Cotton Cultivar Trials for 2018 Central and South Texas

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Introduction

Official Cultivar Trials (OCT) in cotton are conducted each year by Texas A&M AgriLife Research to determine the relative performance of varieties available to producers in Texas. These tests are conducted statewide to evaluate commercial cultivars in every cotton growing region. Since Texas is a large state with diverse climates and growing seasons, the OVT results are reported separately for Central and South Texas, and the Rolling and High Plains. This report concentrates on the cotton production regions of Central and South Texas.

Yield and other characteristics were analyzed as randomized complete block designs. Least significant differences (LSD) are used to determine if two cultivars are different at k=100, which approximates the 5% probability level. Values reported for any two cultivars at each location that differ by more than the LSD value are expected to be different in 95 of every 100 comparisons. The test average (mean) and the coefficient of variation (CV) also are reported for each characteristic measured at each location. The coefficient of variation is a measure of the uniformity of the test site (e.g. soil uniformity, drainage, disease, etc.). Lower coefficients of variation are desirable.

Agronomic Determinations

Lint yield: Lint yield per acre is determined as (lbs. seed cotton/plot) x (appropriate gin turnout) x (area conversion factor).

Lint percent: Amount of lint in a hand harvested boll sample of seed cotton expressed as a percent of seed cotton in the sample.

Gin turnout: Amount of lint in a random sample of machine harvested seed cotton expressed as a percent of seed cotton in the sample

Fiber Quality Determinations

Fiber quality parameters were determined by high volume instrument (HVI) testing at the Texas Tech University Fiber and Biopolymer Research Institute at Lubbock, TX.

Fiber Fineness: Fiber fineness, micronaire, is a measure of the maturity and/or the fineness of cotton fibers and is reported in micronaire units. Micronaire is a relative measure of the development, or maturity, of the secondary wall of the cotton fiber throughout its entire length. Processing rates, fabric dyeing, and yarn and fabric appearance are adversely affected by immature fibers. Fine fibers, although mature, weigh less per unit length and may require reduced processing speeds compared to thicker fibers, yet these finer fibers may produce stronger yarns. Thick or coarse fibers result in fewer fibers in a cross section of yarn, and therefore, may produce weaker yarns.

Fiber fineness is determined by forcing air through a specified weight of lint. The rate of air flow is related to fiber thickness. Finer fibers result in more fibers per specified weight and, therefore, have greater resistance to air flow. Micronaire values of 3.4 or below indicate fine and perhaps immature fibers and values of 5.0 or higher indicate coarse fibers. Values of 3.5 to 4.9 are desirable and indicate mature, well-developed fibers.

Fiber Length: Fiber length is reported in hundredths of an inch as measured by High Volume instrument and is the average of the longest 50 percent of the fibers in the sample, usually referred to as the upper half mean (UHM). Long fibers are desirable because they produce greater yarn strength, aid in spinning finer yarns, and can be processed at higher speeds.

HVI fiber lengths (in.)
and descriptive designation

Below 0.97	Short
0.97 - 1.10	Medium
1.11 -1.28	Long
1.29 – 1.36	Extra long
1.37 and above	Extra long staple upland

Fiber Uniformity: Fiber uniformity index (UI) provides a relative measure of the length uniformity of cotton fibers. Uniformity is calculated as the ratio of the average length of all fibers to the average length of the longest 50 percent of the fibers in the sample. High uniformity values indicate uniform fiber length distribution and are associated with a high-quality product and with low manufacturing waste.

Uniformity ratios
and descriptive designation

Below 77	Very low
77-79	Low
80-82	Average
83-85	High
Above 85	Very high

Fiber Strength: Yarn strength and ease of processing are positively correlated with strong fibers. Strength values are reported in grams of force required to break a bundle of cotton fibers with the holding jaws separated by 1/8 inch. The size of the bundle of fibers is described in tex units. Fiber strength is described from very low to very high within UHM classifications.

