

Cotton Variety Trial Results | 2022



Tennessee Cotton Variety Trial Results | 2022

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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 2022 program consisted of two types of trials: the Official Variety Trials (OVTs) and the County Standard Trials (CSTs). The OVTs are small plot, replicated variety trials composed of experimental and commercial varieties. The CSTs are large plot variety strip trials located throughout the Western and Central regions of Tennessee and are only composed of major commercial cultivars. Eight OVTs and thirteen CSTs were conducted during 2022. Of the thirteen CSTs, two included both FE (Enlist) and XF (XtendFlex) cultivars; nine included only XF cultivars; and two included only FE cultivars. The 2022 planting window was challenging; many locations received a tremendous amount of rainfall immediately after planting and due to very poor stands, two OVT locations were abandoned.

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

Eight OVTs were planted in the 2022 growing season. Six were harvested and have been included within this report. 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, 40 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.

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 and weighed. At five of the six locations, six lb seedcotton samples from each plot were ginned at the UT Cotton MicroGin and classed at the USDA Classing Office in Memphis, TN.

Large Plot Variety Trials

Thirteen CSTs were harvested in the 2022 growing season. Seed of commercial varieties was provided by each respective company. In all, 19 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, approximately 6 lb of seedcotton from each plot was collected, transported to the .

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 one lint cleaner. 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 (JMP, 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. 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.

Seed Sources

Companies which participated in the 2022 University of Tennessee Cotton Variety Testing Program and their entry abbreviations are listed below:

- American Cotton Breeders, Inc. 5210 88th Street, Lubbock, TX 79424
 - Abbreviated as NG (NexGen) or AMX (experimental)
- BASF Corporation, 100 Park Ave, Florham Park, NJ 07932
 - Abbreviated as ST (Stoneville)
- Croplan Genetics, 8700 Trail Lake Dr., Suite 100, Memphis, TN 38125
 - Abbreviated as AR (Armor)
- Crop Production Services, 3005 Rocky Mountain Ave., Loveland, CO 80538
 - Abbreviated as DG (DynaGro) or DGX (experimental)
- Bayer CropScience, P.O. Box 157, Scott, MS 38772
 - Abbreviated as DP (DeltaPine)
- PhytoGen Seed Co., P.O. Box 27, Leland, MS 38756

- Abbreviated as PHY (Phytogen) or PX (experimental)

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This program was partially funded by Cotton Incorporated State Support Project No. 20-498TN. Additionally, all entrant companies provided financial support to the TN Cotton Research Program during the 2022 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, BASF, Bayer CropScience, Cannon Packing Company, Dow AgroSciences, FMC Corp., and Syngenta Crop Protection, Inc. and Nichino.

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.

2022 Official Variety Trial Results



Table OVT1. 2022 Tennessee Official Variety Trial details.

Location	Planting Date	Soil Type	Tillage	Irrigation
Gift	05/10/2022	Loring Silt Loam	No-Till	None
Grand Junction ¹	05/9/2022	Memphis Silt Loam	No-Till	None
Jackson ²	05/2/2022	Almo Silt Loam	No-Till	None
Jackson ²	05/31/2022	Almo Silt Loam	No-Till	None
Milan ³	05/18/2022	Memphis Silt Loam	No-Till	None
Ridgely	05/5/2022	Reelfoot Silt Loam	No-Till	None

¹Ames Plantation Research and Education Center, Grand Junction, TN

²West Tennessee Research and Education Center, Jackson, TN

³Milan Research and Education Center, Milan, TN

Table OVT2. Average lint yield, turnout, and fiber quality of 40 entries in the 2022 Official Variety Trials conducted near Gift, Grand Junction, Jackson, Milan and Ridgely, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	ST 4595B3XF	1554 a	42.4 b-e	4.3 d-g	1.22 e-i	29.8 l-n	83.0 g-i
2	DP 2038 B3XF	1553 a	44.3 a	4.4 c-e	1.15 rs	29.6 m-p	82.1 lm
3	NG 3195 B3XF	1467 ab	41.8 e-i	4.4 b-d	1.19 no	31.2 gh	83.7 d-f
4	DP 2239 B3XF	1464 a-c	41.6 f-j	4.1 k-m	1.25 ab	30.1 i-m	83.7 d-f
5	DG 3535 B3XF	1440 a-d	40.7 l-q	4.2 g-k	1.22 e-i	30.7 h-j	83.2 e-i
6	DG 3511 B3XF	1432 b-f	42.6 b-d	4.6 ab	1.21 f-j	32.5 b-d	84.6 ab
7	ST 5091B3XF	1432 b-e	41.5 g-k	4.2 f-k	1.19 no	29.7 l-o	82.2 k-m
8	DP 2127 B3XF	1430 b-f	42.7 bc	4.5 a-c	1.17 pq	30.2 i-m	84.1 a-d
9	PHY 1140A385-04 W3FE	1424 b-f	42.3 c-f	4.1 h-l	1.19 m-o	32.2 c-f	84.4 ab
10	DP 2333 B3XF	1424 b-g	43.2 b	4.5 ab	1.19 l-o	30.1 j-m	82.7 h-l
11	PHY 411 W3FE	1423 b-g	41.2 i-m	4.4 c-e	1.15 s	31.6 fg	82.9 g-i
12	PHY 443 W3FE	1422 b-g	40.9 k-o	4.3 d-f	1.16 qr	31.8 d-g	83.4 e-g
13	AR 9371 B3XF	1420 b-g	42.0 c-h	4.2 e-j	1.20 j-n	29.8 l-n	84.5 ab
14	ST 4550GLTP	1420 b-g	42.6 b-d	4.5 b-d	1.19 m-o	32.3 b-e	84.2 a-d
15	DP 21R622B3XF	1418 b-g	42.1 c-g	4.5 b-d	1.19 l-o	29.6 m-p	82.3 j-m
16	BX 2394B3XF	1415 b-h	40.4 n-t	4.1 k-m	1.19 k-o	30.2 i-m	82.3 j-m
17	DG 3519 B3XF	1402 b-h	40.7 l-r	4.2 g-k	1.24 bc	32.2 c-f	84.3 a-c
18	DG 3456 B3XF	1401 b-h	42.4 b-e	4.3 e-h	1.18 op	29.0 p	82.8 g-k
19	ST 4990B3XF	1392 b-h	39.2 v	4.4 b-d	1.22 d-f	30.3 i-m	84.1 b-d
20	PHY 415 W3FE	1389 b-h	40.4 m-s	4.1 h-l	1.23 de	32.3 b-e	83.4 e-g
21	NG 4190 B3XF	1376 b-h	41.2 i-l	4.1 j-m	1.22 e-h	29.6 m-p	84.3 a-d
22	AR 9831 B3XF	1373 b-h	40.8 l-p	4.3 e-i	1.19 no	30.2 i-m	82.1 lm
23	BX 2392B3XF	1363 b-i	41.4 g-l	4.2 f-k	1.18 o	29.1 op	82.9 g-j
24	DG 3402 B3XF	1351 c-i	39.8 s-v	4.0 lm	1.21 f-j	30.4 i-l	83.3 e-h
25	PHY 400 W3FE	1345 d-i	41.2 i-l	4.1 j-m	1.20 j-n	32.1 c-f	83.0 g-i
26	DP 2115 B3XF	1338 d-i	41.9 d-i	4.3 d-f	1.20 i-m	30.0 k-m	83.8 c-e
27	PHY 332 W3FE	1337 d-i	40.0 q-u	4.1 j-m	1.22 d-g	31.7 e-g	83.1 f-i
28	DP 2020 B3XF	1336 c-i	39.9 q-v	4.1 i-l	1.23 cd	30.8 hi	83.2 e-h
29	PHY 1130B336-04 W3FE	1335 d-i	40.1 p-u	4.2 f-k	1.20 j-n	32.9 ab	84.5 ab
30	PHY 1140B373-04 W3FE	1334 d-i	39.9 s-v	4.2 f-k	1.19 l-o	31.6 fg	84.3 a-c
31	DG 3387 B3XF	1328 d-i	41.3 i-l	4.1 i-l	1.22 e-h	29.7 m-p	82.6 i-l
32	DP 1646 B2XF	1326 d-i	41.3 h-l	4.2 g-k	1.27 a	29.8 l-o	83.0 g-i
33	PHY 1130B333-04 W3FE	1325 d-i	39.6 uv	4.1 k-m	1.20 h-l	32.6 a-c	84.7 a
34	DP 2012 B3XF	1325 e-i	40.1 p-u	4.2 e-j	1.21 g-j	30.6 h-k	83.2 e-i
35	PHY 360 W3FE	1321 e-i	40.0 r-u	4.3 d-g	1.18 op	29.9 l-n	81.9 m
36	DP 2141 NR B3XF	1321 e-i	41.1 j-n	4.6 a	1.21 h-k	32.5 b-d	83.4 e-g
37	NG 3299 B3XF	1318 f-i	42.3 c-f	4.5 ab	1.20 j-n	33.2 a	84.6 ab
38	DP 21R618B3XF	1310 g-i	42.7 bc	4.0 m	1.20 i-m	29.8 l-n	82.6 i-l
39	BX 2396B3XF	1301 h-i	40.3 o-u	4.1 h-l	1.21 h-k	28.3 q	83.2 e-h
40	BX 2398B3XF	1255 i	39.7 t-v	4.2 f-k	1.22 d-g	29.3 n-p	83.3 e-g
Average		1384	41.2	4.2	1.20	30.7	83.4
LSD (p<0.05)		80	0.5	0.1	0.01	1.1	0.4
CV (%)		13.1	2.8	5.8	2.1	3.6	1.2

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

†Turnout and fiber quality determined from ginning a 6 lb seedcotton sample and classing a 200 gram subsample from each plot from Gift, Grand Junction, Jackson (early and late) planted), and Ridgely.

