1.16	28.6	81.3	41	4
55	NG 3699 B2XF	998	38.0	4.1	1.21	30.9	81.3	51	4
56	NG 4689 B2XF	985	38.1	4.3	1.17	31.4	82.1	41	4
57	CPS 18864 GLTP	914	38.6	4.3	1.18	31.6	81.5	51	4
58	AMX 1815 B3XF	849	35.9	3.4	1.13	31.8	82.1	51	5
	Average	**1178**	**40.2**	**4.3**	**1.17**	**30.1**	**81.8**	**41**	**3.7**
	LSD (p<0.05)	211	1.3	0.2	0.03	1.1	1.3		
	CV (%)	12.8	2.3	3.3	1.8	2.6	1.1		

Tennessee AgResearch data of Raper et al. (2018).

Table OVT3. Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trial conducted at the Lake Co Trial location near Ridgely, TN.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
1	PX3B07W3FE	1331	41.0	4.8	1.18	34.8	83.2	31	4
2	PHY 300 W3FE	1264	40.5	5.0	1.18	34.3	84.0	31	4
3	PX3B09W3FE	1254	40.2	4.8	1.16	33.7	82.8	31	4
4	PX5C09W3FE	1242	41.8	5.2	1.14	33.8	83.1	31	4
5	PHY 430 W3FE	1235	41.2	5.0	1.11	33.6	82.9	31	5
6	PHY 480 W3FE	1221	39.5	4.9	1.15	33.0	84.2	31	4
7	CP 9608 B3XF	1220	43.1	5.0	1.18	31.1	83.0	31	4
8	PX3C06W3FE	1174	38.9	5.1	1.16	31.5	82.7	41	4
9	BX 1973GLTP	1169	42.6	5.2	1.17	34.2	84.3	31	3
10	NG 5007 B2XF	1159	39.6	4.9	1.19	30.3	83.3	31	3
11	PX5B73W3FE	1158	39.8	5.0	1.17	33.1	83.0	31	4
12	ST 5020GLT	1153	38.0	5.1	1.21	35.1	84.8	41	5
13	CPS 18507-B B3XF	1150	40.7	5.3	1.16	32.5	84.3	31	3
14	PHY 340 W3FE	1139	41.2	5.1	1.19	34.0	84.0	41	5
15	PX4A64W3FE	1124	40.0	5.0	1.15	35.6	83.4	31	4
16	PHY 350 W3FE	1109	39.8	5.2	1.18	32.7	84.1	31	4
17	PHY 330 W3FE	1088	40.7	5.0	1.17	34.3	83.8	41	4
18	PX5D28BW3FE	1087	39.6	4.8	1.15	35.5	83.0	31	4
19	DP 1646 B2XF	1086	40.6	5.0	1.25	31.3	84.0	31	3
20	NG 3522 B2XF	1084	40.7	5.2	1.11	30.1	82.3	31	3
21	DP 1835 B3XF	1068	42.1	5.0	1.20	33.7	83.5	31	4
22	BX 1975GLTP	1066	41.2	5.4	1.17	32.7	83.6	31	3
23	PX4A69W3FE	1057	42.2	4.6	1.17	33.6	83.1	31	4
24	ST 4949GLT	1056	42.0	5.4	1.12	31.3	83.1	31	3
25	MON 17R821B3XF	1042	39.4	5.1	1.15	32.1	83.1	31	3
26	AMX 1816 B3XF	1039	36.0	4.4	1.21	32.2	84.4	31	4
27	CPS 18817 B3XF	1032	39.3	5.2	1.17	33.1	84.0	41	5
28	DG 3385 B2XF	1026	38.9	5.4	1.14	30.5	84.1	31	4
29	PHY 440 W3FE	1024	39.5	4.6	1.21	36.4	84.0	31	4
30	DP 1725 B2XF	1022	41.7	5.3	1.13	31.5	82.3	31	3
31	NG 4777 B2XF	1016	37.5	5.1	1.16	33.9	82.6	31	3
32	DG 3214 B2XF	994	38.1	5.3	1.19	32.5	85.4	41	4
33	CP 9178 B3XF	980	41.4	5.4	1.17	35.1	84.0	31	3
34	CP 3475 B2XF	978	37.2	5.2	1.15	32.7	83.7	41	5
35	PHY 320 W3FE	975	39.5	4.9	1.16	33.7	83.8	41	4
36	NG 3729 B2XF	972	37.5	5.2	1.21	32.4	84.8	41	4
37	NG 4689 B2XF	969	38.4	5.4	1.15	34.2	83.0	31	4
38	AMX 1819 B3XF	968	37.4	5.0	1.17	32.1	83.3	31	4
39	BX 1974GLTP	966	41.2	5.2	1.21	33.4	84.2	31	3
40	ST 5122GLT	948	37.9	4.9	1.17	33.6	82.8	31	3
	Average	**1022**	**39.4**	**5.1**	**1.18**	**33.4**	**83.6**	**31**	**3.7**
	LSD (p<0.05)	183	1.2	0.2	0.03	1.2	1.1		
	CV(%)	12.8	2.2	3.3	1.8	2.7	0.92		

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Tennessee AgResearch data of Raper et al. (2018).

Table OVT3 (continued). Average lint yield, turnout, and fiber quality of 58 entries in the 2018 Official Variety Trial conducted at the Lake Co Trial location near Ridgely, TN.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
41	NG 3517 B2XF	946	35.2	5.0	1.19	35.4	84.0	41	5
42	DP 1518 B2XF	942	39.1	4.9	1.15	31.3	83.4	41	4
43	NG 3699 B2XF	941	35.9	5.1	1.24	33.9	84.0	31	4
44	BX 1976GLTP	941	41.0	5.5	1.19	35.3	84.2	31	3
45	NG 4601 B2XF	939	40.2	5.5	1.20	35.4	84.5	31	3
46	MON 17R818B3XF	936	39.0	5.5	1.20	35.0	83.9	31	4
47	CP 18XC9 B3XF	913	38.4	5.2	1.25	34.8	84.6	31	5
48	AMX 1801 B3XF	907	38.2	5.1	1.23	32.2	84.7	31	4
49	DP 1614 B2XF	892	39.6	5.5	1.21	32.8	84.1	41	5
50	AMX 1817 B3XF	853	39.7	5.2	1.21	32.3	83.0	31	4
51	ST 5517GLTP	835	37.8	5.0	1.18	33.4	82.0	31	3
52	AMX 1818 B3XF	832	38.3	4.9	1.24	35.5	84.2	31	4
53	CPS 18864 GLTP	830	37.6	5.0	1.20	34.5	83.8	31	4
54	ST 5818GLT	830	38.8	5.1	1.17	34.1	83.0	31	3
55	ST 5471GLTP	824	38.6	5.1	1.13	33.1	82.3	31	3
56	NG 3780 B2XF	797	36.1	5.4	1.18	33.4	82.8	31	4
57	DP 1820 B3XF	773	40.1	5.1	1.23	36.3	84.1	31	4
58	AMX 1815 B3XF	716	34.0	4.5	1.15	35.4	83.9	41	6
	Average	**1022**	**39.4**	**5.1**	**1.18**	**33.4**	**83.6**	**31**	**3.7**
	LSD (p<0.05)	183	1.2	0.2	0.03	1.2	1.1		
	CV(%)	12.8	2.2	3.3	1.8	2.7	0.9		

Tennessee AgResearch data of Raper et al. (2018).

