

Cotton Variety Trial Results | 2023



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Tennessee Cotton Variety Trial Results|2023

Tyson B. Raper, Cotton and Small Grains Specialist
Department of Plant Sciences

Contributing Authors

Ryan H. Blair	Extension Area Specialist	UT Extension
Samuel Reeves	Research Associate	Department of Plant Sciences
Matt Davis	Extension Assistant	UT Extension
Caroline Honorato Rocha	Program Assistant	Department of Plant Sciences
Patricia de Sousa Soares	Program Assistant	Department of Plant Sciences
Earl Reed	Program Assistant	Department of Plant Sciences

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Department of Plant Sciences
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The University of Tennessee Knoxville,
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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 2023 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 fourteen CSTs were conducted during 2023. Of the fourteen CSTs, three included both FE (Enlist) and XF (XtendFlex) cultivars; ten included only XF cultivars; and one included only FE cultivars.

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 2023 growing season. These included five locations on University of Tennessee Research and Education Centers and three locations on producer farms. Seed of commercial cultivars and experimental lines was provided by respective companies. In all, 44 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.

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 four of the 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. At two of the locations, one six lb seedcotton sample from each treatment was ginned at the UT Cotton MicroGin and classed at the USDA Classing Office in Memphis, TN.

Large Plot Variety Trials

Fourteen CSTs were harvested in the 2023 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 six 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 University of Tennessee Cotton MicroGin for further analysis.

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 2023 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 2023 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.

2023 Official Variety Trial Results



Table OVT1. 2023 Tennessee Official Variety Trial details.