Tennessee AgResearch data of Raper et al. (2022).

Table OVT3. Average lint yield, turnout, and fiber quality of 40 entries in the 2022 Official Variety Trial conducted in Gift, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DP 2127 B3XF	1346 a [‡]	42.0 a-d	4.2 a-c	1.18 j-l	30.4 e-i	84.0 a-g
2	PHY 400 W3FE	1333 ab	41.9 a-e	4.1 a-g	1.21 e-k	31.3 c-f	82.9 f-m
3	NG 3195 B3XF	1301 a-c	41.7 a-f	4.1 a-f	1.21 d-i	30.8 d-h	84.3 a-f
4	DG 3511 B3XF	1290 a-d	42.8 ab	4.3 a	1.21 c-j	31.0 c-g	84.6 a-d
5	ST 5091B3XF	1266 a-e	40.0 e-n	3.9 f-j	1.21 d-j	29.5 g-l	82.3 i-n
6	PHY 443 W3FE	1262 a-e	40.1 d-m	4.1 a-f	1.18 i-l	33.3 a	83.3 b-k
7	ST 4550GLTP	1254 a-e	41.0 b-h	4.3 a	1.19 g-k	32.2 a-c	84.5 a-d
8	PHY 411 W3FE	1237 a-f	40.6 c-p	4.1 a-g	1.16 lm	31.7 b-e	83.3 c-l
9	PHY 360 W3FE	1228 a-f	39.0 i-n	4.0 a-h	1.20 f-k	29.9 f-l	82.0 k-n
10	PHY 332 W3FE	1224 a-f	39.2 h-n	4.1 a-h	1.22 b-g	31.9 b-d	82.0 j-n
11	ST 4990B3XF	1223 a-f	38.2 mn	4.2 a-e	1.25 b	29.6 g-l	84.7 ab
12	DP 21R622B3XF	1205 a-f	41.0 b-h	4.3 ab	1.21 d-j	30.0 f-l	82.1 j-n
13	DP 2239 B3XF	1201 a-g	40.8 c-i	3.8 g-j	1.24 b-d	29.7 g-l	82.9 f-m
14	DG 3519 B3XF	1200 a-g	40.0 e-n	3.9 d-j	1.24 b-e	31.6 c-e	83.6 a-i
15	ST 4595B3XF	1198 a-g	41.5 a-g	4.0 b-i	1.24 b-e	29.6 g-l	82.9 f-m
16	PHY 1130B336-04 W3FE	1194 a-g	39.1 h-n	4.0 c-j	1.20 f-k	33.0 ab	84.0 a-g
17	DP 2012 B3XF	1188 a-g	38.2 n	3.9 d-j	1.19 f-l	30.3 d-k	81.7 mn
18	DG 3456 B3XF	1166 a-g	40.8 c-i	4.2 a-e	1.18 i-l	28.8 l-m	82.7 g-m
19	DP 2038 B3XF	1160 a-g	42.9 a	4.1 a-f	1.15 m	28.9 j-m	81.2 n
20	PHY 1140A385-04 W3FE	1154 a-g	42.8 ab	3.9 f-j	1.19 g-k	31.6 c-e	84.5 a-c
21	PHY 415 W3FE	1153 a-g	39.2 h-n	3.7 ij	1.23 b-f	31.6 c-e	83.8 a-h
22	AR 9831 B3XF	1143 a-h	39.7 g-n	3.8 g-j	1.18 k-m	29.2 i-m	81.3 n
23	NG 4190 B3XF	1134 a-h	40.0 d-n	4.1 a-g	1.21 d-i	30.3 e-j	84.0 a-g
24	BX 2392B3XF	1129 a-i	40.5 c-j	3.9 d-j	1.19 f-l	28.9 i-m	83.1 c-m
25	BX 2394B3XF	1091 a-i	39.9 f-n	3.8 g-j	1.19 h-l	29.3 i-l	82.5 h-n
26	PHY 1140B373-04 W3FE	1085 a-i	39.3 h-n	3.7 ij	1.20 f-k	31.2 c-f	84.7 ab
27	DG 3387 B3XF	1074 a-i	39.8 f-n	3.9 d-j	1.24 bc	29.1 i-m	81.9 l-n
28	DP 2020 B3XF	1072 a-i	40.9 a-n	3.9 d-j	1.25 b	29.7 g-l	82.7 g-m
29	AR 9371 B3XF	1033 b-i	40.4 c-l	3.9 d-j	1.19 h-l	28.7 lm	83.1 d-m
30	PHY 1130B333-04 W3FE	1028 b-i	38.6 k-n	3.7 ij	1.20 f-k	31.6 c-e	84.3 a-e
31	DG 3535 B3XF	1025 b-i	38.5 l-n	3.7 j	1.23 b-f	29.7 g-l	83.1 d-m
32	DP 2115 B3XF	1025 a-i	42.0 a-f	4.2 a-d	1.21 d-j	29.4 h-l	83.6 a-i
33	DP 21R618B3XF	994 c-i	42.1 a-c	3.8 h-j	1.18 i-l	29.3 i-l	82.0 j-n
34	DP 1646 B2XF	981 d-i	40.1 d-m	3.9 e-j	1.29 a	29.5 g-l	83.0 e-m
35	NG 3299 B3XF	942 f-i	42.2 a-c	4.3 a	1.20 d-k	33.5 a	84.8 ab
36	DG 3402 B3XF	940 f-i	38.7 j-n	3.7 j	1.22 b-h	29.7 g-l	83.1 e-m
37	DP 2333 B3XF	936 e-i	40.6 c-k	4.1 a-g	1.21 e-k	30.1 f-k	82.9 g-m
38	BX 2396B3XF	891 g-i	39.2 h-n	3.9 e-j	1.19 g-k	27.8 m	82.5 h-n
39	DP 2141 NR B3XF	835 h-i	40.5 c-l	4.1 a-f	1.20 f-k	32.3 a-c	83.2 c-m
40	BX 2398B3XF	820 i	38.3 mn	3.8 g-j	1.24 b-d	29.0 i-m	83.4 a-j
Average		1127	40.3	4.0	1.21	30.3	83.1
LSD (p<0.05)		220	1.4	0.2	0.02	1.0	1.0
CV (%)		12.7	3.4	5.3	1.9	3.3	1.2

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

[†]Turnout and fiber quality determined from ginning a 6 lb seedcotton sample and classing a 200 gram subsample from each plot.

Tennessee AgResearch data of Raper et al. (2022).