Table OVT4. Average lint yield, turnout, and fiber quality of 60 entries in the 2018 Official Variety Trials conducted at the West Tennessee Research and Education Center, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
1	BX 1973GLTP	1697	42.8	4.6	1.16	30.8	82.5	42	4
2	PX3C06W3FE	1635	39.5	4.5	1.12	28.4	81.0	52	5
3	PHY 430 W3FE	1621	41.3	4.3	1.10	29.6	81.7	42	4
4	NG 3522 B2XF	1551	40.8	4.6	1.09	26.6	81.8	52	3
5	PX3B09W3FE	1534	40.8	4.4	1.14	29.6	82.0	52	5
6	DP 1725 B2XF	1530	42.5	4.4	1.19	29.9	82.8	42	4
7	PHY 330 W3FE	1520	41.0	4.7	1.12	30.3	82.5	52	4
8	DP 1614 B2XF	1520	41.2	4.9	1.16	29.1	82.5	52	4
9	PHY 340 W3FE	1518	41.5	4.5	1.14	28.8	83.2	42	6
10	DG 3385 B2XF	1509	38.5	4.7	1.12	27.4	82.2	42	5
11	BX 1976GLTP	1504	41.5	4.8	1.15	31.3	83.1	42	3
12	DG 3214 B2XF	1498	38.8	4.9	1.14	28.1	83.6	52	5
13	PX3B07W3FE	1472	40.9	4.4	1.15	28.5	81.1	42	5
14	DP 1835 B3XF	1469	42.6	4.2	1.17	31.6	81.2	52	4
15	ST 5471GLTP	1468	38.6	4.3	1.14	31.1	82.1	52	6
16	DP 1646 B2XF	1461	40.7	4.1	1.22	30.2	82.0	41	3
17	ST 5818GLT	1457	38.5	4.2	1.18	31.5	82.2	41	6
18	PX4A64W3FE	1456	40.0	4.2	1.14	30.4	83.1	42	6
19	DP 1820 B3XF	1450	41.3	4.7	1.20	31.1	82.9	52	5
20	PX4A69W3FE	1442	41.7	4.0	1.17	30.6	81.6	42	4
21	ST 4949GLT	1425	42.2	4.3	1.10	28.1	81.4	52	5
22	PHY 480 W3FE	1423	39.8	4.4	1.14	28.7	82.6	42	6
23	PHY 440 W3FE	1423	40.4	4.2	1.19	31.9	81.5	42	5
24	CP 9608 B3XF	1405	43.7	4.6	1.10	27.6	80.9	52	4
25	MON 17R821B3XF	1404	40.4	4.7	1.11	28.5	81.7	52	4
26	DP 1518 B2XF	1403	39.0	4.1	1.20	28.5	82.3	52	6
27	PHY 320 W3FE	1401	39.2	4.5	1.13	29.4	83.7	52	5
28	PHY 350 W3FE	1391	38.9	4.7	1.17	30.3	83.8	42	4
29	PX5D28BW3FE	1390	40.1	4.3	1.12	32.4	82.3	52	4
30	AMX 1817 B3XF	1384	41.0	4.9	1.13	28.2	81.3	52	5
31	PX5B73W3FE	1380	39.9	4.4	1.13	28.8	81.7	52	5
32	PX5C09W3FE	1377	42.1	4.5	1.19	29.2	83.1	52	5
33	NG 3729 B2XF	1363	37.9	4.8	1.18	28.9	82.6	52	6
34	PHY 300 W3FE	1356	40.6	4.7	1.09	28.7	82.4	42	4
35	CPS 18507-B B3XF	1349	41.2	5.0	1.13	28.4	82.7	42	4
36	ST 5517GLTP	1349	37.9	4.2	1.18	30.0	82.2	41	5
37	BX 1974GLTP	1345	41.9	4.9	1.14	28.7	81.8	52	4
38	CPS 18817 B3XF	1344	40.3	4.6	1.14	29.6	82.4	52	5
39	CP 3475 B2XF	1343	37.2	4.5	1.11	29.0	82.2	52	5
40	NG 5007 B2XF	1329	40.3	4.5	1.12	26.6	81.1	52	4
				continued on next page					
	Average	**1376**		4.5	1.15	29.7	82.3	52	**5**
	LSD (p<0.05)	210							
	CV (%)	10.9							

Tennessee AgResearch data of Raper et al. (2018).

Table OVT4 (continued). Average lint yield, turnout, and fiber quality of 60 entries in the 2018 Official Variety Trials conducted at the West Tennessee Research and Education Center, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Color	Leaf Grade
41	CP 9178 B3XF	1327	41.6	4.6	1.15	30.3	82.5	42	4
42	NG 3780 B2XF	1311	37.1	4.6	1.17	29.9	81.9	52	5
43	CPS 18864 GLTP	1305	38.1	4.4	1.18	32.3	83.1	41	4
44	ST 5020GLT	1298	38.4	4.4	1.19	30.9	82.9	52	5
45	NG 4601 B2XF	1296	40.6	4.7	1.18	33.1	83.1	52	5
46	MON 17R818B3XF	1294	39.9	4.4	1.17	30.4	81.7	42	4
47	AMX 1819 B3XF	1294	37.8	4.5	1.11	28.1	81.6	52	5
48	BX 1975GLTP	1282	41.4	4.4	1.16	28.5	82.6	53	4
49	ST 5122GLT	1270	38.6	4.4	1.11	29.7	81.7	51	5
50	NG 4689 B2XF	1261	38.3	4.6	1.14	30.0	81.9	52	5
51	AMX 1816 B3XF	1251	35.7	3.9	1.19	29.8	82.5	42	5
52	SSG UA 114	1247	33.9	4.4	1.10	28.4	82.4	52	5
53	AMX 1818 B3XF	1206	39.4	4.6	1.22	32.7	83.9	42	6
54	NG 3517 B2XF	1203	36.0	4.6	1.14	29.2	81.9	52	4
55	NG 4777 B2XF	1168	37.8	4.1	1.10	29.1	80.9	42	4
56	NG 3699 B2XF	1159	36.9	4.5	1.17	29.5	80.4	52	5
57	AMX 1801 B3XF	1148	38.9	4.6	1.21	29.0	84.6	41	3
58	CP 18XC9 B3XF	1142	39.2	4.2	1.23	31.5	82.6	52	6
59	SSG UA 222	1117	34.0	4.3	1.22	29.5	82.7	42	7
60	AMX 1815 B3XF	1090	35.0	3.9	1.12	30.8	82.9	52	8
	Average	**1376**		4.5	1.15	29.7	82.3	52	**5**
	LSD (p<0.05)	210							
	CV (%)	10.9							

Tennessee AgResearch data of Raper et al. (2018).

Table OVT5. Average lint yield of 58 entries in the 2018 Agricenter International trial in Memphis, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
1	DP 1725 B2XF	1755	746	42.5
2	BX 1973GLTP	1736	744	42.8
3	MON 17R821B3XF	1816	733	40.4
4	PHY 480 W3FE	1825	726	39.8
5	DP 1614 B2XF	1755	723	41.2
6	DP 1820 B3XF	1736	717	41.3
7	DP 1646 B2XF	1760	717	40.7
8	ST 4949GLT	1680	708	42.2
9	BX 1975GLTP	1708	707	41.4
10	NG 5007 B2XF	1755	707	40.3
11	PHY 300 W3FE	1708	693	40.6
12	NG 3522 B2XF	1671	682	40.8
13	PX5C09W3FE	1601	673	42.1
14	PHY 330 W3FE	1629	668	41.0
15	CPS 18864 GLTP	1727	658	38.1
16	ST 5471GLTP	1704	657	38.6
17	AMX 1819 B3XF	1736	657	37.8
18	PHY 440 W3FE	1624	657	40.4
19	DP 1835 B3XF	1531	652	42.6
20	CP 9608 B3XF	1479	647	43.7
21	AMX 1801 B3XF	1662	646	38.9
22	ST 5122GLT	1671	645	38.6
23	DG 3214 B2XF	1652	641	38.8
24	BX 1974GLTP	1521	637	41.9
25	DP 1518 B2XF	1629	636	39.0
26	PX3C06W3FE	1573	621	39.5
27	BX 1976GLTP	1493	620	41.5
28	CPS 18817 B3XF	1535	619	40.3
29	PHY 350 W3FE	1587	617	38.9
30	PX4A69W3FE	1479	616	41.7
31	NG 4689 B2XF	1596	611	38.3
32	PX3B09W3FE	1498	611	40.8
33	ST 5517GLTP	1605	609	37.9
34	MON 17R818B3XF	1493	596	39.9
35	CP 3475 B2XF	1601	595	37.2
36	PX5B73W3FE	1489	593	39.9
37	PHY 340 W3FE	1428	592	41.5
38	PHY 320 W3FE	1503	590	39.2
39	NG 4601 B2XF	1437	583	40.6
40	AMX 1817 B3XF	1419	581	41.0
		Average	**1548**	**617**	**40.0**
		LSD (p<0.05)		168	
		CV(%)		19.5	

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†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations. Tennessee AgResearch data of Raper et al. (2018).