Location	Planting Date	Soil Type	Tillage	Irrigation
Elora	05/25/2023	Dickson Silt Loam	No-Till	None
Gift	05/08/2023	Loring Silt Loam	No-Till	None
Grand Junction ¹	05/09/2023	Memphis Silt Loam	No-Till	None
Jackson ²	05/04/2023	Almo Silt Loam	No-Till	None
Jackson ²	06/02/2023	Almo Silt Loam	No-Till	None
Milan ³	05/17/2023	Memphis Silt Loam	Bedded	None
Milan ³	05/24/2023	Grenada Silt Loam	No-Till	Pivot
Ridgely	05/09/2023	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 44 entries in the 2023 Official Variety Trials conducted near Elora, Gift, Grand Junction, Jackson (early and late planted), Milan (dryland and irrigated) and Ridgely, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DP 2115 B3XF	1498 a	42.2 e-h	4.4 d-i	1.18 n-s	31.1 l-p	83.9 g-m
2	PHY 360 W3FE	1462 ab	40.6 mno	4.2 h-o	1.18 q-u	30.5 o-s	82.8 qr
3	DP 2211 B3TXF	1448 abc	42.8 cde	4.3 g-n	1.19 l-r	30.4 p-s	83.9 f-m
4	PX 1140D328-04 W3FE	1436 a-d	41.5 h-l	4.1 n-s	1.22 d-h	33.2 bcd	83.7 h-n
5	PX 1140B373-04 W3FE	1434 a-d	40.5 nop	4.2 h-p	1.19 m-s	32.9 c-f	84.6 a-f
6	DP 2127 B3XF	1434 a-e	42.8 cde	4.6 a	1.17 stu	31.4 j-n	84.8 ab
7	NG 3195 B3XF	1431 a-f	42.2 e-h	4.4 c-h	1.19 l-p	32.0 g-j	84.5 a-g
8	DP 2038 B3XF	1429 a-f	44.8 a	4.5 a-d	1.15 vw	31.2 k-o	83.0 opq
9	ST 4595 B3XF	1428 a-f	42.7 c-f	4.5 b-e	1.20 i-m	31.2 k-o	83.7 h-n
10	DP 2131 B3TXF	1428 a-f	43.1 cd	4.1 l-s	1.24 ab	30.6 o-s	83.0 o-r
11	PHY 400 W3FE	1422 a-f	42.3 d-g	4.0 rst	1.20 j-m	33.1 b-e	83.5 k-o
12	AR 9371 B3XF	1422 a-f	42.9 cde	4.3 e-k	1.19 m-s	30.9 m-r	84.6 a-f
13	DG 4530 B3TXF	1408 a-g	42.3 e-h	4.2 k-r	1.20 i-m	30.5 o-s	84.5 a-g
14	PHY 443 W3FE	1391 b-h	41.4 i-n	4.3 e-k	1.17 r-u	32.9 c-f	84.1 c-k
15	ST 5091 B3XF	1366 c-i	41.9 f-i	4.1 m-s	1.20 j-n	30.7 n-s	82.8 pqr
16	PX 1140A385-04 W3FE	1362 c-j	43.4 bc	4.2 h-p	1.18 n-s	33.6 abc	84.9 a
17	PX 1130D303-04 W3FE	1362 c-j	41.3 i-n	4.4 d-j	1.16 tuv	32.4 e-h	84.6 a-f
18	PHY 415 W3FE	1359 c-j	41.9 f-i	4.2 k-r	1.22 c-f	33.9 ab	84.1 d-l
19	PX 1130B333-04 W3FE	1356 c-j	40.1 opq	4.2 k-s	1.19 l-q	33.8 ab	84.7 abc
20	DP 2239 B3XF	1353 d-j	41.8 g-j	4.1 m-s	1.23 abc	31.4 j-m	83.5 j-o
21	PHY 411 W3FE	1351 d-j	41.4 i-m	4.5 bcd	1.14 x	31.9 h-k	83.4 m-q