Table OVT4. Average lint yield, turnout, and fiber quality of 40 entries in the 2022 Official Variety Trial conducted in Grand Junction, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	ST 4595B3XF	1817 a [‡]	43.7 c-j	4.5 g-j	1.19 f-l	30.5 g-n	82.7 i-m
2	PHY 415 W3FE	1772 ab	42.2 l-q	4.5 f-j	1.24 ab	32.6 b-e	84.0 c-i
3	PHY 1140A385-04 W3FE	1739 ab	44.2 b-e	4.6 d-j	1.18 g-m	33.1 a-c	85.4 a-c
4	BX 2394B3XF	1714 a-c	42.3 k-q	4.4 i-k	1.17 i-n	31.1 e-j	83.1 h-l
5	PHY 411 W3FE	1686 a-d	42.5 i-o	4.7 b-g	1.13 o	31.9 c-g	83.3 g-l
6	DG 3519 B3XF	1678 a-e	41.8 n-r	4.5 g-j	1.22 a-e	32.3 b-f	84.5 a-g
7	DP 2038 B3XF	1670 a-e	46.1 a	4.6 c-i	1.14 o	29.6 j-n	82.0 lm
8	PHY 443 W3FE	1652 a-f	42.4 j-q	4.6 c-i	1.14 no	31.9 c-h	83.2 g-l
9	DP 2141 NR B3XF	1622 a-f	42.1 m-r	5.0 a	1.21 b-g	33.3 a-c	84.7 a-f
10	ST 4990B3XF	1620 a-f	41.2 qr	4.7 a-f	1.23 a-c	30.7 f-n	85.1 a-e
11	DP 21R622B3XF	1618 a-f	44.6 bc	4.8 a-e	1.17 i-n	29.7 i-n	83.1 h-l
12	DG 3511 B3XF	1601 a-g	43.9 c-h	5.0 a	1.19 e-j	33.4 a-c	85.4 a-c
13	DP 2333 B3XF	1593 a-g	45.3 ab	4.8 a-d	1.17 i-n	29.4 l-n	83.0 h-l
14	DG 3535 B3XF	1586 a-g	43.1 e-m	4.5 e-j	1.21 b-h	30.9 f-l	83.9 d-i
15	NG 3195 B3XF	1584 a-g	43.0 g-n	4.6 c-h	1.17 i-n	31.1 e-k	83.7 e-j
16	BX 2396B3XF	1575 a-g	42.1 l-r	4.4 i-k	1.19 e-k	29.0 n	83.2 g-l
17	PHY 1140B373-04 W3FE	1573 a-g	41.7 o-r	4.6 d-j	1.16 k-o	31.7 c-h	84.4 a-h
18	PHY 1130B333-04 W3FE	1569 a-g	41.0 r	4.4 i-k	1.19 e-k	33.8 ab	85.5 ab
19	DP 2012 B3XF	1564 a-g	42.5 j-p	4.6 d-j	1.19 f-l	30.7 f-n	83.7 e-j
20	DP 2115 B3XF	1554 a-g	44.5 b-d	4.8 a-c	1.17 i-n	30.8 f-m	84.0 c-i
21	DP 2239 B3XF	1549 b-g	43.6 c-j	4.4 g-j	1.23 a-d	30.8 f-m	84.4 a-h
22	PHY 332 W3FE	1547 b-g	41.2 qr	4.5 f-j	1.21 b-f	32.7 b-e	84.0 c-i
23	BX 2392B3XF	1530 b-g	44.1 c-g	4.5 g-j	1.16 j-o	29.4 k-n	83.2 g-l
24	PHY 1130B336-04 W3FE	1527 b-g	41.2 qr	4.5 f-j	1.19 f-l	32.8 b-d	85.6 a
25	NG 4190 B3XF	1520 b-g	42.8 h-o	4.3 j-l	1.23 a-c	30.2 h-n	85.2 a-d
26	ST 4550GLTP	1493 c-g	44.2 b-f	4.5 e-j	1.18 f-l	33.9 ab	83.6 f-k
27	NG 3299 B3XF	1485 c-g	43.9 c-h	4.9 ab	1.18 f-m	34.6 a	85.1 a-e
28	DP 21R618B3XF	1476 d-g	43.7 c-i	4.2 kl	1.21 b-g	30.7 f-m	83.9 d-i
29	PHY 400 W3FE	1468 d-g	43.0 f-n	4.3 j-l	1.19 e-k	32.9 a-d	83.4 f-l
30	DG 3402 B3XF	1466 c-h	41.2 p-r	4.1 l	1.20 c-i	30.6 f-n	83.7 d-k
31	PHY 360 W3FE	1448 e-h	41.7 o-r	4.7 c-g	1.16 l-o	29.4 j-n	81.4 m
32	AR 9831 B3XF	1446 e-h	43.3 d-l	4.5 g-j	1.18 h-m	30.3 g-n	82.3 k-m
33	AR 9371 B3XF	1446 e-h	44.5 b-d	4.6 d-j	1.18 f-l	30.7 f-n	85.1 a-e
34	ST 5091B3XF	1422 f-h	43.2 e-m	4.5 f-j	1.15 m-o	29.4 l-n	82.3 j-m
35	DG 3456 B3XF	1406 f-h	44.4 b-d	4.5 g-j	1.16 l-o	29.2 mn	83.2 g-l
36	DG 3387 B3XF	1403 f-h	43.0 e-n	4.5 e-j	1.20 d-i	31.1 e-j	82.9 i-l
37	DP 1646 B2XF	1377 gh	43.4 c-k	4.4 i-k	1.25 a	29.7 i-n	84.1 b-i
38	DP 2020 B3XF	1374 gh	41.3 qr	4.4 h-k	1.23 a-c	31.3 d-i	84.1 b-i
39	BX 2398B3XF	1361 gh	41.6 o-r	4.5 g-j	1.21 b-g	29.5 j-n	84.6 a-g
40	DP 2127 B3XF	1229 h	44.5 b-d	4.7 a-f	1.16 l-o	30.4 g-n	84.0 c-i
Average		1541	43.0	4.5	1.19	31.2	83.8
LSD (p<0.05)		165	0.9	0.2	0.02	1.2	1.0
CV (%)		10.8	2.0	4.0	1.9	3.8	1.2

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

[†]Turnout and fiber quality determined from ginning a 6 lb seedcotton sample and classing a 200 gram subsample from each plot.

Tennessee AgResearch data of Raper et al. (2022).

Table OVT5. Average lint yield, turnout, and fiber quality of 40 entries in the early planted 2022 West Tennessee Research and Education Trial conducted in Jackson, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DP 2038 B3XF	1675 a	44.2 ab	4.5 b-f	1.12 m	29.4 l-o	81.5 m
2	DP 2239 B3XF	1578 ab	42.2 c-g	4.4 d-g	1.24 a-c	30.1 i-n	82.9 d-k
3	AR 9371 B3XF	1555 ab	43.1 a-d	4.7 a-e	1.19 e-k	29.4 l-o	84.7 a
4	DP 2127 B3XF	1543 a-c	44.3 a	5.0 a	1.13 lm	30.3 h-n	83.1 c-i
5	DP 2333 B3XF	1528 a-c	43.3 a-c	5.1 a	1.17 h-l	30.2 i-n	81.5 lm
6	BX 2396B3XF	1520 a-c	41.0 e-l	4.8 a-d	1.19 d-j	28.5 o	83.1 d-i
7	DG 3535 B3XF	1515 a-d	42.5 a-e	4.8 a-d	1.21 a-f	31.2 e-j	83.0 d-i
8	ST 4595B3XF	1498 a-e	42.5 b-f	4.9 ab	1.20 c-i	30.0 i-n	82.6 g-m
9	NG 4190 B3XF	1474 a-f	41.8 c-h	4.5 b-g	1.20 d-j	29.8 j-o	83.9 a-f
10	BX 2398B3XF	1472 a-f	40.7 g-m	4.6 a-f	1.22 a-e	29.7 k-o	82.6 g-m
11	NG 3195 B3XF	1469 a-f	41.4 d-k	4.8 a-c	1.17 h-l	31.7 c-h	83.0 d-j
12	ST 5091B3XF	1448 a-g	42.3 c-g	4.8 a-d	1.16 j-l	29.7 j-o	82.3 h-m
13	BX 2392B3XF	1385 b-g	42.0 c-g	4.6 a-f	1.16 i-l	29.2 m-o	82.5 g-m
14	BX 2394B3XF	1371 b-g	40.7 f-m	4.3 e-g	1.21 a-f	30.5 h-n	82.3 i-m
15	DP 1646 B2XF	1362 b-g	41.1 e-l	4.6 b-f	1.24 ab	30.8 g-l	82.2 i-m
16	ST 4990B3XF	1361 b-g	39.5 l-n	4.7 a-e	1.19 d-k	30.2 i-n	83.1 c-i
17	DG 3402 B3XF	1355 b-g	39.8 j-n	4.5 b-g	1.19 d-j	31.5 d-i	83.3 b-i
18	DG 3456 B3XF	1353 b-g	43.0 a-d	4.5 b-g	1.16 j-l	29.2 no	81.7 j-m
19	DP 2020 B3XF	1339 b-g	39.7 j-n	4.5 b-g	1.21 b-g	31.2 e-k	82.8 f-k
20	DP 21R622B3XF	1337 b-g	41.2 e-l	4.9 a-c	1.17 h-l	30.0 i-o	81.7 k-m
21	AR 9831 B3XF	1333 b-g	40.0 i-n	4.5 b-g	1.19 e-k	31.7 c-h	82.4 h-m
22	PHY 411 W3FE	1331 b-g	40.8 e-m	4.7 a-e	1.13 lm	32.6 b-e	82.9 e-k
23	DG 3511 B3XF	1329 b-g	42.2 c-g	4.8 a-d	1.19 d-k	32.5 b-f	83.5 a-i
24	DG 3519 B3XF	1321 b-g	39.9 i-n	4.5 b-g	1.25 a	32.5 b-f	84.4 a-c
25	PHY 1140B373-04 W3FE	1316 b-g	38.8 n	4.6 b-f	1.17 g-k	32.1 b-g	83.3 b-i
26	DP 2141 NR B3XF	1313 b-g	40.2 h-n	4.8 a-c	1.21 b-g	32.5 b-f	82.2 i-m
27	PHY 1130B333-04 W3FE	1307 b-g	39.1 mn	4.3 e-g	1.19 d-j	33.0 bc	84.4 ab
28	PHY 400 W3FE	1306 b-g	40.9 e-m	4.3 e-g	1.19 d-j	33.3 ab	82.8 f-l
29	PHY 443 W3FE	1281 c-g	41.6 c-i	4.8 a-d	1.13 lm	31.3 d-i	82.9 e-k
30	PHY 1140A385-04 W3FE	1280 c-g	41.3 d-k	4.3 e-g	1.18 f-k	32.6 b-e	83.7 a-g
31	DP 2115 B3XF	1278 c-g	41.5 c-j	4.5 b-f	1.20 c-i	30.7 g-m	83.2 b-i
32	NG 3299 B3XF	1272 c-g	42.1 c-g	4.4 c-g	1.18 f-k	33.4 ab	83.6 a-h
33	DG 3387 B3XF	1247 d-g	41.1 e-l	4.4 d-g	1.19 d-j	30.4 h-n	82.5 g-m
34	PHY 360 W3FE	1227 e-g	39.8 i-n	4.9 ab	1.15 k-m	31.3 d-i	81.4 m
35	ST 4550GLTP	1214 fg	42.5 b-f	4.9 a-c	1.18 f-k	32.8 b-d	84.2 a-d
36	DP 21R618B3XF	1212 fg	44.3 ab	4.1 g	1.23 a-d	30.2 i-n	83.0 d-i
37	PHY 1130B336-04 W3FE	1211 fg	39.9 i-n	4.7 a-f	1.18 f-k	34.6 a	84.1 a-e
38	PHY 332 W3FE	1192 g	40.2 h-n	4.2 fg	1.20 b-h	31.7 c-h	82.8 f-l
39	PHY 415 W3FE	1191 g	39.7 k-n	4.5 b-g	1.20 c-i	33.1 a-c	82.4 h-m
40	DP 2012 B3XF	1188 g	40.6 g-n	4.7 a-f	1.20 c-h	31.0 f-k	82.6 g-m
	Average	1362	41.3	4.6	1.19	31.1	82.9
	LSD (p<0.05)	193	1.3	0.3	0.03	1.2	0.9
	CV (%)	14.3	3.1	6.6	2.3	3.5	1.1