Table OVT5 (continued). Average lint yield of 58 entries in the 2018 Agricenter International trial in Memphis, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
41	AMX 1818 B3XF	1475	581	39.4
42	PX3B07W3FE	1391	568	40.9
43	NG 3699 B2XF	1535	567	36.9
44	AMX 1815 B3XF	1619	566	35.0
45	CP 9178 B3XF	1358	565	41.6
46	PX4A64W3FE	1409	563	40.0
47	ST 5818GLT	1456	561	38.5
48	AMX 1816 B3XF	1568	559	35.7
49	CP 18XC9 B3XF	1409	553	39.2
50	PHY 430 W3FE	1330	549	41.3
51	ST 5020GLT	1386	532	38.4
52	NG 3729 B2XF	1381	523	37.9
53	PX5D28BW3FE	1302	523	40.1
54	CPS 18507-B B3XF	1251	516	41.2
55	NG 3517 B2XF	1405	506	36.0
56	NG 3780 B2XF	1302	483	37.1
57	NG 4777 B2XF	1232	465	37.8
58	DG 3385 B2XF	1176	453	38.5
	Average	**1548**	**617**	**40.0**
	LSD (p<0.05)		19.5	
	CV(%)			

†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT6. Average lint yield of 58 entries in the 2018 Crockett Co. trial in Maury City, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
1	PX3B09W3FE	4335	1767	40.8
2	PX3C06W3FE	4418	1744	39.5
3	PHY 320 W3FE	4437	1741	39.2
4	PX3B07W3FE	4167	1703	40.9
5	PHY 340 W3FE	4098	1700	41.5
6	PHY 330 W3FE	4143	1699	41.0
7	AMX 1817 B3XF	4117	1687	41.0
8	PHY 300 W3FE	4097	1661	40.6
9	DP 1646 B2XF	4069	1657	40.7
10	CPS 18817 B3XF	4090	1650	40.3
11	PX4A69W3FE	3931	1638	41.7
12	DP 1820 B3XF	3911	1614	41.3
13	ST 5471GLTP	4140	1596	38.6
14	PHY 480 W3FE	4008	1596	39.8
15	BX 1973GLTP	3720	1593	42.8
16	DP 1835 B3XF	3731	1590	42.6
17	PX4A64W3FE	3939	1574	40.0
18	PHY 430 W3FE	3783	1563	41.3
19	ST 5020GLT	4067	1562	38.4
20	CP 9608 B3XF	3572	1562	43.7
21	CPS 18507-B B3XF	3743	1543	41.2
22	CP 9178 B3XF	3669	1527	41.6
23	DG 3385 B2XF	3952	1521	38.5
24	PHY 350 W3FE	3849	1497	38.9
25	ST 4949GLT	3534	1490	42.2
26	DP 1725 B2XF	3478	1478	42.5
27	PX5C09W3FE	3510	1476	42.1
28	NG 3522 B2XF	3607	1473	40.8
29	DG 3214 B2XF	3736	1450	38.8
30	BX 1975GLTP	3484	1443	41.4
31	DP 1518 B2XF	3687	1439	39.0
32	PX5B73W3FE	3589	1431	39.9
33	BX 1974GLTP	3392	1420	41.9
34	ST 5818GLT	3675	1416	38.5
35	DP 1614 B2XF	3413	1407	41.2
36	NG 5007 B2XF	3490	1406	40.3
37	ST 5122GLT	3633	1403	38.6
38	AMX 1801 B3XF	3570	1388	38.9
39	ST 5517GLTP	3655	1386	37.9
40	PHY 440 W3FE	3423	1384	40.4
		continued on next page		
	Average	**3649**	**1454**	**40.0**
	LSD (p<0.05)		234	
	CV(%)		11.5	

†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations. Tennessee AgResearch data of Raper et al. (2018).

Table OVT6 (continued). Average lint yield of 58 entries in the 2018 Crockett Co. trial in Maury City, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
41	CP 3475 B2XF	3675	1367	37.2
42	NG 3729 B2XF	3580	1356	37.9
43	PX5D28BW3FE	3366	1351	40.1
44	MON 17R818B3XF	3371	1346	39.9
45	NG 4601 B2XF	3293	1336	40.6
46	CPS 18864 GLTP	3450	1314	38.1
47	CP 18XC9 B3XF	3263	1280	39.2
48	NG 3699 B2XF	3438	1270	36.9
49	NG 4777 B2XF	3326	1256	37.8
50	MON 17R821B3XF	3036	1226	40.4
51	AMX 1819 B3XF	3225	1220	37.8
52	AMX 1815 B3XF	3456	1208	35.0
53	AMX 1816 B3XF	3365	1201	35.7
54	NG 4689 B2XF	3114	1192	38.3
55	NG 3780 B2XF	3168	1175	37.1
56	NG 3517 B2XF	3213	1157	36.0
57	BX 1976GLTP	2680	1112	41.5
58	AMX 1818 B3XF	2732	1076	39.4
	Average	**3649**	**1454**	**40.0**
	LSD (p<0.05)		234	
	CV(%)		11.5	

†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT7. Average lint yield of 60 entries in the 2018 Milan Research and Education Center trial in Milan, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
1	DP 1725 B2XF	3121	1326	42.5
2	PX3C06W3FE	3317	1309	39.5
3	DP 1646 B2XF	3143	1280	40.7
4	DP 1614 B2XF	3086	1272	41.2
5	NG 3522 B2XF	3112	1271	40.8
6	ST 4949GLT	3011	1269	42.2
7	DP 1820 B3XF	3034	1253	41.3
8	DG 3385 B2XF	3235	1245	38.5
9	PX3B07W3FE	3021	1234	40.9
10	DP 1835 B3XF	2886	1230	42.6
11	CP 9608 B3XF	2805	1226	43.7
12	NG 4601 B2XF	3006	1220	40.6
13	PHY 330 W3FE	2944	1207	41.0
14	PX3B09W3FE	2950	1203	40.8
15	PHY 320 W3FE	3039	1193	39.2
16	CP 9178 B3XF	2828	1177	41.6
17	NG 3729 B2XF	3105	1176	37.9
18	PX5D28BW3FE	2912	1169	40.1
19	NG 4777 B2XF	3093	1168	37.8
20	DP 1518 B2XF	2989	1167	39.0
21	NG 5007 B2XF	2879	1160	40.3
22	BX 1975GLTP	2792	1156	41.4
23	AMX 1816 B3XF	3237	1155	35.7
24	AMX 1817 B3XF	2806	1150	41.0
25	ST 5020GLT	2992	1149	38.4
26	MON 17R821B3XF	2825	1141	40.4
27	PHY 430 W3FE	2732	1128	41.3
28	PHY 350 W3FE	2862	1113	38.9
29	PX5B73W3FE	2785	1110	39.9
30	BX 1973GLTP	2579	1104	42.8
31	ST 5818GLT	2831	1091	38.5
32	CP 3475 B2XF	2902	1079	37.2
33	PX4A64W3FE	2673	1068	40.0
34	ST 5517GLTP	2800	1062	37.9
35	BX 1974GLTP	2484	1040	41.9
36	CPS 18507-B B3XF	2522	1040	41.2
37	PX5C09W3FE	2443	1027	42.1
38	ST 5471GLTP	2659	1025	38.6
39	CPS 18817 B3XF	2541	1025	40.3
40	AMX 1818 B3XF	2556	1006	39.4
	Average	**2727**	**1080**	**39.6**
	LSD (p<0.05)		249	
	CV(%)		14.3	

continued on next page

†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
‡SSG UA 114, SSG UA 222 turnout calculated from ginning Jackson grab sample.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT7 (continued). Average lint yield of 60 entries in the 2018 Milan Research and Education Center trial in Milan, TN, listed by yield rank.