22	PHY 332 W3FE	1348 d-j	40.2 opq	3.9 u	1.23 a-d	33.1 cde	83.5 l-p
23	NG 4190 B3XF	1346 d-j	41.2 i-n	4.2 i-q	1.21 e-j	31.7 h-l	84.8 ab
24	DP 2012 B3XF	1343 d-j	41.1 i-n	4.2 k-s	1.21 e-k	31.7 h-l	84.0 e-l
25	NG 4343 B3TXF	1343 d-j	40.2 opq	4.1 p-t	1.20 g-m	30.9 m-r	83.7 i-n
26	AMX 20T157 B3XF	1340 e-j	40.7 l-o	4.2 k-r	1.21 f-l	31.7 h-l	83.7 i-n
27	DP 2333 B3XF	1337 f-j	43.1 c	4.5 abc	1.18 o-t	30.6 o-s	83.7 h-n
28	DG 3528 B3XF	1324 g-j	41.7 g-k	4.1 q-t	1.22 c-g	30.5 o-s	84.2 c-j
29	DG 3519 B3XF	1319 g-j	40.9 k-o	4.2 j-r	1.23 a-d	32.7 d-g	84.6 a-e
30	DP 2317 B3TXF	1319 g-j	41.1 i-n	4.1 n-s	1.20 j-m	31.5 i-m	83.8 h-n
31	DG 3511 B3XF	1301 h-j	42.9 cde	4.6 ab	1.20 i-m	33.5 a-d	84.6 a-e
32	AR 9383 B3TXF	1284 ijk	39.6 q	4.3 e-l	1.18 p-t	30.2 rs	83.7 h-n
33	NG 4335 B3TXF	1280 ijk	40.9 k-o	4.3 g-o	1.20 h-m	31.7 h-l	84.5 a-g
34	DP 2141 NR B3XF	1275 i-l	41.2 i-n	4.4 c-f	1.20 j-n	33.4 a-d	83.7 i-n
35	DG 4484 B3TXF	1270 jkl	44.1 ab	4.2 k-s	1.14 wx	32.1 g-j	83.2 n-q
36	AMX 160030-B B3XF	1204 klm	41.3 i-n	4.4 c-g	1.19 l-p	32.1 ghi	83.7 h-n
37	AMX 21C005 B3TXF	1203 klm	39.7 pq	3.9 tu	1.20 k-o	30.9 m-r	84.2 b-i
38	PX 1150D490-04 W3FE	1184 lm	41.1 i-n	4.2 i-q	1.16 uv	30.0 s	82.3 r
39	AMX 20T079 B3XF	1183 lm	41.1 j-n	4.3 f-m	1.22 b-e	30.8 m-r	84.3 a-h
40	DG 4497 B3TXF	1174 m	44.1 ab	4.1 l-s	1.15 vwx	32.3 f-i	83.4 m-q
41	PX 1150B437-04 W3FE	1174 m	38.7 r	4.2 k-r	1.17 stu	34.1 a	83.5 k-o
42	DG 3425 B3XF	1131 mn	40.9 k-o	4.0 stu	1.25 a	32.9 c-f	83.8 h-n
43	AMX 20T114 B3XF	1061 no	40.8 l-o	4.3 e-l	1.22 d-i	30.3 qrs	84.7 a-d
44	AMX 1600-A B3XF	1034 o	42.8 cde	4.1 o-s	1.24 a	31.0 l-q	83.9 f-m
Average		1326	41.7	4.2	1.20	31.8	83.9
LSD (p≤0.05)		66	0.6	0.1	0.01	0.5	0.5
CV (%)		14.0	3.0	5.8	2.1	3.5	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 Elora, Gift, Grand Junction, Jackson (early and late planted), and Ridgely.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT3. Average lint yield, turnout, and fiber quality of 44 entries in the 2023 Official Variety Trial conducted in Elora, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout [†] (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	PHY 360 W3FE	1529 a	41.2 e-k	4.1 abc	1.17 klm	29.9 no	82.4 k-o