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

†Turnout and fiber quality determined from ginning a 6 lb seedcotton sample and classing a 200 gram subsample from each plot.

Tennessee AgResearch data of Raper et al. (2022).

Table OVT6. Average lint yield, turnout, and fiber quality of 40 entries in the late planted 2022 West Tennessee Research and Education Trial conducted in Jackson, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DG 3456 B3XF	1452 a	42.2 b-g	3.8 d-i	1.21 d-j	28.5 o-r	82.8 e-j
2	ST 4550GLTP	1448 ab	43.5 ab	4.1 b-d	1.19 g-l	31.3 a-f	84.6 ab
3	DG 3387 B3XF	1448 ab	42.0 b-j	3.8 e-j	1.20 f-k	28.7 n-r	81.9 jk
4	DP 2038 B3XF	1429 a-c	45.1 a	4.0 b-d	1.16 mn	28.6 o-r	82.7 f-k
5	ST 4595B3XF	1396 a-d	42.2 b-g	3.7 g-j	1.22 c-g	28.8 l-r	82.9 d-j
6	NG 3195 B3XF	1385 a-d	42.2 b-h	4.0 b-e	1.19 i-m	30.9 b-h	83.3 b-j
7	DG 3402 B3XF	1372 a-e	39.9 k-o	3.6 j	1.21 d-j	29.8 g-p	82.0 jk
8	ST 5091B3XF	1365 a-e	41.6 c-j	3.7 f-j	1.21 d-j	29.9 f-o	82.3 i-k
9	DP 2020 B3XF	1336 a-f	38.5 op	3.6 j	1.24 b-e	30.9 a-h	83.2 c-j
10	DP 2141 NR B3XF	1330 a-f	42.7 b-d	4.3 a	1.19 g-l	31.4 a-e	82.3 i-k
11	PHY 1140A385-04 W3FE	1326 a-f	42.8 bc	3.9 d-i	1.19 g-l	31.5 a-e	84.6 a-c
12	NG 3299 B3XF	1306 a-g	42.6 b-e	4.2 ab	1.21 d-i	32.4 a	84.4 a-d
13	AR 9831 B3XF	1302 a-g	41.1 e-m	4.0 c-f	1.19 g-l	29.0 l-r	82.3 i-k
14	DP 2127 B3XF	1291 a-g	42.0 b-i	4.1 b-d	1.16 l-n	29.2 j-q	84.4 a-e
15	PHY 1130B336-04 W3FE	1289 a-g	41.0 f-m	3.8 d-i	1.20 e-j	32.0 a-c	83.7 a-i
16	BX 2396B3XF	1277 a-g	40.6 h-n	3.7 h-j	1.20 f-k	27.6 r	82.9 d-j
17	DG 3535 B3XF	1275 a-g	40.3 j-n	3.8 e-j	1.20 f-k	31.2 a-g	82.8 e-j
18	DP 21R618B3XF	1268 a-g	42.1 b-i	3.6 j	1.20 f-k	29.1 k-q	82.1 jk
19	PHY 415 W3FE	1266 a-g	41.2 d-l	3.7 g-j	1.23 c-f	32.3 ab	83.1 c-j
20	DG 3511 B3XF	1252 a-g	42.5 b-f	4.1 a-c	1.21 d-i	32.1 a-c	84.4 a-d
21	DP 1646 B2XF	1249 a-g	41.1 d-l	3.6 j	1.27 a	29.0 l-r	82.3 i-k
22	PHY 411 W3FE	1237 a-g	41.6 c-j	4.1 b-d	1.15 n	30.3 e-l	82.3 i-k
23	AR 9371 B3XF	1234 b-g	41.2 d-l	3.7 h-j	1.21 d-j	29.8 g-o	84.9 a
24	DG 3519 B3XF	1233 b-g	41.2 d-l	3.8 f-j	1.26 a-c	31.8 a-d	84.6 ab
25	DP 2239 B3XF	1227 c-g	40.5 i-n	3.6 j	1.27 ab	30.2 e-m	84.3 a-e
26	DP 2012 B3XF	1215 c-g	39.7 l-p	3.6 j	1.24 b-d	30.8 c-i	83.9 a-h
27	DP 2115 B3XF	1214 c-g	41.4 c-k	3.9 d-h	1.19 h-m	29.3 i-q	83.1 c-j
28	BX 2398B3XF	1201 d-g	39.2 n-p	3.6 ij	1.22 d-i	28.7 o-r	83.0 c-j
29	DP 2333 B3XF	1198 d-g	43.4 b	4.2 ab	1.20 f-k	30.1 e-n	82.3 i-k
30	PHY 332 W3FE	1190 d-g	40.5 i-n	3.7 g-j	1.22 c-g	30.7 c-j	82.5 h-k
31	PHY 400 W3FE	1165 e-g	40.7 g-m	3.6 j	1.20 f-k	31.3 a-f	82.7 f-k
32	ST 4990B3XF	1162 e-g	38.2 p	4.0 b-e	1.22 d-h	29.3 i-q	83.3 b-j
33	DP 21R622B3XF	1144 fg	42.1 b-h	3.9 c-g	1.20 g-k	28.0 qr	82.2 i-k
34	NG 4190 B3XF	1141 fg	41.2 d-l	3.6 j	1.22 d-i	28.3 p-r	84.2 a-f
35	PHY 1140B373-04 W3FE	1140 fg	40.2 j-n	3.9 d-i	1.20 f-k	31.0 a-h	84.3 a-e
36	PHY 443 W3FE	1136 fg	40.2 j-n	3.7 f-j	1.18 j-n	30.6 d-k	83.9 a-h
37	PHY 360 W3FE	1135 fg	39.9 k-o	3.9 d-i	1.19 g-l	28.8 m-r	82.7 g-k
38	PHY 1130B333-04 W3FE	1132 fg	39.8 l-o	3.9 d-i	1.20 e-j	32.1 a-c	84.1 a-g
39	BX 2392B3XF	1126 fg	39.5 m-p	3.7 g-j	1.17 k-n	28.0 Qr	82.0 jk
40	BX 2394B3XF	1106 g	38.5 op	3.6 j	1.18 i-m	29.7 h-p	81.2 k
Average		1260	41.2	3.8	1.20	30.1	83.1
LSD (p<0.05)		154	1.1	0.2	0.01	1.0	1.1
CV (%)		12.3	2.7	4.6	2.1	3.4	1.4

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

†Turnout and fiber quality determined from ginning a 6 lb seedcotton sample and classing a 200 gram subsample from each plot.