HVI 1/8-inch gauge strength (g/tex)	Fiber length group and descriptive designation
Short (0.96 inch or less)	
18-19	Very low
20-21	Low
22-23	Average
24-25	High
26-27	Very high
Medium (0.97-1.10 inch)	
17-19	Very low
20-22	Low
23-25	Average
26-28	High
29-31	Very high
Long (1.11-1.28 inch)	
18-20	Very low
21-23	Low
24-26	Average
27-29	High
30-32	Very high

Fiber Elongation: Elongation is the degree of extension of the fibers before break occurs when measuring strength. Fiber bundle elongation is correlated with yarn elongation but has an insignificant effect on yarn strength. Its value and importance in yarn manufacture has not been fully established.

Fiber elongation	and descriptive designation
4.9 and below	Very low
5.0-5.8	Low
5.9-6.7	Average
6.8-7.6	High
7.7 and above	Very high

Work to break: An estimate of the amount of work required to completely break the bundle of fibers during HVI determination of fiber bundle strength. Work to break is estimated by multiplying HVI fiber bundle strength by elongation. This value provides an additional estimate of the yarn performance derived from each variety.

Acknowledgments

The authors wish to recognize the contributions of personnel at the Texas A&M AgriLife Research and Extension Centers, graduate students and undergraduate students who contributed to the conduct of these cultivar evaluations.

Table 1. 2017 Cotton Cultivar Tests and Preliminary Cultivar Tests locations, soil types, and irrigated/dryland.

Location	Soil Type	Irrigated
Weslaco	Hildago s.c.l.[1]	yes
Corpus Christi	Victoria clay	no
College Station-irrigated	Westwood s.l.[2]	yes
College Station-dryland	Westwood s.l.[2]	no
Commerce	Crockett loam	yes
Chillicothe	Abilene c.l.[3]	yes

1. s.c.l.=sandy clay loam
2. s.l.=silt loam
3. c.l.=clay loam

Table 2. Agronomic performance and fiber quality of cotton cultivars evaluated at Weslaco during 2018 (Irrigated).

Cultivar	Lint Yield (lb/ac)	Lint Percent (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)	Work to Break
Deltapine DP 1646 B2XF	1898	45.9	4.7	1.22	29.4	84.2	5.7	168
TAM 13 S-20	1750	43.1	4.8	1.18	32.4	85.4	5.4	173
Deltapine DP 1725 B2XF	1735	48.4	5.2	1.15	28.7	83.7	4.7	134
Experimental	1732	45.3	5.4	1.16	29.9	84.5	6.2	185
Experimental	1719	42.8	5.2	1.20	31.5	85.2	5.6	176
Stoneville ST 4848GLT	1705	46.9	5.4	1.14	29.6	84.6	5.0	148
Experimental	1667	43.2	4.5	1.22	31.4	86.4	7.3	229
NexGen NG 4689 B2XF	1636	44.2	5.4	1.11	29.3	83.9	3.9	113
TAM 13 T-38	1604	41.3	5.1	1.16	31.1	83.9	4.8	149
TAM 13 V-26	1576	42.7	4.8	1.13	27.3	81.4	4.7	128
Deltapine DP 1522 B2XF	1556	44.6	5.5	1.14	30.3	84.4	7.0	212
TAM 13 Q-18	1539	44.2	4.7	1.17	31.9	85.4	5.7	182
Seed Source Genetics SSG UA 222	1536	44.1	5.4	1.14	30.8	83.8	6.8	208
BRS 286	1518	43.3	4.9	1.09	29.1	82.6	5.0	144
BRS 335	1514	43.3	4.7	1.16	30.0	83.9	5.4	160
TAM 13 V-20	1493	42.8	5.2	1.10	31.1	82.3	4.8	148
NexGen NG 4601 B2XF	1472	46.8	5.6	1.13	32.2	84.6	5.9	190
TAM 12 J-39	1458	42.2	5.3	1.11	32.6	83.2	5.5	177
TAM 13 Q-35	1433	41.4	5.0	1.23	31.6	86.4	5.7	180
TAM 13 V-57	1433	41.5	4.9	1.13	27.8	82.8	4.5	124
Experimental	1423	45.7	5.1	1.18	29.6	85.1	6.4	188

Table 2 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at Weslaco during 2018 (irrigated).