Yield Rank	Variety	Seedcotton Yield (lb/ac)	Lint Yield (lb/ac)	Turnout (%)†
41	NG 3780 B2XF	2706	1004	37.1
42	DG 3214 B2XF	2581	1001	38.8
43	NG 3517 B2XF	2779	1001	36.0
44	SSG UA 114	2948	999	33.9‡
45	MON 17R818B3XF	2504	999	39.9
46	CP 18XC9 B3XF	2503	982	39.2
47	PHY 340 W3FE	2364	981	41.5
48	PHY 440 W3FE	2405	972	40.4
49	PHY 300 W3FE	2397	972	40.6
50	ST 5122GLT	2436	941	38.6
51	BX 1976GLTP	2253	935	41.5
52	NG 4689 B2XF	2413	924	38.3
53	PHY 480 W3FE	2244	893	39.8
54	AMX 1801 B3XF	2284	888	38.9
55	AMX 1819 B3XF	2289	866	37.8
56	SSG UA 222	2541	864	34.0‡
57	AMX 1815 B3XF	2445	855	35.0
58	PX4A69W3FE	2031	846	41.7
59	NG 3699 B2XF	2155	796	36.9
60	CPS 18864 GLTP	1798	685	38.1
	Average	**2727**	**1080**	**39.6**
	LSD (p<0.05)		249	
	CV (%)		14.3	

†Turnout calculated from ginning all four replicates of entire plot lengths from Ames Plantation and Lake Co locations.
‡SSG UA 114, SSG UA 222 turnout calculated from ginning Jackson grab sample.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT8. Average height, total nodes, first fruiting branches, nodes above white flower, and percent open measured within the 2018 Official Variety Trials.

Variety	Height (cm) †	Total Node	First Fruiting Branch	Node Above White Flower[1]	Percent Open[2]
AMX 1801 B3XF	104	17.6	6.4	1.8	37
AMX 1815 B3XF	103	16.8	6.3	1.5	25
AMX 1816 B3XF	117	16.4	6.1	1.8	32
AMX 1817 B3XF	113	16.2	6.5	1.1	40
AMX 1818 B3XF	121	16.6	6.5	1.9	38
AMX 1819 B3XF	118	16.5	6.3	2.6	38
BX 1973GLTP	123	17.0	6.3	1.5	38
BX 1974GLTP	118	16.5	6.0	1.6	35
BX 1975GLTP	117	16.9	6.2	1.5	40
BX 1976GLTP	110	16.1	6.4	1.3	37
CP 18XC9 B3XF	107	17.1	6.6	1.4	35
CP 3475 B2XF	108	16.9	6.4	1.4	38
CP 9178 B3XF	118	16.9	5.9	1.6	37
CP 9608 B3XF	122	16.7	6.6	1.2	35
CPS 18507-B B3XF	118	17.0	6.4	1.8	35
CPS 18817 B3XF	119	16.3	6.3	0.9	37
CPS 18864 GLTP	117	17.7	6.6	1.5	30
DG 3214 B2XF	119	16.6	6.0	1.6	42
DG 3385 B2XF	111	16.9	6.3	2.0	35
DP 1518 B2XF	110	17.0	6.1	1.5	33
DP 1614 B2XF	106	16.4	6.0	1.6	37
DP 1646 B2XF	120	17.2	6.5	1.0	40
DP 1725 B2XF	112	16.8	6.4	1.9	42
DP 1820 B3XF	113	17.6	6.6	1.6	35
DP 1835 B3XF	117	16.5	6.4	1.6	33
MON 17R818B3XF	109	17.5	6.9	1.6	33
MON 17R821B3XF	118	17.1	6.6	1.0	38
NG 3517 B2XF	117	17.3	6.2	1.3	37
NG 3522 B2XF	104	16.1	6.8	1.8	40
NG 3699 B2XF	111	17.3	6.4	2.1	38
NG 3729 B2XF	122	16.5	6.3	1.8	43
NG 3780 B2XF	117	17.6	6.3	1.6	38
NG 4601 B2XF	116	16.7	6.1	1.4	37
NG 4689 B2XF	125	17.9	6.5	1.6	27
NG 4777 B2XF	128	17.8	6.5	1.8	32
NG 5007 B2XF	117	16.8	6.1	1.5	42
PHY 300 W3FE	117	16.6	5.8	1.4	38
PHY 320 W3FE	117	16.9	6.3	1.3	38
PHY 330 W3FE	120	16.4	6.3	0.9	37
PHY 340 W3FE	104	17.6	6.4	1.8	37
Average	**115.0**	**16.9**	**6.4**	**1.5**	**37**
LSD (p<0.05)	4.2	0.6	0.4	0.6	8
CV (%)	9.6	10.4	14.9		

†Data collected from three replications of the one or more of the Ames Plantation, Jackson, Ridgely, and Maury City locations.
[1]Node above white flower determined was measured after cutout at each location.
[2]Percent Open Boll determined by visually rating of plots when several plots appear to reach 60% open.
Tennessee AgResearch data of Raper et al. (2018).

Table OVT8. Average height, total nodes, first fruiting branches, nodes above white flower, and percent open measured within the 2018 Official Variety Trials.

Variety	Height (cm) †	Total Node	First Fruiting Branch	Node Above White Flower[1]	Percent Open[2]
PHY 350 W3FE	116	17.2	6.4	1.3	33
PHY 430 W3FE	109	16.8	6.3	1.2	33
PHY 440 W3FE	119	17.3	6.5	0.9	42
PHY 480 W3FE	113	16.3	6.1	1.5	40
PX3B07W3FE	112	15.9	6.2	1.8	42
PX3B09W3FE	108	16.4	6.4	1.4	45
PX3C06W3FE	109	16.3	6.5	1.1	42
PX4A64W3FE	115	16.6	5.8	1.2	43
PX4A69W3FE	113	17.4	6.4	0.8	32
PX5B73W3FE	114	17.3	6.7	0.9	25
PX5C09W3FE	114	17.6	6.6	1.3	33
PX5D28BW3FE	118	16.6	6.2	1.3	40
ST 4949GLT	114	16.9	6.7	1.2	42
ST 5020GLT	117	15.9	6.4	1.9	42
ST 5122GLT	111	16.0	6.2	1.3	48
ST 5471GLTP	113	16.4	6.5	1.3	37
ST 5517GLTP	109	16.2	6.4	1.5	38
ST 5818GLT	115	17.0	6.4	1.9	35
Average	**115.0**	**16.9**	**6.4**	**1.5**	**37**
LSD (p<0.05)	4.2	0.6	0.4	0.6	8
CV (%)	9.6	10.4	14.9		

†Data collected from three replications of the one or more of the Ames Plantation, Jackson, Ridgely, and Maury City locations.

[1]Node above white flower determined was measured after cutout at each location.

[2]Percent Open Boll determined by visually rating of plots when several plots appear to reach 60% open.

Tennessee AgResearch data of Raper et al. (2018).