Tennessee AgResearch data of Raper et al. (2022).

Table OVT7. Average lint yield of 40 entries in the 2022 Milan Research and Education Trial conducted in Milan, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)
1	PHY 400 W3FE	1488a
2	PHY 360 W3FE	1392ab
3	ST 4595B3XF	1363a-c
4	PHY 1140B373-04 W3FE	1354a-c
5	PHY 332 W3FE	1326a-d
6	PHY 415 W3FE	1319a-e
7	PHY 411 W3FE	1315a-e
8	DP 2115 B3XF	1314a-e
9	PHY 1140A385-04 W3FE	1303a-e
10	DP 2038 B3XF	1251a-f
11	NG 3195 B3XF	1235a-f
12	NG 4190 B3XF	1233a-g
13	PHY 443 W3FE	1220a-g
14	DP 21R618B3XF	1183b-h
15	DP 2012 B3XF	1181b-h
16	AR 9371 B3XF	1175b-h
17	PHY 1130B333-04 W3FE	1128b-i
18	PHY 1130B336-04 W3FE	1119b-i
19	DP 2020 B3XF	1118b-i
20	ST 4550GLTP	1109c-i
21	DP 2141 NR B3XF	1108c-i
22	BX 2394B3XF	1090c-i
23	DG 3387 B3XF	1071d-i
24	DG 3519 B3XF	1069d-i
25	DP 2239 B3XF	1069d-i
26	AR 9831 B3XF	1060d-i
27	NG 3299 B3XF	1056d-i
28	BX 2396B3XF	1050d-i
29	DP 21R622B3XF	1040e-i
30	ST 4990B3XF	1016f-i
31	DG 3511 B3XF	1005f-i
32	DP 1646 B2XF	984f-i
33	ST 5091B3XF	981f-i
34	DG 3456 B3XF	955g-i
35	DG 3402 B3XF	937h-i
36	BX 2398B3XF	933h-i
37	DP 2333 B3XF	914h-i
38	BX 2392B3XF	887i
39	DG 3535 B3XF	882i
40	DP 2127 B3XF	856i
Average		1127
LSD (p<0.05)		198
CV (%)		17.7

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

†Turnout and fiber quality determined from ginning two 25 boll samples collected from the first and second replicates. Tennessee AgResearch data of Raper et al. (2021).

Table OVT7. Average lint yield, turnout, and fiber quality of 40 entries in the 2021 Official Variety Trial conducted in Ridgely, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DP 2333 B3XF	1867 a	43.2 a	4.5 a-e	1.21 i-n	30.7 d-k	83.8 c-g
2	ST 4595B3XF	1862 ab	42.2 ab	4.5 a-e	1.24 c-j	30.1 g-l	83.9 a-e
3	DP 2038 B3XF	1833 a-c	43.2 a	4.5 a-e	1.18 no	31.7 b-f	83.4 d-i
4	AR 9371 B3XF	1829 a-d	40.9 b-e	4.3 b-g	1.22 f-m	30.4 f-k	84.5 a-d
5	DG 3535 B3XF	1800 a-e	39.1 h-l	4.1 d-g	1.24 c-i	30.6 e-k	83.1 e-j
6	BX 2394B3XF	1791 a-f	40.4 c-i	4.2 b-g	1.20 j-n	30.6 e-k	82.6 f-j
7	DP 21R622B3XF	1785 a-g	41.5 b-d	4.5 a-e	1.21 i-n	30.4 f-k	82.6 g-j
8	PHY 443 W3FE	1777 a-h	40.0 d-l	4.5 a-f	1.18 no	32.2 a-d	83.6 d-i
9	DP 2239 B3XF	1766 a-h	40.9 b-e	4.1 d-g	1.29 a	29.8 j-l	83.8 b-g
10	DP 2127 B3XF	1741 a-i	40.8 b-f	4.4 a-g	1.21 i-n	30.9 c-j	84.9 a-c
11	ST 4550GLTP	1689 a-j	41.6 a-c	4.6 a-d	1.19 m-o	31.5 b-i	84.0 a-e
12	DG 3511 B3XF	1685 a-j	41.8 a-c	4.6 a-c	1.25 c-g	33.5 a	85.0 ab
13	DP 1646 B2XF	1663 a-k	40.8 b-g	4.5 a-f	1.28 ab	29.8 j-l	83.5 d-i
14	ST 5091B3XF	1658 a-k	40.4 c-i	4.1 d-g	1.21 i-n	30.1 h-l	81.9 j
15	BX 2392B3XF	1643 a-l	40.6 b-h	4.3 b-g	1.22 f-m	29.9 j-l	83.6 d-i
16	AR 9831 B3XF	1639 b-l	39.7 e-l	4.6 a-c	1.20 k-n	30.7 d-k	82.4 h-j
17	DG 3456 B3XF	1628 c-l	41.7 ac	4.5 a-f	1.20 l-n	29.5 j-l	83.7 d-g
18	DG 3402 B3XF	1624 c-l	39.5 e-l	4.2 c-g	1.23 c-l	30.5 f-k	84.2 a-e
19	PHY 411 W3FE	1624 c-l	40.3 c-j	4.4 b-g	1.16 o	31.7 b-g	83.1 e-j
20	PHY 1140A385-04 W3FE	1624 c-l	40.2 c-k	4.1 d-g	1.20 i-n	32.4 a-c	83.9 a-f
21	DP 2115 B3XF	1621 c-l	40.0 d-l	4.2 b-g	1.25 c-g	29.9 j-l	85.0 a-c
22	NG 4190 B3XF	1609 c-l	40.4 c-i	4.0 fg	1.24 c-i	29.4 j-l	84.1 a-e
23	DP 21R618B3XF	1602 d-l	41.3 b-d	4.2 b-g	1.20 k-n	29.9 i-l	82.0 j
24	ST 4990B3XF	1595 e-l	38.7 j-l	4.6 a-c	1.24 c-k	31.6 b-h	84.1 a-e
25	NG 3195 B3XF	1594 e-l	40.9 b-e	4.7 ab	1.20 l-o	31.5 b-i	84.1 a-e
26	PHY 1130B333-04 W3FE	1591 e-l	39.5 e-l	4.1 d-g	1.23 c-l	32.3 a-c	85.1 a
27	NG 3299 B3XF	1584 e-l	40.7 b-h	4.8 a	1.22 e-m	32.8 ab	85.1 a
28	DG 3519 B3XF	1582 e-l	40.5 c-i	4.3 b-g	1.26 a-c	32.7 ab	84.6 a-d
29	PHY 360 W3FE	1570 f-l	39.4 e-l	4.2 d-g	1.19 m-o	30.0 h-l	82.3 ij
30	PHY 415 W3FE	1561 g-l	40.0 d-l	4.3 b-g	1.24 c-i	32.2 a-e	83.9 a-e
31	DP 2020 B3XF	1560 g-l	39.2 g-l	4.3 b-g	1.26 b-f	30.9 c-j	83.4 d-i
32	PHY 1140B373-04 W3FE	1556 h-l	39.2 f-l	4.2 b-g	1.22 g-m	31.9 a-f	85.1 a
33	PHY 332 W3FE	1533 u-l	38.9 i-l	4.0 g	1.25 b-g	31.7 b-f	84.1 a-e
34	DP 2141 NR B3XF	1504 j-l	40.0 d-l	4.8 a	1.23 d-m	33.0 ab	84.5 a-d
35	DP 2012 B3XF	1470 j-l	39.4 e-l	4.5 a-f	1.23 c-l	30.8 c-j	83.6 d-h
36	DG 3387 B3XF	1467 j-m	40.5 c-h	4.0 fg	1.26 a-d	29.1 kl	83.8 b-g
37	PHY 400 W3FE	1454 k-m	39.5 e-l	4.2 c-g	1.21 h-n	31.8 b-f	83.1 e-j
38	PHY 1130B336-04 W3FE	1453 k-m	39.0 h-l	4.1 e-g	1.24 c-k	32.2 a-d	84.9 a-c
39	BX 2398B3XF	1422 lm	38.7 kl	4.5 a-f	1.23 c-l	29.7 j-l	83.1 e-j
40	BX 2396B3XF	1240 m	38.5 l	4.0 fg	1.26 a-e	28.7 l	84.5 a-d
Average		1622	40.3	4.3	1.22	30.9	83.8
LSD (p<0.05)		161	1.1	0.3	0.03	1.1	0.9
CV (%)		10.0	2.9	7.6	2.1	3.6	1.0

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

†Data from the first replicate was excluded due to observed off-target herbicide injury from a yard/brush spray. Turnout and fiber quality determined from ginning two 25 boll samples collected from the third and fourth replicates.