Cultivar	Lint Yield (lb/ac)	Lint Percent (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)	Work to Break
Experimental	1413	46.7	5.0	1.16	31.2	85.2	7.3	226
Dyna-Gro DG 3385 B2XF	1412	45.4	5.4	1.12	28.6	84.9	7.1	202
NexGen NG 4545 B2XM	1377	44.0	5.3	1.13	30.6	83.6	4.0	121
NexGen NG 5711 B3XF	1368	46.5	5.2	1.18	30.4	83.4	6.0	182
Seed Source Genetics SSG UA 107	1364	42.8	4.7	1.20	31.5	85.1	5.2	162
TAM 13 R-06	1364	40.8	4.6	1.18	30.6	84.4	6.9	211
NexGen NG 3729 B2XF	1357	45.1	5.7	1.15	28.8	85.9	6.1	176
FiberMax FM 1830GLT	1355	45.1	5.0	1.20	33.4	85.1	4.7	157
Seed Source Genetics SSG UA 103	1338	42.0	5.3	1.18	31.2	83.8	5.7	178
NexGen NG 4777 B2XF	1331	42.9	5.1	1.12	29.2	82.5	3.6	104
Seed Source Genetics SSG UA 114	1325	42.3	5.5	1.12	28.9	83.8	5.9	169
NexGen NG 5007 B2XF	1274	45.8	5.0	1.13	27.3	83.6	6.1	165
TAM 13 P-18	1230	34.5	4.4	1.40	34.1	86.9	4.5	153
BRS 293	1168	42.6	5.5	1.12	31.3	83.6	6.0	187
Phytogen PHY 312 WRF	1163	44.3	5.0	1.16	31.0	85.3	5.3	163
TAM 13 S-03	1085	41.9	4.9	1.13	30.2	84.6	6.9	207
Phytogen PHY 499 WRF	879	46.7	5.3	1.10	31.0	85.0	7.2	222
LSD (k=100)[1]	337	1.8	0.3	0.03	2.6	1.6	0.9	31.2
%CV	13.9	1.7	3.1	1.4	3.9	0.9	7.9	9.4
Mean	1458	43.8	5.1	1.16	30.4	84.3	5.6	171

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 3. Agronomic performance and fiber quality of cotton cultivars evaluated at Corpus Christi during 2018 (dryland).

Cultivar	Lint Yield (lb/ac)	Lint Percent (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)	Work to Break
NexGen NG 3729 B2XF	817	44.2	5.8	1.07	29.3	82.5	7.4	215
Experimental	777	44.5	5.2	1.06	32.0	83.0	7.2	230
Phytogen PHY 312 WRF	772	44.9	5.6	1.05	31.0	82.0	6.5	202
Experimental	739	45.9	5.4	1.08	29.5	82.3	7.5	221
Dyna-Gro DG 3385 B2XF	731	46.3	5.5	1.02	27.6	82.3	7.5	206
NexGen NG 4601 B2XF	720	44.4	5.1	1.10	32.8	81.5	6.3	207
Stoneville ST 4848GLT	707	47.6	6.0	0.98	28.3	81.9	6.0	170
NexGen NG 5711 B3XF	702	47.6	5.4	1.10	30.2	82.2	7.0	210
Deltapine DP 1646 B2XF	701	48.5	5.5	1.10	29.4	82.7	7.1	208
TAM 13 Q-35	697	42.7	5.5	1.07	30.4	83.0	6.6	199
TAM 13 V-26	695	43.5	5.2	0.99	26.3	80.7	5.4	141
TAM 13 R-06	688	41.9	5.2	1.06	31.4	82.7	7.9	246
BRS 286	687	43.2	5.3	0.95	28.2	78.6	6.2	175
Phytogen PHY 499 WRF	677	46.2	5.6	0.99	29.9	81.9	8.3	246
Experimental	673	45.0	5.6	1.04	28.9	83.2	7.3	211
TAM 12 J-39	672	43.3	5.7	1.02	32.2	83.0	5.0	162
TAM 13 Q-18	671	44.9	5.3	1.08	31.0	82.2	6.5	201
Seed Source Genetics SSG UA 107	666	42.9	5.2	1.04	28.5	81.3	5.8	164
BRS 335	661	42.6	5.3	1.06	29.2	82.2	6.2	179
Seed Source Genetics SSG UA 222	660	43.1	5.6	1.06	29.6	82.3	6.2	183
NexGen NG 5007 B2XF	650	45.7	5.1	1.08	27.5	82.8	7.0	192
FiberMax FM 1830GLT	647	46.3	5.5	1.07	30.4	82.4	5.0	150

Table 3 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at Corpus Christi during 2018 (dryland).