2	PX 1130D303-04 W3FE	1469 ab	40.8 f-l	3.9 a-g	1.18 g-m	32.3 c-i	84.5 a-e
3	PX 1130B333-04 W3FE	1394 abc	40.2 g-l	3.6 d-i	1.17 i-m	32.3 c-h	84.2 a-g
4	NG 3195 B3XF	1358 a-d	43.1 b-e	3.9 a-g	1.19 d-l	31.7 d-l	84.1 a-h
5	PHY 415 W3FE	1358 a-d	42.2 b-g	3.7 d-i	1.21 a-g	34.3 a	83.7 a-j
6	DG 4530 B3TXF	1347 a-e	42.8 b-f	4.0 a-d	1.17 i-m	29.8 o	83.8 a-i
7	PHY 400 W3FE	1337 a-f	42.6 b-f	3.6 f-i	1.20 c-k	33.0 bcd	83.3 c-m
8	PHY 443 W3FE	1282 a-g	42.3 b-g	3.9 a-f	1.19 f-l	31.9 d-k	84.2 a-g
9	DP 2141 NR B3XF	1277 a-g	40.8 f-l	4.1 ab	1.19 d-l	32.0 d-k	83.8 a-j
10	DG 3511 B3XF	1245 b-g	43.5 bcd	4.2 a	1.20 b-k	34.0 ab	84.7 ab
11	PX 1140D328-04 W3FE	1245 b-g	42.2 b-g	3.3 i	1.20 a-j	33.0 bcd	82.1 mno
12	DP 2127 B3XF	1244 b-g	42.0 b-i	3.9 a-f	1.17 i-m	31.3 h-n	84.1 a-h
13	DP 2038 B3XF	1236 b-h	46.4 a	4.0 a-d	1.14 n	30.1 no	82.4 l-o
14	ST 4595 B3XF	1226 b-i	43.9 b	4.0 a-e	1.21 a-h	30.8 j-o	83.7 a-j
15	PHY 411 W3FE	1226 b-i	39.9 i-l	3.8 b-h	1.15 mn	31.9 d-k	83.4 b-m
16	AMX 20T079 B3XF	1219 b-j	42.1 b-h	3.9 a-g	1.23 a	30.6 k-o	84.4 a-d
17	DP 2239 B3XF	1208 c-k	42.6 b-f	3.5 hi	1.23 ab	30.9 i-o	82.6 i-o
18	PX 1140A385-04 W3FE	1196 c-l	43.8 bc	3.3 i	1.18 h-m	32.9 b-e	84.5 abc
19	DG 3528 B3XF	1185 c-m	41.8 b-j	3.8 b-h	1.20 c-k	30.2 mno	83.6 b-l
20	DP 2317 B3TXF	1185 c-m	41.7 c-k	3.7 b-h	1.20 c-k	31.6 f-l	83.3 c-m
21	NG 4190 B3XF	1183 c-m	41.2 e-k	3.9 a-g	1.20 b-k	31.7 d-l	84.7 ab
22	DG 3519 B3XF	1181 c-m	41.2 e-k	3.7 d-i	1.21 a-g	32.9 b-f	83.5 b-l
23	PX 1140B373-04 W3FE	1179 c-m	39.8 jkl	3.5 ghi	1.19 e-l	33.0 a-d	83.1 f-n
24	PHY 332 W3FE	1175 c-n	39.9 h-l	3.6 e-i	1.19 f-l	32.1 d-j	82.0 no
25	ST 5091 B3XF	1157 c-n	42.7 b-f	3.6 e-i	1.19 d-l	31.0 i-o	82.5 j-o
26	NG 4335 B3TXF	1140 c-n	40.7 f-l	3.9 a-g	1.20 a-i	32.1 d-j	84.4 a-e
27	DP 2131 B3TXF	1140 c-n	43.5 bcd	3.6 e-i	1.23 ab	31.8 d-k	83.1 e-n
28	DP 2333 B3XF	1123 d-n	41.5 d-k	4.1 abc	1.16 lmn	29.8 o	83.2 d-n
29	AMX 160030-B B3XF	1105 d-n	42.5 b-f	3.9 a-f	1.18 h-m	31.6 e-l	82.9 g-n
30	PX 1150D490-04 W3FE	1093 e-n	42.1 b-h	3.5 ghi	1.15 mn	30.0 no	81.3 o
31	DP 2012 B3XF	1088 e-n	41.0 e-l	3.6 f-i	1.21 a-h	31.8 d-k	84.1 a-h
32	DP 2115 B3XF	1084 f-n	42.8 b-f	3.9 a-g	1.18 i-m	31.5 g-m	83.3 c-n