Tennessee AgResearch data of Raper et al. (2021).

2022 County Standard Trial Results



Two summary tables have been constructed from the 2022 CST data. The first (Table CST1) includes thirteen XtendFlex Varieties averaged across eleven locations. The second (Table CST2) includes six Enlist Varieties averaged across four locations. The remaining tables consist of location responses.

Table CST1. Average lint yield, gin turnout, and fiber quality of the thirteen XtendFlex varieties entered in the 2022 Tennessee County Standard Trial Program across eleven trial locations.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Leaf Grade	HVI Color	Loan Value
1	AR 9371 B3XF	1233a	41.7bc	4.1c-f	1.21d-f	30.3cd	84.4bc	4	31	55.20
2	DG 3511 B3XF	1214ab	42.2b	4.3ab	1.21d-f	32.7a	84.4a-c	4	41	54.00
3	NG 3195 B3XF	1207ab	41.7bc	4.2bc	1.21d-f	31.4b	84.5a-c	4	41	54.05
4	DP 2115 B3XF	1204ab	41.0cd	4.2bc	1.22cd	29.9d	83.9cd	4	41	53.75
5	ST 5091 B3XF	1191ab	40.9cd	3.9gf	1.22b-d	30.2cd	83.0ef	4	41	53.85
6	ST 4595 B3XF	1185ab	41.4bc	4.1c-f	1.24a-c	30.2cd	83.1d-f	5	41	51.70
7	DP 2038 B3XF	1181ab	43.4a	4.1c-e	1.16g	30.3cd	82.8ef	3	31	56.35
8	DP 2012 B3XF	1153a-c	39.4ef	3.9gf	1.22c-e	30.9b-d	83.3d-f	4	41	53.85
9	DP 2127 B3XF	1149a-c	40.9cd	4.2b-d	1.19f	30.6b-d	85.2a	4	41	53.95
10	DP 2020 B3XF	1142bc	39.0f	4.0e-g	1.25a	30.9b-d	83.5de	4	41	53.85
11	NG 3299 B3XF	1132bc	40.9cd	4.4a	1.22c-e	32.8a	84.7ab	4	41	54.00
12	DG 3535 B3XF	1090c	39.9ef	4.0d-g	1.24ab	30.1d	83.9cd	4	41	53.85
13	AR 9831 B3XF	1086c	40.4de	4.1c-f	1.20ef	31.2bc	82.6f	4	41	53.95
	Average	1167	41.0	4.1	1.21	30.9	83.8	4	41	54.03
	LSD (p<0.05)	63	0.7	0.1	0.01	0.7	0.6			
	CV (%)	9.4	3.0	5.1	2.1	4.1	1.2			

Table CST2. Average lint yield, gin turnout, and fiber quality of the six Enlist varieties entered in the 2022 Tennessee County Standard Trial Program across four trial locations.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	HVI Color	Leaf Grade	Loan Value
1	PHY 411 W3FE	1442	40.6b	4.1	1.19c	32.3A	84.8ab	41	5	51.60
2	PHY 360 W3FE	1426	40.4b	4.2	1.20bc	30.2B	81.9c	41	5	51.85
3	PHY 1140A385 W3FE	1413	42.5a	4.0	1.23ab	32.6A	85.0a	41	5	51.90
4	PHY 400 W3FE	1359	41.2ab	4.1	1.21abc	32.7A	83.4bc	41	5	51.90
5	PHY 443 W3FE	1345	40.8b	4.2	1.20bc	32.2A	85.0a	41	5	51.90
6	PHY 1140A383 W3FE	1281	40.0b	3.9	1.25a	32.5A	84.1ab	41	5	51.95
	Average	1378	40.9	4.1	1.21	32.1	84.0	41	5	51.85
	LSD (p<0.05)	ns	0.9	ns	0.02	1.2	1.1			
	CV (%)	7.9	2.6	6.3	2.2	3.4	1.2			

Table CST3. Results from the 2022 Madison County Standard Trial including both Enlist and XtendFlex varieties planted May 18th and harvested Oct. 22nd.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2115 B3XF	1453	41.0	3.8	1.25	32.1	84.2	21	3	57.05
2	NG 3299 B3XF	1428	39.3	3.5	1.25	31.7	83.5	31	4	55.25
3	PHY 400 W3FE	1381	41.2	3.7	1.23	32.4	82.6	31	5	52.95
4	PHY 411 W3FE	1368	39.9	3.6	1.21	31.9	84.0	31	6	50.00
5	ST 4595 B3XF	1360	38.5	3.5	1.26	29.7	83.7	31	5	52.70
6	PHY 360 W3FE	1324	37.8	3.6	1.20	30.7	79.0	31	6	49.20
7	PHY 443 W3FE	1311	38.8	3.6	1.18	32.4	84.7	21	3	57.00
8	DP 2127 B3XF	1311	38.1	3.0	1.23	30.2	83.3	31	4	48.60
9	DG 3535 B3XF	1299	38.1	3.3	1.24	30.7	84.6	21	3	52.10
10	ST 5091 B3XF	1290	38.7	3.4	1.27	31.7	83.2	21	3	52.20
11	DG 3511 B3XF	1271	39.8	3.6	1.23	32.8	84.4	31	3	56.65
12	AR 9371 B3XF	1253	39.2	3.4	1.20	29.2	84.5	21	3	52.00
13	PHY 1140A385 W3FE	1246	41.1	3.0	1.30	31.0	85.0	31	5	46.55
14	DP 2012 B3XF	1231	38.3	3.5	1.21	30.8	82.0	21	4	55.50
15	NG 3195 B3XF	1209	38.4	3.5	1.28	31.8	85.6	21	3	57.05
16	DP 2038 B3XF	1177	39.8	3.3	1.18	29.6	83.5	21	3	51.95
17	DP 2020 B3XF	1169	36.6	3.4	1.25	30.0	82.5	21	3	52.00
18	AR 9831 B3XF	1144	38.6	3.4	1.19	30.8	82.2	21	3	52.00
19	PHY 1140A383 W3FE	1099	37.7	2.8	1.30	31.4	84.9	41	7	38.65
Average		1280	39.0	3.4	1.23	31.1	83.5	41	4	52.07

Table CST4. Results from the 2022 Gibson County Standard Trial including both Enlist and XtendFlex varieties planted May 17th and harvested Dec. 1st.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2115 B3XF	1545	39.2	4.2	1.23	28.9	82.7	41	4	53.65
2	NG 3195 B3XF	1528	42.8	4.5	1.21	30.9	85.2	41	5	51.75
3	PHY 360 W3FE	1515	41.3	4.2	1.22	30.0	83.7	51	6	47.75
4	DP 2038 B3XF	1506	42.0	3.9	1.15	30.0	80.8	41	4	53.65
5	DG 3511 B3XF	1505	42.0	4.5	1.21	32.4	84.1	41	5	51.85
6	DG 3535 B3XF	1416	39.1	4.0	1.24	29.7	83.8	41	3	54.35
7	DP 2012 B3XF	1398	38.0	4.0	1.26	30.3	85.0	41	4	53.95
8	NG 3299 B3XF	1374	39.8	4.4	1.20	32.2	85.1	42	3	51.25
9	ST 4595 B3XF	1362	40.3	3.8	1.24	28.7	82.0	41	5	51.50
10	ST 5091 B3XF	1299	37.6	3.8	1.19	30.4	82.5	41	4	53.80
11	DP 2020 B3XF	1262	37.6	4.0	1.29	30.8	85.6	41	5	51.80
12	AR 9371 B3XF	1249	40.3	4.0	1.24	28.7	84.8	41	4	53.75
13	PHY 411 W3FE	1218	37.9	4.1	1.24	34.4	86.5	51	7	47.10
14	PHY 1140A385 W3FE	1208	40.3	4.3	1.24	31.7	85.0	53	7	42.25
15	PHY 400 W3FE	1193	39.5	4.1	1.23	32.7	83.9	51	6	47.90
16	PHY 1140A383 W3FE	1166	37.9	4.1	1.28	32.1	85.3	52	6	45.50
17	DP 2127 B3XF	1139	38.8	4.1	1.23	29.5	86.7	42	4	50.45
18	AR 9831 B3XF	1072	39.2	4.3	1.21	30.6	83.5	43	4	47.00
19	PHY 443 W3FE	1071	39.8	4.0	1.24	31.1	86.4	51	7	47.00
Average		1317	39.6	4.1	1.23	30.8	84.3	41	5	50.33