Cultivar	Lint Yield (lb/ac)	Lint Percent (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)	Work to Break
NexGen NG 4689 B2XF	641	46.4	5.6	0.95	27.7	81.7	4.7	130
Seed Source Genetics SSG UA 103	640	42.8	5.6	1.06	31.5	82.4	7.0	220
Experimental	637	46.1	5.4	1.04	29.4	81.5	7.7	226
Seed Source Genetics SSG UA 114	630	42.6	6.0	1.01	30.3	81.1	6.8	206
Deltapine DP 1522 B2XF	617	45.2	5.8	1.00	29.4	81.4	8.9	261
Experimental	610	44.1	5.5	1.08	30.9	82.5	6.3	195
TAM 13 S-20	608	44.2	5.2	1.01	28.6	82.6	5.9	169
NexGen NG 4545 B2XF	608	44.4	5.4	1.01	28.7	81.2	4.9	139
TAM 13 V-20	575	42.8	5.4	1.01	27.8	80.5	5.6	156
TAM 13 V-57	570	42.0	5.4	1.02	28.8	79.4	5.3	152
TAM 13 S-03	570	40.7	5.1	1.09	30.0	83.4	7.8	234
TAM 13 T-38	558	42.3	5.6	1.05	29.1	81.0	5.6	162
BRS 293	526	43.1	6.1	1.01	29.9	81.9	6.5	193
NexGen NG 4777 B2XF	522	45.3	5.7	0.99	26.7	81.0	4.6	123
TAM 13 P-18	430	36.8	4.8	1.26	34.7	85.8	4.6	160
Deltapine DP 1845 B3XF	427	35.6	5.2	1.01	26.3	81.1	5.4	142
Phytogen PHY 764 WRF	417	36.3	5.0	0.99	26.1	79.7	5.8	150
LSD (k=100)[1]	240	2.3	0.4	0.06	2.0	1.5	1.0	29.7
%CV	19.6	2.7	3.4	2.8	3.4	0.9	8.0	8.3
Mean	640	43.7	5.4	1.04	29.5	81.9	6.4	188

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 4. Agronomic performance and fiber quality of cotton cultivars evaluated at College Station during 2018 (Irrigated).

Cultivar	Lint Yield	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
Dyna-Gro DG 3615 B3XF	882	40.9	4.5	1.20	28.9	81.9	5.5	159
Phytogen PHY 312 WRF	804	40.0	4.4	1.15	27.7	81.7	5.7	158
Dyna-Gro DG 3421 B2XF	788	41.5	4.4	1.15	27.2	81.2	5.8	156
NexGen NG 4601 B2XF	785	43.4	4.7	1.12	29.8	81.6	5.8	173
TAM 13 S-03	781	37.2	4.3	1.15	28.7	83.1	6.6	188
NexGen NG 5711 B3XF	765	44.5	4.4	1.16	29.1	81.4	5.7	166
Experimental	756	47.8	5.0	1.20	28.1	82.3	5.4	150
NexGen NG 3729 B2XF	736	40.7	4.3	1.21	27.7	83.8	4.3	119
TAM 13 S-20	734	38.0	4.3	1.18	29.0	81.3	6.4	185
TAM 13 R-06	726	35.7	4.5	1.28	29.7	84.6	5.2	153
TAM 13 Q-35	725	37.4	4.2	1.18	29.9	82.0	5.9	175
TAM 13 Q-18	707	38.7	4.7	1.12	27.4	80.5	3.9	107
NexGen NG 4689 B2XF	698	40.4	4.5	1.13	27.6	79.5	5.6	155
TAM 13 V-57	689	37.7	4.5	1.21	28.2	82.5	4.0	113
NexGen NG 3699 B2XF	685	39.7	4.6	1.14	27.2	80.8	6.3	171
Deltapine DP 1522 B2XF	680	40.2	4.7	1.16	29.9	83.4	5.9	175
Phytogen PHY 499 WRF	677	41.4	4.2	1.23	28.6	81.8	5.8	166
Deltapine DP 1646 B2XF	671	41.4	4.3	1.13	27.0	81.0	6.6	177
NexGen NG 5007 B2XF	670	41.3	4.4	1.20	29.4	82.0	4.8	139
Stoneville ST 4848GLT	663	42.0	4.7	1.11	27.9	82.5	6.4	178
Dyna-Gro DG 3385 B2XF	655	40.5	4.5	1.19	30.3	80.7	5.7	171
Seed Source Genetics SSG UA 103	637	37.1	4.5	1.23	29.5	84.3	5.3	155
FiberMax FM 1830GLT	636	41.8	4.6	1.19	29.2	82.1	4.3	124
Deltapine DP 1845 B3XF	628	43.2	4.2	1.25	29.5	82.6	6.4	187