Table OVT9: Lint yield, gin turnout, and fiber quality of 18 like-entries in the 2017 and 2018 Official Variety Trials.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Leaf Grade
1	CP 9608 B3XF	1382	42.2	4.5	1.18	30.1	82.2	4
2	DP 1646 B2XF	1365	39.8	4.4	1.26	30.4	83.2	4
3	PHY 330 W3FE	1361	39.6	4.5	1.18	32.3	83.5	5
4	DP 1820 B3XF	1350	40.8	4.7	1.24	33.9	83.4	4
5	DG 3385 B2XF	1336	38.2	4.8	1.17	29.9	83.8	4
6	PHY 350 W3FE	1331	38.3	4.5	1.19	31.4	83.5	4
7	DP 1725 B2XF	1324	40.9	4.6	1.17	30.8	82.3	3
8	PHY 340 W3FE	1315	39.7	4.6	1.19	31.9	83.4	5
9	DP 1518 B2XF	1314	38.1	4.4	1.19	30.2	82.9	4
10	DP 1614 B2XF	1310	40.4	4.9	1.21	30.4	83.6	5
11	ST 5517 GLTP	1307	36.5	4.3	1.20	32.6	82.2	4
12	PHY 320 W3FE	1303	37.4	4.4	1.16	32.6	84.0	5
13	ST 4949 GLT	1293	40.6	4.6	1.14	30.1	82.8	4
14	PHY 300 W3FE	1279	39.2	4.6	1.17	31.7	83.3	4
15	ST 5020 GLT	1273	36.9	4.4	1.22	33.2	83.6	5
16	NG 3522 B2XF	1272	38.5	4.6	1.14	29.2	82.4	3
17	NG 4601 B2XF	1266	40.3	4.8	1.20	32.9	83.4	3
18	NG 3699 B2XF	1154	36.3	4.5	1.23	32.7	82.8	4
	Average	1307	39.1	4.6	1.19	31.5	83.1	4

2018 County Standard Trial Results

Table CST1. Average lint yield, gin turnout, fiber quality and CCC loan value of 18 entries calculated from 9 locations of the 2018 Tennessee County Standard Trials.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value (¢/lb)
1	DP 1725 B2XF	1317 a[¥]	42.6	4.7	1.17	29.8	82.4	41	4	53.95
2	DP 1646 B2XF	1293 ab	40.5	4.4	1.24	29.5	82.7	41	4	54.00
3	ST 4949 GLT	1247 a-c	42.8	4.7	1.15	29.2	82.4	41	4	53.95
4	ST 5471 GLTP	1245 a-c	39.4	4.3	1.17	30.5	81.9	41	4	54.20
5	PHY 350 W3FE	1229 b-d	38.6	4.6	1.21	30.8	83.9	41	4	54.30
6	DP 1614 B2XF	1225 b-d	41.6	4.9	1.21	30.1	83.4	41	5	52.30
7	PHY 430 W3FE	1224 b-d	40.7	4.6	1.14	30.8	82.9	41	4	54.15
8	NG 3729 B2XF	1222 b-e	39.1	4.7	1.21	30.2	83.8	51	4	51.00
9	PHY 320 W3FE	1205 c-e	38.8	4.4	1.19	31.4	83.8	41	5	52.45
10	DP 1820 B3XF	1180 c-e	41.4	4.6	1.23	32.5	82.7	41	4	54.35
11	DP 1518 B2XF	1179 c-e	39.6	4.3	1.20	29.6	82.7	41	5	52.10
12	ST 5122 GLT	1178 c-f	39.6	4.4	1.16	29.4	81.1	41	4	53.90
13	DG 3385 B2XF	1171 c-f	39.4	4.7	1.16	28.6	83.5	41	3	54.50
14	DG 3214 B2XF	1166 c-f	39.1	4.8	1.18	30.4	83.9	51	5	49.70
15	ST 5517 GLTP	1150 d-g	37.5	4.2	1.19	31.1	81.6	41	4	54.40
16	PHY 330 W3FE	1139 e-g	40.6	4.6	1.18	31.8	83.6	41	5	52.45
17	ST 5020 GLT	1094 fg	37.7	4.8	1.23	32.3	83.1	51	5	49.85
18	NG 4777 B2XF	1075 g	37.5	4.4	1.19	32.2	82.7	41	4	54.35
	Mean	**1197**	**39.8**	**4.6**	**1.19**	**30.6**	**82.9**	**41**	**4.25**	**53.22**
	LSD ($p \leq 0.05$)	87	1.0	0.1	0.02	0.7	0.6		0.6	
	CV (%)	7.6	2.4	3.2	1.3	2.4	0.7		14.5	

[¥]Means followed by the same letter are not significantly different (p=0.05).

Mean and LSD values for lint yield were calculated from 18 varieties planted and harvested in 9 independent 2018 Tennessee County Standard Trials. Mean and LSD values for fiber quality parameters were calculated from 8 independent Tennessee County Standard Trials.

Table CST2. Results from the 2018 Crockett County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	ST 5471 GLTP	1396	42.0	4.6	1.16	29.8	82.1	41	3
2	PHY 350 W3FE	1357	39.4	4.8	1.19	31.7	84.9	41	3
3	PHY 320 W3FE	1312	39.2	4.9	1.16	30.1	83.5	41	4
4	DP 1646 B2XF	1293	41.4	4.7	1.24	29.0	83.3	41	3
5	ST 4949 GLT	1290	43.2	4.8	1.14	30.1	82.3	41	4
6	PHY 330 W3FE	1267	41.2	4.8	1.16	30.1	82.9	41	4
7	ST 5020 GLT	1243	38.9	5.0	1.20	31.9	81.2	41	4
8	PHY 430 W3FE	1209	41.0	4.8	1.13	29.7	81.9	41	3
9	ST 5517 GLTP	1207	39.0	4.3	1.18	30.6	82.0	41	5
10	NG 4777 B2XF	1180	39.0	4.5	1.15	31.4	83.3	41	4
11	NG 3729 B2XF	1156	39.4	4.8	1.19	29.8	83.3	51	4
12	DP 1518 B2XF	1154	40.7	4.5	1.17	30.1	82.5	41	4
13	ST 5122 GLT	1147	39.3	4.5	1.12	29.1	79.7	41	3
14	DP 1725 B2XF	1125	41.8	4.9	1.16	29.2	81.4	41	3
15	DP 1820 B3XF	1109	41.9	4.8	1.23	31.7	82.6	41	3
16	DG 3385 B2XF	1109	39.6	5.1	1.16	27.5	82.8	41	3
17	DG 3214 B2XF	1094	38.6	4.9	1.17	29.8	83.8	51	4
18	DP 1614 B2XF	1084	39.3	5.1	1.18	29.5	83.3	41	4
	Mean	**1207**	**40.3**	**4.8**	**1.17**	**30.1**	**82.6**	**41**	**4**

Table CST3. Results from the 2018 Fayette County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1646 B2XF	1295	42.7	4.8	1.16	28.8	81.7	51	3
2	DP 1725 B2XF	1237	44.1	4.7	1.15	28.5	81.8	51	4
3	PHY 430 W3FE	1209	42.2	4.6	1.08	30.1	82.8	51	4
4	ST 5471 GLTP	1199	42.6	4.3	1.12	29.2	81.8	51	3
5	NG 3729 B2XF	1197	40.1	4.8	1.16	28.6	82.5	51	4
6	PHY 320 W3FE	1192	41.6	4.6	1.15	29.8	83.2	51	4
7	DG 3214 B2XF	1188	41.4	4.6	1.14	29.9	82.9	51	4
8	ST 4949 GLT	1138	44.2	4.6	1.10	27.6	81.3	51	4
9	DP 1518 B2XF	1128	41.4	4.7	1.14	28.5	82.6	51	4
10	DP 1820 B3XF	1126	41.9	4.7	1.20	31.1	83.6	51	4
11	PHY 330 W3FE	1094	42.7	4.8	1.17	32.0	84.5	51	5
12	ST 5122 GLT	1076	38.6	4.1	1.12	29.8	81.7	51	4
13	NG 4777 B2XF	1067	39.6	4.6	1.15	30.5	81.3	51	4
14	ST 5517 GLTP	1033	36.8	4.3	1.13	29.0	81.2	51	4
15	ST 5020 GLT	1012	39.2	5.0	1.19	30.2	83.2	51	3
16	DP 1614 B2XF	996	40.2	5.1	1.12	28.2	81.7	51	4
	Mean	**1137**	**41.2**	**4.6**	**1.14**	**29.5**	**82.4**	**51**	**4**