Table CST5. Results from the 2022 Ames Plantation Enlist County Standard Trial planted May 9th and harvested Nov. 10th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	PHY 411 W3FE	2000	42.6	4.4	1.14	31.7	83.9	51	6	47.90
2	PHY 1140A385 W3FE	1986	44.2	4.5	1.17	33.3	84.8	41	5	51.95
3	PHY 443 W3FE	1847	42.5	4.6	1.18	32.9	84.9	41	5	51.85
4	PHY 1140A383 W3FE	1831	42.2	4.6	1.19	32.2	82.2	41	4	53.90
5	PHY 360 W3FE	1755	40.9	4.3	1.21	30.1	82.3	51	5	48.95
6	PHY 400 W3FE	1724	41.7	4.3	1.19	32.6	83.2	41	4	53.95
Average		1857	42.4	4.5	1.18	32.1	83.6	41	5	51.42

Table CST6. Results from the 2022 Tipton Enlist County Standard Trial planted May 13th and harvested Oct. 20th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	PHY 1140A385 W3FE	1210	44.5	4.0	1.20	34.2	85.2	41	6	49.55
2	PHY 411 W3FE	1184	42.0	4.2	1.15	31.1	84.7	31	3	56.60
3	PHY 443 W3FE	1150	41.9	4.7	1.18	32.3	83.8	31	3	56.60
4	PHY 400 W3FE	1137	42.5	4.1	1.20	32.9	83.7	31	5	53.00
5	PHY 360 W3FE	1110	41.7	4.6	1.18	30.1	82.6	31	4	55.05
6	PHY 1140A383 W3FE	1029	42.4	4.1	1.22	34.4	84.1	41	5	52.00
Average		1137	42.5	4.3	1.19	32.5	84.0	31	4	53.80

Table CST7. Results from the 2022 Carroll (Boals) XtendFlex County Standard Trial planted May 19th and harvested Nov. 17th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DG 3511 B3XF	867	41.1	2.7	1.25	31.2	83.8	43	5	36.25
2	AR 9371 B3XF	708	36.1	2.7	1.26	27.5	83.5	42	6	37.55
3	DP 2012 B3XF	688	37.3	2.3	1.28	29.3	83.0	43	6	26.05
4	DP 2020 B3XF	686	35.8	2.5	1.24	28.0	82.0	43	5	31.26
5	NG 3195 B3XF	681	39.1	2.9	1.20	29.9	83.5	43	5	36.00
6	DP 2038 B3XF	665	43.4	2.9	1.21	30.7	84.2	43	5	36.15
7	ST 5091 B3XF	650	40.3	2.6	1.30	28.3	84.7	43	6	30.31
8	DG 3535 B3XF	485	35.8	2.7	1.30	27.7	84.7	42	6	37.60
9	AR 9831 B3XF	460	36.6	2.6	1.23	29.6	83.3	54	7	0.00
10	DP 2127 B3XF	401	34.9	2.7	1.22	27.9	85.0	53	8	2.70
11	DP 2115 B3XF	375	39.3	2.8	1.24	28.3	82.4	53	7	32.30
12	ST 4595 B3XF	345	39.3	2.9	1.25	28.8	82.9	53	7	32.30
13	NG 3299 B3XF	220	37.7	4.1	1.22	31.6	84.4	43	6	44.75
Average		556	38.2	2.8	1.25	29.1	83.6	51	6	29.48

Table CST8. Results from the 2022 Carroll (Morris) XtendFlex County Standard Trial planted May 19th and harvested Nov. 16th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	NG 3195 B3XF	671	44.6	3.2	1.19	27.9	84.0	42	5	42.50
2	DG 3511 B3XF	660	40.7	3.1	1.19	31.1	83.7	52	5	40.50
3	ST 5091 B3XF	626	38.8	3.2	1.18	29.0	80.7	53	5	37.30
4	DP 2020 B3XF	587	36.7	3.1	1.24	30.7	83.9	42	5	42.60
5	DP 2012 B3XF	581	37.9	2.9	1.19	30.4	82.1	52	6	35.70
6	DP 2115 B3XF	496	37.3	3.1	1.25	30.5	84.8	52	5	40.40
7	DP 2038 B3XF	490	38.7	3.2	1.19	30.4	84.6	52	5	40.40
8	NG 3299 B3XF	450	37.2	3.1	1.25	32.8	83.5	53	5	37.65
9	ST 4595 B3XF	444	38.0	3.2	1.25	32.2	84.1	53	6	36.80
10	AR 9371 B3XF	384	42.2	3.5	1.16	30.1	83.3	42	3	51.00
11	DG 3535 B3XF	366	36.3	3.0	1.26	30.1	83.4	52	7	37.75
12	AR 9831 B3XF	297	39.1	3.1	1.22	31.8	83.7	44	5	37.80
13	DP 2127 B3XF	283	38.1	3.3	1.19	30.1	84.5	42	5	44.40
		487	38.9	3.2	1.21	30.5	83.6	51	5	40.37

Table CST9. Results from the 2022 Crockett (Gwinn) XtendFlex County Standard Trial planted May 18th and harvested Nov. 18th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	AR 9371 B3XF	1219	44.0	4.1	1.23	30.4	86.1	32	4	52.00
2	DP 2127 B3XF	1157	41.7	4.5	1.19	29.8	86.8	41	4	53.80
3	NG 3195 B3XF	1152	40.3	4.2	1.22	31.0	84.7	42	4	50.65
4	DG 3511 B3XF	1132	42.3	4.4	1.23	33.2	86.3	32	3	53.05
5	ST 5091 B3XF	1126	38.5	3.7	1.29	29.5	84.3	42	4	50.40
6	ST 4595 B3XF	1117	41.4	4.0†	1.25	30.0	83.0	43	5	45.60
7	DP 2115 B3XF	1105	40.3	4.2	1.21	32.5	85.6	32	4	52.15
8	DP 2020 B3XF	1100	41.6	4.3	1.25	29.8	84.8	42	4	50.35
9	DP 2038 B3XF	1084	44.5	4.5	1.12	29.6	81.2	31	4	54.45
10	NG 3299 B3XF	1057	40.7	4.3	1.26	34.1	85.9	32	4	52.20
11	AR 9831 B3XF	1045	39.8	4.1	1.21	31.8	83.7	43	5	45.75
12	DP 2012 B3XF	980	39.0	3.9	1.24	32.2	83.2	41	5	51.85
13	DG 3535 B3XF	976	40.5	3.9	1.27	29.7	84.6	42	5	49.05
		1096	41.1	4.2	1.23	31.0	84.6	41	4	50.87

†Fiber quality data not collected for ST 4595 B3XF; fiber quality numbers reported here are weighted estimates.

Table CST10. Results from the 2022 Crockett (Mayfield) XtendFlex County Standard planted May 16th and harvested Nov. 17th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2115 B3XF	1264	42.2	4.7	1.21	29.1	84.2	31	4	55.05
2	ST 5091 B3XF	1251	41.6	4.6	1.22	31.3	82.0	41	3	54.50
3	NG 3299 B3XF	1222	41.3	4.6	1.22	28.9	86.2	41	3	54.35
4	DG 3511 B3XF	1220	42.6	5.2	1.22	33.1	85.4	31	3	54.45
5	DP 2020 B3XF	1220	39.5	4.4	1.27	30.9	83.2	41	4	53.80
6	DP 2127 B3XF	1194	42.7	4.7	1.18	29.7	85.2	31	3	56.45
7	AR 9371 B3XF	1161	42.9	5.0	1.18	33.5	84.7	31	3	54.40
8	NG 3195 B3XF	1100	40.2	4.5	1.22	31.0	84.5	42	3	51.20
9	DP 2012 B3XF	1090	39.1	4.5	1.23	30.0	83.9	41	4	53.80
10	ST 4595 B3XF	1086	40.7	4.1	1.26	30.3	83.3	42	4	50.45
11	DG 3535 B3XF	1085	39.8	4.5	1.19	28.9	83.4	42	3	50.85
12	DP 2038 B3XF	1040	44.0	4.7	1.13	30.9	81.1	31	3	55.85
13	AR 9831 B3XF	966	40.3	4.6	1.13	29.2	79.9	44	3	44.35
Average		1146	41.3	4.6	1.20	30.5	83.6	41	3	53.04