Table 4 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at College Station during 2018 (Irrigated).

Cultivar	Lint Yield	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
NexGen NG 3780 B2XF	624	39.0	4.7	1.16	28.3	81.1	5.2	146
NexGen NG 4545 B2XM	620	40.1	4.7	1.12	27.8	80.4	4.2	115
Seed Source Genetics SSG UA 114	616	38.2	4.5	1.14	28.8	81.9	6.1	176
Seed Source Genetics SSG UA 107	611	38.7	4.7	1.21	29.5	83.5	5.2	152
Experimental	610	40.1	4.5	1.14	27.7	81.5	6.4	176
TAM 13 V-26	609	39.1	4.5	1.14	27.8	80.6	4.0	110
Dyna-Gro DG 3650 B2XF	602	39.7	4.6	1.23	32.3	84.2	5.7	184
TAM 13 T-38	599	37.1	4.4	1.15	30.0	81.7	4.9	146
Dyna-Gro 3605 B2XF	589	42.1	4.4	1.16	28.5	81.1	5.3	149
NexGen NG 4777 B2XF	576	38.0	4.7	1.15	27.8	81.8	3.7	101
Deltapine DP 1725 B2XF	558	43.1	4.5	1.14	27.9	82.6	4.6	127
TAM 12 J-39	551	38.6	4.8	1.15	31.1	83.2	4.7	144
TAM 13 V-20	549	39.8	4.3	1.14	28.5	80.7	5.0	141
BRS 286	547	38.4	4.5	1.12	30.0	83.3	4.9	145
Experimental	546	40.6	4.6	1.19	28.7	83.4	5.6	159
Seed Source Genetics SSG UA 222	546	38.3	4.6	1.22	29.5	83.1	6.2	181
BRS 293	501	38.3	4.9	1.16	29.9	81.0	5.5	163
BRS 335	438	37.5	4.1	1.11	31.2	79.9	5.8	181
Phytogen PHY 764 WRF	438	39.9	4.4	1.17	28.2	81.9	4.6	129
TAM 13 P-18	435	32.9	4.1	1.38	31.1	84.1	4.3	132
LSD (k=100)[1]	196	4.6	0.3	0.04	2.2	2.8	0.8	27.9
%CV	17.9	4.9	3.0	1.90	3.3	1.3	7.8	8.8
Mean	643	39.8	4.5	1.17	28.9	82.0	5.3	154.0

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 5. Agronomic performance and fiber quality of cotton cultivars evaluated at College Station during 2018 (dryland).