33	AMX 20T157 B3XF	1080 f-n	40.7 f-l	3.6 f-i	1.21 a-h	30.8 j-o	83.8 a-j
34	NG 4343 B3TXF	1043 g-n	40.1 g-l	3.5 ghi	1.22 a-d	30.4 l-o	83.5 b-l
35	AR 9383 B3TXF	1032 g-n	38.8 l	3.6 d-i	1.20 b-k	30.4 l-o	83.9 a-i
36	DG 4484 B3TXF	1027 g-n	43.6 bcd	3.7 b-h	1.17 j-m	32.9 b-g	83.4 b-m
37	PX 1150B437-04 W3FE	985 h-n	39.5 kl	4.0 a-d	1.18 i-m	33.6 abc	83.4 b-m
38	DP 2211 B3TXF	984 h-n	41.7 c-k	3.7 c-i	1.22 a-f	31.2 h-n	84.4 a-f
39	AR 9371 B3XF	976 i-n	42.5 b-f	3.6 f-i	1.20 b-k	30.8 j-o	84.9 a
40	AMX 21C005 B3TXF	963 j-n	39.5 kl	3.6 d-i	1.20 b-k	31.0 i-o	83.7 a-j
41	AMX 20T114 B3XF	949 k-n	40.2 g-l	3.6 d-i	1.22 a-e	29.8 o	84.3 a-f
42	AMX 1600-A B3XF	947 lmn	42.0 b-i	3.8 b-h	1.22 abc	30.8 j-o	83.5 b-l
43	DG 4497 B3TXF	928 mn	43.6 bcd	3.7 c-i	1.16 lmn	32.4 c-h	83.7 a-k
44	DG 3425 B3XF	917 n	40.9 f-l	3.5 ghi	1.22 a-d	31.8 d-k	82.8 h-n
Average		1165	41.8	3.7	1.19	31.6	83.5
LSD (p≤0.05)		184	1.5	0.3	0.02	0.9	1.1
CV (%)		15.9	3.7	7.6	1.9	3.0	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 every plot.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT4. Average lint yield, turnout, and fiber quality of 44 entries in the 2023 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 2115 B3XF	1595 a	41.2 g-m	4.5 d-i	1.22 h-n	31.2 n-r	84.6 a-k
2	NG 4343 B3TXF	1520 ab	40.4 k-p	4.2 klm	1.25 c-i	32.0 h-r	84.4 b-m
3	PHY 415 W3FE	1509 ab	41.8 d-i	4.3 h-l	1.24 c-j	34.3 a-f	84.4 b-m
4	AR 9371 B3XF	1502 ab	42.8 a-e	4.6 c-g	1.20 m-q	31.0 n-r	84.7 a-i
5	DP 2211 B3TXF	1501 ab	41.8 d-j	4.3 g-l	1.21 j-o	30.9 o-r	83.7 f-o
6	PHY 360 W3FE	1491 abc	39.5 n-q	4.4 f-k	1.21 i-o	30.7 qr	83.6 h-o
7	PX 1140D328-04 W3FE	1487 a-d	40.8 h-n	4.3 h-l	1.26 a-f	34.3 a-f	84.7 a-j
8	DP 2127 B3XF	1473 a-e	41.8 d-i	4.9 ab	1.21 j-o	32.2 g-q	85.4 ab
9	DP 2012 B3XF	1472 a-e	40.6 i-o	4.3 i-l	1.23 f-m	32.0 h-r	83.9 e-n
10	AMX 20T157 B3XF	1457 a-e	40.4 k-p	4.4 g-k	1.25 c-i	32.5 g-o	84.4 b-m
11	AR 9383 B3TXF	1453 a-e	39.9 m-p	4.5 f-j	1.20 k-p	30.9 n-r	84.5 b-m
12	PHY 332 W3FE	1446 a-e	40.0 m-p	3.8 n	1.27 a-e	34.9 ab	84.5 b-m
13	ST 4595 B3XF	1440 a-f	41.5 e-k	4.6 c-g	1.23 f-m	31.9 i-r	84.0 d-m
14	DP 2131 B3TXF	1418 a-g	42.6 a-f	4.3 g-l	1.29 a	30.9 n-r	82.5 o
15	DP 2317 B3TXF	1413 a-g	40.5 j-p	4.1 lm	1.24 d-j	31.3 l-r	84.7 a-i