Table CST4. Results from the 2018 Gibson County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1646 B2XF	1112	41.9	4.3	1.25	29.0	82.3	51	4
2	DP 1725 B2XF	1081	44.5	4.6	1.18	28.8	82.3	51	4
3	DP 1614 B2XF	1049	43.5	4.7	1.19	30.7	82.9	52	5
4	ST 5020 GLT	1014	39.3	4.7	1.22	32.6	82.3	51	4
5	PHY 430 W3FE	1007	40.7	4.5	1.14	31.0	82.2	52	6
6	ST 5122 GLT	983	42.2	4.1	1.15	27.3	79.5	51	4
7	PHY 350 W3FE	980	40.7	4.6	1.19	30.5	82.1	51	4
8	NG 3729 B2XF	973	39.3	4.4	1.23	28.9	82.8	52	5
9	ST 4949 GLT	972	43.4	4.6	1.16	28.8	82.3	52	4
10	DP 1820 B3XF	968	44.3	4.5	1.23	31.3	81.8	51	4
11	ST 5517 GLTP	931	39.0	4.0	1.20	30.8	81.0	51	5
12	PHY 320 W3FE	883	39.0	4.0	1.18	30.2	83.0	51	5
13	DG 3385 B2XF	852	40.9	4.5	1.16	28.8	83.2	41	3
14	DG 3214 B2XF	852	40.1	4.9	1.19	30.2	83.4	51	5
15	ST 5471 GLTP	851	39.5	4.1	1.18	29.8	82.0	51	4
16	PHY 330 W3FE	838	42.2	4.6	1.18	32.1	83.5	52	5
17	NG 4777 B2XF	833	38.6	4.2	1.21	31.2	82.8	52	4
18	DP 1518 B2XF	821	41.0	4.0	1.20	29.2	82.2	51	5
	Mean	**944**	**41.1**	**4.4**	**1.19**	**30.1**	**82.3**	**51**	**4**

Table CST5. Results from the 2018 Hardeman County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1646 B2XF	1299	39.5	4.4	1.20	31.7	82.1	41	3
2	DP 1725 B2XF	1294	44.1	4.8	1.14	30.8	83.2	51	3
3	PHY 430 W3FE	1291	42.0	4.6	1.10	30.4	82.6	42	4
4	NG 3729 B2XF	1279	41.8	4.9	1.15	30.6	83.4	52	4
5	DP 1614 B2XF	1258	43.9	5.1	1.20	30.1	83.3	42	5
6	DG 3385 B2XF	1243	41.7	4.8	1.15	29.9	83.6	41	4
7	ST 5517 GLTP	1216	37.7	4.2	1.18	32.7	82.3	41	4
8	ST 5471 GLTP	1196	39.7	4.2	1.16	31.4	81.9	51	4
9	DG 3214 B2XF	1177	42.6	5.1	1.13	30.8	83.4	52	5
10	DP 1820 B3XF	1176	42.1	4.6	1.22	33.5	83.3	51	4
11	PHY 350 W3FE	1147	39.5	4.6	1.17	30.6	84.4	42	4
12	ST 5122 GLT	1147	40.1	4.7	1.13	29.1	82.1	41	3
13	ST 5020 GLT	1143	40.2	4.9	1.18	32.7	84.1	51	4
14	ST 4949 GLT	1114	44.2	4.5	1.12	30.9	82.7	41	4
15	PHY 330 W3FE	1103	41.1	4.8	1.15	31.3	82.7	42	3
16	PHY 320 W3FE	1052	39.7	4.4	1.18	32.0	84.0	42	5
17	NG 4777 B2XF	1015	38.4	4.4	1.16	32.0	82.6	52	5
18	DP 1518 B2XF	908	40.0	4.1	1.17	28.9	82.1	52	5
	Mean	**1170**	**41.0**	**4.6**	**1.16**	**31.1**	**83.0**	**51**	**4**

Table CST6. Results from the 2018 Haywood County (Sullivan) Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1646 B2XF	1492	40.5	4.2	1.27	29.3	82.9	41	5
2	NG 3729 B2XF	1482	38.6	4.8	1.25	30.0	83.8	41	4
3	DP 1725 B2XF	1481	41.2	4.4	1.19	29.6	82.4	41	4
4	DP 1614 B2XF	1386	41.7	5.0	1.23	29.1	83.8	42	5
5	PHY 350 W3FE	1379	38.0	4.5	1.21	30.0	83.7	41	3
6	DG 3385 B2XF	1340	41.1	4.5	1.17	27.7	83.2	41	3
7	DP 1820 B3XF	1324	39.4	4.5	1.25	32.3	82.3	41	5
8	ST 5471 GLTP	1320	37.5	4.2	1.17	30.1	81.9	41	5
9	PHY 430 W3FE	1306	40.3	4.3	1.14	30.4	82.9	42	5
10	DG 3214 B2XF	1305	38.8	4.7	1.22	30.2	84.2	42	5
11	ST 4949 GLT	1303	42.4	4.6	1.16	28.5	81.8	41	4
12	ST 5122 GLT	1288	38.7	4.1	1.17	28.9	81.0	41	4
13	DP 1518 B2XF	1279	39.4	4.1	1.19	28.8	82.6	41	5
14	PHY 320 W3FE	1234	38.4	4.3	1.19	30.4	83.4	41	4
15	ST 5517 GLTP	1206	36.4	4.2	1.20	30.2	81.3	41	4
16	PHY 330 W3FE	1153	39.6	4.4	1.18	31.1	83.9	42	5
17	NG 4777 B2XF	1124	36.9	4.3	1.21	32.2	82.7	41	4
18	ST 5020 GLT	1013	35.0	4.8	1.22	32.1	82.3	42	5
	Mean	**1301**	**39.1**	**4.4**	**1.20**	**30.0**	**82.8**	**41**	**4**

Table CST7. Results from the 2018 Haywood County (Taylor) Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1725 B2XF	1716	40.1	4.4	1.19	29.9	82.7	41	5
2	ST 4949 GLT	1626	39.5	4.4	1.15	29.0	82.9	41	5
3	PHY 320 W3FE	1608	36.6	4.0	1.21	31.8	84.2	51	7
4	ST 5122 GLT	1591	37.1	4.2	1.20	30.3	81.5	41	5
5	DG 3385 B2XF	1536	36.5	4.2	1.19	30.8	83.0	41	4
6	NG 3729 B2XF	1522	37.1	4.4	1.23	30.6	84.7	41	6
7	DP 1518 B2XF	1511	37.1	3.9	1.23	30.8	82.9	41	6
8	DP 1820 B3XF	1470	39.7	4.7	1.27	32.5	82.8	41	5
9	ST 5471 GLTP	1450	36.7	4.0	1.17	30.5	80.9	41	4
10	DG 3214 B2XF	1444	35.9	4.5	1.20	29.2	83.7	42	6
11	DP 1614 B2XF	1422	38.3	4.1	1.23	31.0	83.6	41	5
12	PHY 330 W3FE	1412	38.7	4.5	1.21	31.9	83.6	41	6
13	PHY 350 W3FE	1366	35.7	4.5	1.26	30.4	83.6	41	6
14	DP 1646 B2XF	1339	38.6	4.1	1.27	29.1	81.9	41	4
15	ST 5020 GLT	1316	36.3	4.5	1.25	33.0	83.4	51	6
16	PHY 430 W3FE	1311	39.5	4.2	1.22	31.8	82.4	42	6
17	ST 5517 GLTP	1306	35.1	4.0	1.21	30.9	82.2	41	6
18	NG 4777 B2XF	1175	35.2	4.2	1.21	31.9	82.7	42	5
	Mean	**1451**	**37.4**	**4.3**	**1.22**	**30.9**	**82.9**	**42**	**5**

Table CST8. Results from the 2018 Lincoln County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1725 B2XF	1160	42.8	5.1	1.09	29.2	82.0	41	3
2	PHY 330 W3FE	1078	40.5	5.1	1.14	31.7	84.4	42	4
3	DP 1646 B2XF	1072	41.7	5.1	1.19	29.9	81.9	31	3
4	PHY 350 W3FE	1069	41.6	5.4	1.13	31.3	83.1	32	3
5	PHY 430 W3FE	1068	42.9	5.2	1.08	29.9	82.1	32	4
6	DG 3385 B2XF	1059	40.6	5.3	1.09	27.8	82.6	32	4
7	DP 1614 B2XF	1043	42.3	5.4	1.13	29.8	82.4	42	5
8	NG 3729 B2XF	1041	39.0	5.2	1.17	30.5	83.7	41	5
9	DP 1518 B2XF	1022	40.8	5.2	1.10	29.1	82.2	42	4
10	ST 5122 GLT	1016	39.4	5.0	1.11	29.8	81.3	31	3
11	DG 3214 B2XF	1001	40.1	5.3	1.14	30.3	82.5	42	4
12	DP 1820 B3XF	985	40.5	5.2	1.12	32.0	82.5	41	4
13	PHY 320 W3FE	957	39.7	5.0	1.11	31.3	83.7	31	4
14	ST 4949 GLT	954	43.0	5.2	1.07	28.0	81.7	42	4
15	ST 5471 GLTP	943	39.8	5.1	1.10	30.4	81.0	31	3
	Mean	**1031**	**41.0**	**5.2**	**1.12**	**30.1**	**82.5**	**41**	**4**