Cultivar	Lint Yield (lb/ac)	Lint Percent (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)	Work to Break
NexGen NG 3729 B2XF	743	42.4	4.6	1.14	27.5	82.2	6.1	166
TAM 13 S-20	731	40.3	4.1	1.12	28.4	82.3	5.4	153
Phytogen HPH 499 WRF	696	43.8	4.6	1.11	29.2	82.5	6.7	194
NexGen NG 5007 B2XF	658	42.7	4.5	1.11	26.6	82.3	5.8	154
TAM 13 V-57	621	40.5	4.3	1.10	27.0	80.3	5.4	145
Deltapine DP 1646 B2XF	603	43.1	4.4	1.19	28.8	80.6	6.4	183
TAM 13 Q-35	566	37.7	4.2	1.21	30.3	83.5	5.3	160
TAM 13 R-06	563	36.7	4.2	1.15	29.4	80.7	6.4	186
TAM 13 V-20	561	41.1	4.5	1.08	25.7	79.2	4.2	108
Experimental	559	43.8	4.6	1.09	25.6	81.8	6.1	155
Experimental	558	41.2	4.4	1.17	27.9	82.2	5.7	157
NexGen NG 4689 B2XF	550	42.1	4.8	1.05	25.7	80.0	4.4	114
Dyna-Gro DG 3421 B3XF	549	41.9	4.3	1.12	27.8	82.1	5.7	158
TAM 13 V-26	525	39.4	4.2	1.10	26.5	79.4	4.7	124
Dyna-Gro DG 3605 B2XF	518	42.5	4.3	1.20	27.4	81.0	5.4	146
NexGen NG 4777 B2XF	505	41.1	4.5	1.12	27.2	80.6	4.2	114
TAM 13 S-03	502	40.5	4.3	1.14	28.5	81.6	5.9	169
TAM 13 T-38	499	39.6	4.5	1.12	28.1	81.9	4.9	138
TAM 12 J-39	489	40.6	4.4	1.13	31.5	82.6	5.2	160
Seed Source Genetics SSG UA 107	487	38.5	4.4	1.14	28.5	81.7	5.4	152
Seed Source Genetics SSG UA 114	487	39.2	4.4	1.19	28.5	83.0	5.1	144
Deltapine DP 1845 B3XF	486	42.7	4.2	1.19	29.8	82.7	6.0	177

Table 5 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at College Station during 2018 (dryland).

Cultivar	Lint Yield	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
TAM 13 Q-18	473	41.7	4.3	1.16	28.4	81.9	5.8	164
Seed Source Genetics SSG UA 103	454	38.8	4.8	1.20	30.8	83.1	6.0	185
BRS 335	453	38.9	4.1	1.14	27.2	81.6	5.0	135
Seed Source Genetics SSG UA 222	447	39.3	4.4	1.17	30.1	82.8	6.4	191
Stoneville ST 4848GLT	433	41.9	4.5	1.16	29.1	83.1	5.3	152
Dyna-Gro DG 3650 B2XF	430	42.5	4.7	1.18	30.4	83.5	5.4	164
BRS 286	413	38.5	4.4	1.07	28.1	80.1	5.0	141
TAM 13 P-18	388	33.3	3.9	1.33	32.7	85.5	4.9	160
NexGen NG 5711 B3XF	364	41.0	4.4	1.14	26.9	80.1	5.5	148
Dyna-Gro DG 3615 B3XF	352	42.1	4.5	1.17	28.6	82.6	5.2	147
Phytogen PHY 764 WRF	346	39.2	3.9	1.13	30.2	81.6	5.0	151
NexGen NG 4545 B2XM	345	40.9	4.6	1.10	27.3	80.4	3.6	98
BRS 293	336	38.2	4.7	1.10	28.6	81.3	5.2	149
Experimental	319	37.7	4.1	1.19	28.0	82.4	5.2	145
LSD (k=100)[1]	125	3.3	0.4	0.05	2.2	2.5	1.0	29.5
%CV	16.6	3.8	3.8	2.40	3.8	1.3	9.1	9.4
Mean	503	40.4	4.4	1.14	28.4	81.8	5.4	152

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 6. Agronomic performance and fiber quality of cotton cultivars evaluated at Commerce during 2018 (Irrigated).