Table CST11. Results from the 2022 Hardeman XtendFlex County Standard planted May 12th and harvested Oct. 27th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	AR 9371 B3XF	1149	42.3	5.2	1.23	31.3	84.7	31	3	54.30
2	ST 4595 B3XF	1090	43.7	5.2	1.25	30.0	83.8	31	4	52.75
3	DG 3535 B3XF	965	41.2	5.3	1.23	29.8	83.3	31	3	52.45
4	AR 9831 B3XF	959	40.6	5.4	1.22	31.3	82.6	31	3	52.65
5	DP 2127 B3XF	940	42.7	5.5	1.21	31.3	84.4	31	3	52.75
6	DP 2012 B3XF	921	39.9	4.9	1.18	29.6	82.6	31	3	56.30
7	NG 3299 B3XF	886	43.2	5.5	1.21	34.0	85.7	31	3	52.90
8	DP 2115 B3XF	870	41.7	5.2	1.23	27.8	82.7	31	3	53.90
9	DP 2038 B3XF	866	44.2	5.4	1.18	30.6	83.7	31	3	52.55
10	NG 3195 B3XF	849	41.7	5.1	1.16	30.9	83.5	31	3	54.00
11	ST 5091 B3XF	811	41.1	5.0	1.19	28.9	82.7	31	2	54.25
12	DP 2020 B3XF	799	40.0	4.9	1.25	30.3	82.5	31	4	55.05
13	DG 3511 B3XF	728	44.3	5.1	1.20	31.4	84.0	31	3	54.30
Average		910	42.0	5.2	1.21	30.6	83.6	31	3	53.70

Table CST12. Results from the 2022 Haywood (Booth) XtendFlex County Standard planted May 12th and harvested Nov. 4th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	ST 4595 B3XF	1723	43.5	3.7	1.24	30.3	83.2	41	4	53.85
2	DP 2012 B3XF	1682	40.8	3.8	1.22	31.0	84.2	31	3	56.70
3	DP 2115 B3XF	1670	41.3	3.6	1.22	30.2	84.0	31	4	55.15
4	DP 2038 B3XF	1651	43.1	3.6	1.19	30.4	83.0	31	3	56.45
5	NG 3195 B3XF	1645	41.5	4.1	1.23	37.7	84.6	31	3	56.80
6	DP 2127 B3XF	1633	42.3	3.9	1.21	32.0	85.6	31	4	55.40
7	DG 3511 B3XF	1626	42.6	4.3	1.22	32.9	85.0	31	3	56.70
8	AR 9371 B3XF	1621	41.2	3.6	1.19	31.1	83.0	31	4	55.25
9	NG 3299 B3XF	1597	42.0	4.1	1.20	32.4	84.8	31	3	56.70
10	ST 5091 B3XF	1594	41.5	3.4	1.23	31.7	83.4	31	4	50.50
11	AR 9831 B3XF	1586	41.0	3.6	1.22	30.6	82.4	31	3	56.40
12	DP 2020 B3XF	1574	38.6	3.6	1.25	30.7	83.0	31	4	55.10
13	DG 3535 B3XF	1551	40.8	3.7	1.28	30.8	84.0	41	4	53.90
Average		1627	41.5	3.8	1.22	31.7	83.9	31	4	55.30

Table CST13. Results from the 2022 Haywood (Farmer/Woods) XtendFlex County Standard planted May 11th and harvested Oct. 27th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DG 3511 B3XF	1505	43.5	5.0	1.16	34.5	84.7	31	2	54.65
2	AR 9371 B3XF	1469	44.3	4.6	1.20	30.8	84.4	31	4	55.15
3	DP 2115 B3XF	1434	44.0	4.9	1.18	30.0	84.9	31	3	56.50
4	DP 2127 B3XF	1393	43.8	5.1	1.14	29.8	84.6	41	4	51.30
5	DP 2020 B3XF	1385	41.9	4.6	1.23	30.6	83.6	31	3	56.45
6	NG 3195 B3XF	1348	43.4	4.8	1.17	30.9	84.8	31	4	55.10
7	DP 2012 B3XF	1333	41.9	4.6	1.19	30.6	83.0	41	4	53.80
8	DP 2038 B3XF	1324	45.4	4.9	1.11	29.6	81.4	31	3	55.75
9	ST 4595 B3XF	1310	43.5	5.0	1.19	29.2	82.6	41	5	49.15
10	NG 3299 B3XF	1293	43.8	5.2	1.19	34.9	84.6	31	3	54.40
11	ST 5091 B3XF	1240	42.9	4.6	1.18	28.4	82.3	31	4	54.90
12	AR 9831 B3XF	1200	42.4	4.3	1.15	29.2	82.5	31	3	56.20
13	DG 3535 B3XF	1093	40.2	4.8	1.17	30.5	81.6	31	3	56.25
Average		1333	43.1	4.8	1.17	30.7	83.5	31	3	54.58

Table CST14. Results from the 2022 Haywood (Williams) XtendFlex County Standard planted May 12th and harvested Nov. 9th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2127 B3XF	1693	41.1	4.7	1.2	30.4	85.6	41	3	54.50
2	AR 9371 B3XF	1690	41.1	4.4	1.21	31.0	85.7	41	4	54.05
3	ST 4595 B3XF	1615	42.4	4.6	1.27	30.3	84.8	41	5	51.70
4	NG 3195 B3XF	1589	42.5	4.7	1.24	31.5	86.0	41	4	54.05
5	DP 2115 B3XF	1516	42.1	4.6	1.23	30.2	84.1	41	4	53.85
6	DP 2038 B3XF	1482	45.5	4.7	1.20	31.4	83.8	31	3	56.60
7	AR 9831 B3XF	1446	41.2	4.8	1.20	32.7	82.3	42	3	51.10
8	ST 5091 B3XF	1439	40.4	4.4	1.24	30.7	84.8	41	3	54.45
9	DP 2020 B3XF	1432	39.7	4.5	1.26	32.9	84.4	41	4	54.00
10	DG 3535 B3XF	1409	41.6	4.4	1.28	30.8	85.2	41	4	53.90
11	NG 3299 B3XF	1378	39.9	4.6	1.27	33.9	85.2	41	3	54.75
12	DG 3511 B3XF	1368	42.5	4.8	1.21	33.1	84.4	31	3	56.75
13	DP 2012 B3XF	1269	40.5	4.3	1.21	31.4	83.1	41	5	51.80
	Average	1486	41.6	4.6	1.23	31.6	84.6	41	4	53.96

Table CST15. Results from the 2022 Lincoln XtendFlex County Standard planted May 11th and harvested Oct. 18th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	ST 5091 B3XF	1485	44.5	4.1	1.20	31.3	83.0	31	4	55.25
2	AR 9371 B3XF	1445	43.4	4.1	1.18	29.8	83.9	31	4	55.05
3	DP 2038 B3XF	1442	45.3	4.2	1.14	30.2	83.0	31	3	56.40
4	AR 9831 B3XF	1431	42.8	4.3	1.22	33.6	82.5	31	4	55.30
5	ST 4595 B3XF	1387	42.9	4.3	1.19	31.3	81.7	31	5	52.85
6	DP 2115 B3XF	1361	42.1	4.6	1.22	29.9	83.4	31	4	55.00
7	NG 3195 B3XF	1354	42.9	4.3	1.19	31.9	84.0	31	4	55.35
8	DG 3511 B3XF	1343	42.8	4.6	1.19	33.5	83.6	31	4	55.35
9	NG 3299 B3XF	1341	42.9	4.8	1.16	33.8	83.9	31	3	56.60
10	DP 2012 B3XF	1331	40.1	3.8	1.21	32.4	83.6	31	4	55.30
11	DP 2127 B3XF	1324	43.2	4.2	1.17	33.1	85.4	31	3	56.75
12	NG 4190 B3XF	1306	43.0	3.9	1.23	31.3	84.1	31	3	56.70
13	NG 5150 B3XF	1258	42.1	4.2	1.19	30.7	81.8	31	3	56.40
14	DG 3519 B3XF	1246	41.9	4.1	1.26	33.3	83.3	41	6	49.45
15	DP 2020 B3XF	1244	39.9	4.1	1.24	33.1	83.4	31	4	55.40
16	DG 3535 B3XF	1217	42.6	4.2	1.24	31.2	83.9	31	4	55.30
	1345	42.6	4.2	1.20	31.9	83.4	31	4	55.15	

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.

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

- USDA. 1997. Cotton Classification Results -- Understanding the Data. Agricultural Marketing Service, Cotton Div. Rev. 5/97. 12 pp.
- USDA. 1999. The Classification of Cotton. Agricultural Marketing Service, Agric. Handbook 566. Rev. 1/99. Washington, DC. 23 pp.



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