16	DP 2038 B3XF	1375 a-h	43.7 ab	4.8 a-e	1.18 o-r	32.2 g-q	83.4 l-o
17	DG 3519 B3XF	1372 a-h	40.7 h-n	4.4 g-k	1.27 a-d	32.9 d-l	85.8 a
18	PHY 443 W3FE	1369 a-h	41.1 g-m	4.5 f-j	1.20 l-q	34.3 a-f	84.6 a-l
19	DG 4530 B3TXF	1366 b-h	41.0 h-m	4.3 j-m	1.25 b-h	31.3 k-r	85.1 a-d
20	PHY 400 W3FE	1365 b-h	41.5 e-k	4.4 g-k	1.22 g-n	33.6 a-h	83.5 i-o
21	PX 1140A385-04 W3FE	1357 b-h	43.2 abc	4.5 e-j	1.22 f-m	34.6 a-d	85.4 ab
22	PX 1130D303-04 W3FE	1342 b-i	40.8 h-n	4.6 c-g	1.19 n-q	33.0 d-k	84.7 a-i
23	DP 2141 NR B3XF	1320 b-j	40.8 h-n	4.8 abc	1.23 f-m	35.0 a	83.6 g-o
24	NG 3195 B3XF	1319 b-j	40.6 h-o	4.6 c-h	1.22 f-m	32.9 e-m	84.6 a-k
25	DG 3511 B3XF	1309 b-j	41.8 d-i	4.9 ab	1.23 f-m	34.5 a-e	84.9 a-f
26	PX 1130B333-04 W3FE	1309 b-j	39.4 opq	4.4 g-k	1.24 d-k	34.4 a-e	85.4 ab
27	DP 2239 B3XF	1308 b-j	42.0 c-h	4.5 d-i	1.23 e-l	31.9 i-r	82.7 no
28	ST 5091 B3XF	1307 b-j	40.4 k-p	4.3 h-l	1.24 c-j	30.7 pqr	83.7 g-o
29	PX 1140B373-04 W3FE	1301 b-j	40.0 m-p	4.4 g-k	1.20 l-q	33.7 a-g	85.2 abc
30	NG 4190 B3XF	1299 b-j	40.8 h-n	4.4 f-k	1.25 c-i	33.2 c-j	85.0 a-e
31	AMX 21C005 B3TXF	1270 c-k	39.1 pq	4.0 mn	1.23 f-m	30.7 pqr	84.4 b-m
32	PHY 411 W3FE	1259 d-k	41.4 f-l	5.0 a	1.14 r	32.2 g-q	83.5 j-o
33	DG 3528 B3XF	1248 e-k	41.0 g-m	4.3 j-m	1.25 c-i	30.9 n-r	84.3 b-m
34	DG 4484 B3TXF	1213 f-k	42.7 a-f	4.3 h-l	1.17 pqr	32.4 g-p	84.0 d-m
35	DP 2333 B3XF	1203 g-k	42.9 a-d	4.8 a-d	1.20 l-q	31.2 n-r	84.1 c-m
36	AMX 20T079 B3XF	1176 h-l	40.5 i-o	4.3 g-l	1.26 a-g	31.4 j-r	84.9 a-g
37	AMX 20T114 B3XF	1169 h-l	40.1 l-p	4.3 h-l	1.26 a-g	31.2 m-r	85.4 ab
38	AMX 160030-B B3XF	1151 h-l	40.8 h-n	4.7 b-f	1.24 d-j	33.3 a-i	84.8 a-h
39	DG 4497 B3TXF	1128 i-m	43.8 a	4.4 f-k	1.17 qr	32.6 f-n	83.4 k-o
40	NG 4335 B3TXF	1116 i-m	39.9 m-p	4.3 i-l	1.24 d-j	32.3 g-q	84.6 a-k
41	PX 1150B437-04 W3FE	1098 j-m	38.4 q	4.3 h-l	1.21 i-o	34.8 abc	84.5 b-l
42	DG 3425 B3XF	1057 klm	40.0 m-p	4.2 klm	1.28 abc	33.2 b-j	84.1 c-m
43	PX 1150D490-04 W3FE	955 lm	40.6 h-o	4.8 a-e	1.20 l-q	30.4 r	83.3 mno
44	AMX 1600-A B3XF	919 m	42.3 b-g	4.3 j-m	1.28 ab	31.7 i-r	84.6 a-k
Average		1322	41.1	4.4	1.23	32.4	84.3
LSD (p≤0.05)		161	0.9	0.2	0.03	1.2	0.9
CV (%)		12.3	2.3	4.3	2.2	3.8	1.0