Cultivar	Lint Yield	Gin Turnout	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
Dyna-Gro DG 3650 B2XF	1276	36.6	47.1	5.3	1.13	31.1	83.9	5.8	179
NexGen NG 5007 B2XF	1187	34.5	45.0	4.8	1.09	26.0	81.4	5.6	145
FiberMax FM 1830GLT	1130	36.8	47.3	5.2	1.12	29.8	82.4	4.2	125
NexGen NG 4601 B2XF	1109	35.0	46.3	5.4	1.09	30.6	81.7	5.5	168
Dyna-Gro DG 3421 B3XF	1087	35.9	45.6	5.1	1.07	26.1	81.8	5.3	137
Experimental	1072	36.0	45.9	5.1	1.04	26.6	82.6	6.0	159
Dyna-Gro DG 3615 B3XF	1053	35.3	44.8	5.0	1.05	27.4	81.9	5.9	161
Experimental	1034	37.6	46.9	5.3	1.09	27.7	82.7	6.6	183
Stoneville ST 4848GLT	1023	36.6	46.9	5.4	1.05	27.7	82.0	5.9	162
NexGen NG 3729 B2XF	986	35.3	44.9	5.3	1.09	27.1	82.3	6.6	179
TAM 13 V-20	981	32.9	43.0	4.8	1.06	26.7	80.3	5.0	132
Phytogen PHY 499 WRF	951	35.5	46.6	5.0	1.08	29.6	82.6	6.6	195
Experimental	946	33.8	43.1	4.3	1.11	28.3	82.6	6.8	191
TAM 13 V-26	946	35.0	43.3	4.8	1.11	27.2	81.5	4.8	131
TAM 13 Q-18	927	32.1	42.8	4.7	1.09	29.0	82.0	5.4	157
TAM 13 T-38	874	32.9	41.4	4.6	1.14	29.7	82.0	4.7	139
TAM 12 J-39	868	33.8	43.5	5.2	1.08	32.0	82.6	5.1	161
Phytogen PHY 312 WRF	843	36.0	46.5	5.2	1.09	28.0	83.3	5.9	165
Dyna-Gro DG 3385 B2XF	835	30.9	45.8	5.3	1.03	25.6	81.2	6.0	154
TAM 13 R-06	823	31.0	41.0	4.9	1.06	26.6	80.6	4.7	125
TAM 13 V-57	823	32.6	42.5	4.4	1.13	29.8	81.7	6.2	185
Deltapine DP 1845 B3XF	814	37.0	46.5	4.8	1.14	29.8	82.3	6.3	187
Deltapine DP 1522 B2XF	790	33.8	44.7	5.0	1.06	27.3	81.2	6.3	171

Table 6 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at Commerce during 2018 (Irrigated).

Cultivar	Lint Yield	Gin Turnout	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
NexGen NG 4689 B2XF	789	32.4	43.6	5.0	1.06	26.3	81.3	4.3	114
Phytogen PHY 764 WRF	752	29.8	43.7	4.4	1.08	31.1	82.1	5.8	180
Deltapine DP 1646 B2XF	736	38.2	48.1	4.9	1.11	27.5	81.5	6.1	168
TAM 13 S-20	733	32.6	43.5	4.7	1.11	29.6	82.9	5.6	164
Experimental	717	34.8	43.3	4.8	1.07	26.7	81.2	5.4	144
TAM 13 Q-35	659	30.6	41.3	4.6	1.16	30.3	82.5	5.6	168
Experimental	633	35.4	45.0	4.8	1.09	26.2	82.1	6.2	162
NexGen NG 5711 B3XF	607	37.8	46.7	4.9	1.13	27.8	81.9	5.2	144
NexGen NG 4545 B2XM	593	31.9	44.2	5.2	1.04	25.2	79.3	3.6	89
TAM 13 S-03	586	30.4	41.2	4.7	1.09	28.6	81.4	6.1	174
TAM 13 P-18	573	24.5	34.6	4.1	1.28	31.7	83.4	5.0	157
LSD (k=100)[1]	382	3.7	.	0.4	0.05	2.4	2.3	0.9	24.7
%CV	21.7	5.3	.	3.7	2.30	4.1	1.1	8.3	8.0
Mean	878	34.0	.	4.9	1.09	28.2	82.0	5.6	158

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 7. Agronomic performance and fiber quality of cotton cultivars evaluated at Chillicothe during 2018 (irrigated).