Table CST9. Results from the 2018 Madison County (Couch) Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	ST 4949 GLT	1340	44.3	4.9	1.14	28.7	82.5	51	5
2	ST 5471 GLTP	1330	39.9	4.4	1.17	29.6	81.5	51	4
3	DP 1725 B2XF	1327	43.2	4.6	1.16	29.0	81.4	51	4
4	DP 1614 B2XF	1318	42.7	5.0	1.23	28.6	83.2	52	4
5	DP 1646 B2XF	1277	41.0	4.5	1.26	28.7	82.2	41	4
6	ST 5122 GLT	1274	39.6	4.3	1.16	30.1	81.9	51	6
7	DG 3385 B2XF	1263	40.0	4.7	1.17	27.8	84.3	52	3
8	DP 1518 B2XF	1261	40.0	4.4	1.21	28.8	83.4	51	5
9	ST 5020 GLT	1246	38.1	4.5	1.24	31.4	83.4	51	5
10	DP 1820 B3XF	1236	42.2	4.5	1.21	32.1	81.5	41	5
11	PHY 350 W3FE	1223	37.4	4.6	1.24	30.9	85.1	51	5
12	PHY 430 W3FE	1220	40.9	4.7	1.14	30.7	83.7	42	4
13	PHY 330 W3FE	1210	41.4	4.6	1.19	31.5	84.0	52	6
14	PHY 320 W3FE	1190	39.8	4.4	1.18	31.5	83.3	51	4
15	NG 3729 B2XF	1173	39.2	4.6	1.26	30.7	84.3	52	4
16	ST 5517 GLTP	1158	38.1	4.3	1.20	31.5	81.2	41	4
17	DG 3214 B2XF	1151	39.3	4.7	1.20	30.7	83.4	51	5
18	NG 4777 B2XF	1140	37.4	4.2	1.20	32.7	81.4	52	4
	Mean	**1241**	**40.3**	**4.6**	**1.20**	**30.3**	**82.9**	**51**	**5**

Table CST10. Results from the 2018 Madison County (Griggs) Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1518 B2XF	1510	40.0	4.1	1.19	29.4	82.5	41	4
2	DP 1646 B2XF	1495	41.5	4.4	1.24	29.0	83.7	31	3
3	DP 1614 B2XF	1459	42.6	4.8	1.20	29.0	83.6	41	4
4	DP 1725 B2XF	1422	43.3	4.6	1.16	29.1	83.2	31	3
5	PHY 350 W3FE	1410	39.6	4.5	1.18	30.5	83.3	41	4
6	ST 4949 GLT	1368	44.2	4.6	1.15	28.4	82.2	41	4
7	ST 5471 GLTP	1368	39.7	4.2	1.18	30.9	82.3	31	3
8	ST 5517 GLTP	1328	37.7	4.1	1.20	31.0	82.0	31	3
9	PHY 430 W3FE	1320	40.6	4.5	1.12	30.6	83.5	41	3
10	PHY 320 W3FE	1283	39.1	4.4	1.20	31.6	84.1	41	4
11	DG 3214 B2XF	1225	39.5	4.9	1.17	29.8	84.9	41	3
12	NG 4777 B2XF	1212	36.3	4.2	1.17	32.4	83.3	41	3
13	ST 5122 GLT	1203	39.2	4.2	1.17	30.1	81.5	41	3
14	NG 3729 B2XF	1186	38.9	4.7	1.21	30.0	83.7	41	4
15	PHY 330 W3FE	1173	40.6	4.4	1.18	31.3	83.6	41	4
16	DP 1820 B3XF	1155	41.3	4.7	1.22	33.3	84.0	41	4
17	DG 3385 B2XF	1154	39.0	4.6	1.14	27.9	83.2	41	2
18	ST 5020 GLT	1108	37.9	4.6	1.23	31.6	83.7	41	4
	Mean	**1299**	**40.1**	**4.5**	**1.18**	**30.3**	**83.2**	**41**	**3**

Table CST11. Results from the 2018 Tipton County Standard Trial.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1725 B2XF	1166	42.8	5.0	1.17	31.6	82.9	41	4
2	PHY 430 W3FE	1146	40.9	5.1	1.14	32.0	84.0	42	4
3	ST 5471 GLTP	1094	40.5	4.6	1.18	31.6	82.6	41	4
4	PHY 320 W3FE	1087	38.3	4.7	1.18	33.8	84.5	41	4
5	ST 4949 GLT	1068	40.9	5.0	1.17	29.5	82.7	41	5
6	DG 3214 B2XF	1059	37.8	4.9	1.17	32.2	84.7	41	3
7	DP 1820 B3XF	1058	40.0	4.8	1.24	33.1	83.0	41	4
8	DP 1614 B2XF	1051	40.8	5.1	1.22	32.7	83.8	41	4
9	DP 1518 B2XF	1039	38.8	4.9	1.21	31.0	83.4	41	4
10	DP 1646 B2XF	1039	39.7	4.8	1.23	30.5	83.5	41	4
11	PHY 350 W3FE	1029	38.9	4.9	1.20	32.0	84.0	41	4
12	NG 3729 B2XF	1027	38.7	5.4	1.18	31.4	84.6	41	4
13	PHY 330 W3FE	1005	40.0	4.8	1.20	34.9	84.5	41	5
14	ST 5517 GLTP	960	37.0	4.8	1.15	30.9	81.1	41	3
15	DG 3385 B2XF	929	36.6	5.1	1.15	28.6	84.4	41	3
16	NG 4777 B2XF	926	38.4	5.0	1.17	33.5	82.6	41	5
17	ST 5122 GLT	893	40.7	4.9	1.15	30.6	81.5	41	4
18	ST 5020 GLT	751	35.7	5.1	1.26	32.7	84.5	51	5
	Mean	**1018**	**39.2**	**4.9**	**1.19**	**31.8**	**83.5**	**41**	**4**

Table CST12. Lint yield, gin turnout, and fiber quality of 7 like-entries in the 2017 and 2018 Tennessee County Standard Trial Programs.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade
1	DP 1646 B2XF	1354	40.1	4.4	1.26	29.9	83.4	41	4
2	DP 1725 B2XF	1322	41.7	4.5	1.18	30.4	82.7	41	4
3	DP 1614 B2XF	1303	41.3	4.9	1.21	30.4	83.8	41	5
4	ST 4949 GLT	1298	42.0	4.6	1.15	30.0	83.0	41	5
5	DG 3385 B2XF	1286	39.4	4.7	1.17	29.4	83.9	41	4
6	DP 1518 B2XF	1279	39.2	4.3	1.20	30.1	83.3	41	5
7	PHY 330 W3FE	1241	40.4	4.6	1.20	32.7	84.2	41	5
	Mean	**1298**	**40.6**	**4.6**	**1.20**	**30.4**	**83.5**	**41**	**5**

Tennessee AgResearch data of Raper et al. (2017).
Tennessee AgResearch data of Raper et al. (2018).

Glossary

Bollgard II: A two-gene trait which expresses the Cry1Ac and Cry2Ab proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm. Abbreviated **B2** in variety names.

Bollgard III: A three-gene trait which expresses the Cry1Ac, Cry2Ab and Vip3A proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm. Abbreviated **B3** in variety names.

Commodity Credit Corporation: An entity administered by the Farm Services Agency of the United States Department of Agriculture. Commonly abbreviated as CCC.