Cultivar	Lint Yield	Gin Turnout	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
NexGen NG 3780 B2XF	821	30.7	41.7	5.1	1.12	29.9	82.1	5.5	164
Experimental	732	30.0	41.9	4.9	1.13	30.2	83.3	6.9	208
Deltapine DP 1845 B3XF	725	32.6	43.3	4.7	1.18	33.1	83.0	6.5	214
NexGen NG 4689 B2XF	725	31.1	41.7	5.0	1.07	29.5	81.9	5.2	152
TAM 13 R-06	687	28.0	38.7	4.6	1.17	30.8	82.1	6.0	185
Experimental	672	30.6	41.8	4.5	1.14	31.5	83.5	7.7	243
TAM 13 S-20	667	28.8	39.6	4.8	1.12	31.5	83.0	5.8	183
TAM 12 J-39	664	29.0	40.8	5.0	1.11	33.3	82.7	5.3	175
TAM 13 T-38	646	28.3	38.6	4.7	1.13	31.3	82.5	4.6	142
Experimental	625	30.0	40.4	4.9	1.12	30.6	81.3	6.1	184
TAM 13 Q-18	622	29.9	42.0	4.8	1.14	33.1	83.3	6.0	197
NexGen NG 3729 B2XF	606	30.6	41.0	5.2	1.12	28.7	81.7	6.8	193
TAM 13 V-20	605	29.7	39.8	4.5	1.09	28.4	80.8	5.4	152
Phytogen PHY 300 W3FE	600	30.8	43.0	4.8	1.08	30.4	81.6	5.5	167
Dyna-Gro DG 3421 B3XF	594	30.7	43.3	4.8	1.08	29.3	81.7	6.7	196
Stoneville ST 4848GL	592	31.5	43.2	5.2	1.11	30.1	83.4	6.0	180
NexGen NG 5711 B3XF	580	30.5	43.3	4.9	1.15	29.8	81.7	6.5	194
TAM 13 V-57	570	27.9	38.8	4.7	1.07	29.7	80.6	5.6	166
Deltapine DP 1612 B2XF	567	29.5	41.6	4.7	1.10	29.7	82.5	6.8	200
TAM 13 V-26	559	30.1	40.0	4.5	1.04	27.7	80.3	5.2	144

Table 7 (cont'd). Agronomic performance and fiber quality of cotton cultivars evaluated at Chillicothe during 2018 (irrigated).

Cultivar	Lint Yield	Gin Turnout	Lint Percent	Micro-naire	Length	Strength	UI	Elong-ation	Work to Break
	(lb/ac)	(%)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)	
NexGen NG 3699 B2XF	557	28.6	39.6	4.8	1.14	29.8	82.4	4.9	144
Phytogen PHY 499 WRF	556	29.7	42.3	4.9	1.08	30.9	81.3	7.2	220
NexGen NG 5007 B2XF	555	30.4	43.0	4.8	1.12	27.7	81.2	6.5	178
FiberMax FM 1911 GLT	514	30.7	42.6	4.5	1.09	30.2	81.6	5.3	160
Deltapine DP 1646 B2XF	508	31.8	43.6	4.8	1.16	29.9	81.0	6.4	190
TAM 13 S-03	499	27.7	39.2	4.6	1.11	30.7	82.7	6.5	199
NexGen NG 4545 B2XM	492	28.3	41.3	5.1	1.07	28.4	81.0	4.2	118
TAM 13 P-18	465	22.7	32.8	4.3	1.34	34.1	85.1	5.1	172
TAM 13 Q-35	459	27.6	39.6	4.7	1.16	31.8	82.3	6.4	203
Phytogen PHY 764 WRF	453	27.3	39.8	4.2	1.14	32.9	83.0	6.3	207
Experimental	451	28.7	39.3	4.9	1.13	28.3	81.0	6.1	173
LSD (k=100)[1]	179	2.1	.	0.3	0.05	1.7	2.1	0.9	30.6
%CV	17.0	3.6	.	2.9	2.10	2.7	1.1	7.6	8.4
Mean	590	29.5	.	4.8	1.12	30.4	82.1	5.9	181

1. Values within columns are different at approximately p=0.05 (k=100) if they differ by more than the LSD at the base of the column.