Color: See ***HVI Color Grade.***

Conventional tillage: Systems in which the entire surface layer of soil is mixed or inverted by plowing, power tilling, or multiple disking before planting. Conventional tillage systems may also involve inter- row cultivation after planting.

County Standard Test: A large plot variety trial consisting of no-replications and only commercially available cotton varieties. Abbreviated as CST.

Coefficient of variation: A statistical estimate of experimental variability, calculated as the standard deviation divided by the mean, and expressed as a percentage. A relatively low CV indicates greater experimental precision. Abbreviated as CV.

Earliness: A measure of how rapidly a cotton crop reaches maturity. Relative earliness of varieties can be measured by the heat units needed to mature the highest harvestable boll. Earliness is under genetic control but is strongly influenced by crop management.

Enlist: A trait which provides tolerance (in cotton) to the herbicides 2,4-D, glyphosate, and glufosinate. Abbreviated ***FE*** in variety names.

Gin turnout: Weight of lint as a percent of seedcotton weight, which is composed of lint, seed, trash, and excess moisture.

Glytol: A trait which provides tolerance to the herbicide glyphosate. Abbreviated **G** in variety names.

Heat Units: A measure of thermal time used to describe crop growth and development. Commonly abbreviated as *GDD* (growing degree days) or *DD60s* (degree-days above a threshold of 60° F).

High Volume Instrument: A classing instrument providing accurate measurements of fiber length, strength, micronaire, length uniformity, trash, and color. Abbreviated as HVI.

HVI Color Grade: Cotton color grade is a function of white reflectance (Rd) and yellowness (+b) of the lint sample. The HVI color code identifies the quadrant of the Nickerson-Hunter cotton colorimeter diagram in which Rd and +b values intersect (USDA, 1999). Color may be affected by moisture and temperature after boll

opening, during harvest, ginning or storage.

Height to Node Ratio: A ratio of the main stem height divided by the total number of nodes. This measurement can provide insight into vegetative vigor.

Leaf Grade: The classer's leaf grade is a visual estimate of the amount of cotton plant leaf particles in a sample of lint. There are seven leaf grades represented by physical standards, plus a below grade designation. See ***Trash.***

Length: Average fiber length of the longer one-half of the fibers sampled, in hundredths of an inch. Fiber length is under strong genetic control but may be reduced by environmental stress, nutrient deficiency, or fiber breakage. Staple expresses fiber length in 32nds of an inch.

Length (32nds)	Length (Inches)	Length (32nds)	Length (Inches)
24	0.79 & shorter	36	1.11 – 1.13
26	0.80 – 0.85	37	1.14 – 1.17
28	0.86 – 0.89	38	1.18 – 1.20
29	0.90 – 0.92	39	1.21 – 1.23
30	0.93 – 0.95	40	1.24 – 1.26
31	0.96 – 0.98	41	1.27 – 1.29
32	0.99 – 1.01	42	1.30 – 1.32
33	1.02 – 1.04	43	1.33 – 1.35
34	1.05 – 1.07	44 & +	1.36 & +
35	1.08 – 1.10		

Source: USDA (1999)

Lint yield: Weight of lint harvested per unit ground area (typically reported as pounds per acre).

Liberty Link: A trait which provides tolerance to the herbicide glufosinate. Abbreviated ***LL*** in variety names.

Least Significant Difference: Least significant difference is the statistical estimate of the smallest difference between two means that are significantly different at a fixed p-value (usually 0.05).

Micronaire: A measure of fiber fineness or maturity. An airflow instrument measures the air permeability of a given mass of cotton lint compressed to a fixed volume. Low "mike" values indicate finer or less mature fibers. Mike is strongly influenced by boll load, leaf retention and environmental conditions (especially moisture supply) during boll maturation. Abbreviated as mike or mic***.*** No decimal point is used by the USDA (1999) in reporting micronaire values, while others report values in tenths of units.

Market Value	HVI Micronaire
Low discount range	34 and below
Base range	35 – 36
Premium range	37 – 42
Base range	43 – 49
High discount range	50 and above

Source: USDA (1999)

***Nodes above cracked boll*:** A measure of plant maturity measured by the number of nodes from the highest first-

position cracked boll to the node of the highest harvestable boll. Abbreviated as NACB.
Nodes above white flower: A measure of the number of main-stem nodes above the uppermost white flower at first position, indicating relative crop maturity. An average NAWF count of 5 is used as a reference point of physiological cutout or last effective boll population. Abbreviated as NAWF.

No-till: A system in which a crop is planted directly into a seedbed not tilled since the previous crop and only the immediate seed zone is disturbed during planting. Other surface residues are not moved, and weed control is accomplished primarily with herbicides.

Official Variety Trail: A replicated small-plot test conducted at several locations to evaluate the adaptation of the most promising commercial cultivars for Tennessee. Abbreviated as OVT.

P-value: Observed significance level in an analysis of variance. It estimates the probability of error in concluding that differences truly exist among treatments (varieties).

Randomized Complete Block Design: An experimental design in which all treatments are randomly assigned to plots in separate within-field blocks (replications). This design increases the power of the trial to isolate treatment differences from inherent field variability.

Rd and +b: Measures of white reflectance (%) and of yellow pigmentation (Hunter's scale), respectively, in a sample of lint. Lower Rd values indicate grayer samples, while higher +b values indicate yellower samples. Field weathering can decrease reflectance, while excess moisture in storage can cause yellowing.

Roundup Ready: A trait which provides tolerance to a broadcast application of the herbicide glyphosate until the fifth true leaf reaches the size of a quarter. Subsequent glyphosate applications must be directed towards the base of the plant. Abbreviated ***R*** or ***RR*** in variety names.

Roundup Ready Flex: A trait which provides tolerance to a broadcast application of the herbicide glyphosate beyond the fifth true leaf stage. Abbreviated ***F*** or ***RF*** in variety names.

Seedcotton: Lint plus seed, trash and excess moisture.

Staple: A traditional term applied to lengths of fiber that require spinning or twisting in the manufacture of yarn. Staple also refers to the average length of the bulk fibers measured in 32nds of one inch. Cotton fiber considered with regard to its length.

Strength: Force required to break a bundle of fibers one tex unit in size. A tex is the weight in grams of 1,000 meters of fiber. HVI clamp jaw spacing is 1/8 inch. Fiber strength is under strong genetic control, but may be reduced by nutrient deficiency or stress.

Strength category	HVI Strength
	(grams per tex)
Very strong	31 and above
Strong	29 – 30
Intermediate	26 – 28
Weak	24 – 25
Very weak	23 and below
Source: USDA (1999)	

Transgenic variety: A variety containing genes from dissimilar species or other foreign sources that confer

desirable traits such as insect or herbicide resistance.
Trash: Percentage of the sample surface area covered by non-lint materials, as determined by a video scanner. Typical sources of trash include leaf fragments and bark. HVI trash measurement is correlated to a hand classer's leaf grade:

Twinlink: A two-gene trait which expresses the Cry1Ab and Cry2Ae proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm. Abbreviated ***T*** in variety names.

TwinlinkPlus: A three-gene trait which expresses the Cry1Ab, Cry2Ae, and Vip3Aa19 proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm. Abbreviated ***TP*** in variety names.

Uniformity: Length uniformity is the ratio between the mean length and the upper-half mean length of the fibers, expressed as a percentage. Also referred to as the length uniformity index.

Uniformity Group	Length Uniformity Index
Very high	86 and above
High	83- 85
Intermediate	80- 82
Low	77- 79
Very low	76 and below

Source: USDA (1999)

Widestrike: A two-gene trait which expresses the Cry1Ac and Cry1F proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm. Abbreviated ***W*** in variety names.

Widestrike 3: A three-gene trait which expresses the Cry1Ac, Cry1F, and Vip3A proteins from *Bacillus thuringiensis (Bt)* and provides resistance to certain lepidopteran pests such as tobacco budworm and improved resistance management. Abbreviated ***W3*** in variety names.

XtendFlex: A trait which provides tolerance (in cotton) to the herbicides dicamba, glyphosate, and glufosinate. Abbreviated ***XF*** in variety names.

References

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