‡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 every plot.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT5. Average lint yield, turnout, and fiber quality of 44 entries in the 2023 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	1844 a	43.0	4.7	1.15	33.1	83.0
2	DP 2115 B3XF	1825 ab	43.0	4.6	1.17	31.6	84.4
3	PHY 1140D328-04 W3FE	1813 abc	40.9	4.2	1.19	32.3	84.1
4	DP 2211 B3TXF	1809 a-d	43.0	4.5	1.16	29.7	83.5
5	PHY 1140B373-04 W3FE	1802 a-e	42.6	4.4	1.14	31.7	83.7
6	DP 2127 B3XF	1801 a-e	43.9	4.8	1.18	30.4	84.5
7	AR 9371 B3XF	1793 a-e	42.3	4.5	1.19	29.8	85.0
8	PHY 360 W3FE	1715 a-f	40.9	4.5	1.15	29.3	81.9
9	PHY 443 W3FE	1705 a-g	40.7	4.5	1.16	32.2	84.6
10	DP 2038 B3XF	1698 a-h	46.0	4.7	1.13	31.8	82.6
11	ST 5091B3XF	1683 a-i	42.3	4.1	1.21	29.6	82.7
12	NG 4190 B3XF	1675 a-j	41.9	4.4	1.15	30.4	84.8
13	DG 3519 B3XF	1672 a-j	42.8	4.2	1.23	32.3	85.2
14	PHY 1150D490-04 W3FE	1666 b-k	40.3	4.5	1.14	28.7	81.8
15	DP 2131 B3TXF	1651 b-l	44.5	4.6	1.20	29.1	83.2
16	NG 4343 B3TXF	1651 b-l	42.8	4.7	1.19	30.3	84.0
17	PHY 400 W3FE	1643 c-m	42.8	4.0	1.20	33.4	83.9
18	DG 3425 B3XF	1643 c-m	41.4	4.1	1.27	33.0	85.0
19	NG 3195 B3XF	1641 c-m	42.6	4.5	1.17	32.8	83.5
20	DP 2333 B3XF	1639 c-m	44.6	4.7	1.16	30.7	84.5
21	DG 3528 B3XF	1635 d-k	42.5	4.1	1.19	29.0	84.0
22	PHY 1140A385-04 W3FE	1626 e-m	42.9	4.8	1.15	33.5	84.1
23	PHY 415 W3FE	1604 f-m	42.0	4.3	1.25	36.6	85.4
24	NG 4335 B3TXF	1597 f-m	40.2	4.4	1.22	31.1	84.9
25	PHY 332 W3FE	1594 f-m	40.3	4.2	1.24	33.7	83.9
26	DG 4530 B3TXF	1583 f-m	43.2	4.5	1.17	30.4	83.2
27	PHY 1150B437-04 W3FE	1578 f-n	39.6	4.5	1.15	33.9	82.5
28	DP 2239 B3XF	1544 f-n	43.1	4.4	1.20	31.0	83.2
29	AR 9383 B3TXF	1535 g-n	39.9	4.8	1.17	29.0	84.8
30	DP 2317 B3TXF	1526 h-n	41.6	4.4	1.20	30.6	84.3
31	DG 3511 B3XF	1522 h-n	41.9	4.2	1.22	30.7	84.3
32	DG 4497 B3TXF	1519 i-n	45.0	4.4	1.13	33.1	84.5
33	AMX 160030-B B3XF	1513 i-n	40.2	4.7	1.17	29.4	83.3
34	PHY 411 W3FE	1513 i-n	42.0	4.9	1.11	33.5	83.4
35	PHY 1130B333-04 W3FE	1502 j-o	41.1	4.5	1.17	34.0	85.6
36	DP 2012 B3XF	1493 l-p	41.3	4.3	1.14	29.0	82.1
37	DG 4484 B3TXF	1489 k-p	44.6	4.3	1.14	31.0	83.0
38	AMX 20T157 B3XF	1486 l-p	40.4	4.4	1.23	32.6	83.9
39	AMX 21C005 B3TXF	1470 m-p	43.4	4.2	1.14	29.1	82.5
40	DP 2141 NR B3XF	1469 m-p	42.8	4.8	1.21	34.6	84.2
41	PHY 1130D303-04 W3FE	1405 nop	41.3	4.6	1.12	30.4	84.5
42	AMX 20T079 B3XF	1326 opq	41.2	4.5	1.23	30.7	84.6
43	AMX 20T114 B3XF	1320 pq	42.5	4.8	1.18	29.3	84.0
44	AMX 1600-A B3XF	1177 q	43.4	4.5	1.22	32.9	84.6
Average		1600	42.2	4.5	1.18	31.4	83.9
LSD ($p \leq 0.05$)		125					
CV (%)		7.9					

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

†Turnout and fiber quality determined from ginning a single 6 lb seedcotton sample and classing a 200 gram subsample from each treatment. Tennessee AgResearch data of Raper et al. (2023).

Table OVT6. Average lint yield, turnout, and fiber quality of 44 entries in the early planted 2023 West Tennessee Research and Education Official Variety 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 2115 B3XF	1656 a	41.5	4.3	1.16	30.5	84.7
2	AR 9371 B3XF	1578 ab	42.1	4.2	1.19	30.6	85.2
3	DP 2127 B3XF	1572 ab	41.7	4.5	1.18	33.2	85.3
4	ST 4595 B3XF	1543 a-c	42.3	4.3	1.23	32.5	84.7
5	DP 2211 B3TXF	1520 a-d	42.4	4.2	1.15	30.2	84.5
6	DP 2012 B3XF	1514 b-e	41.6	4.4	1.21	35.0	82.9
7	DG 3528 B3XF	1509 b-f	41.3	4.1	1.18	30.8	84.2
8	DP 2038 B3XF	1468 b-g	43.1	4.3	1.18	31.8	84.7
9	ST 5091 B3XF	1463 b-h	41.3	4.0	1.24	31.8	83.6
10	AMX 20T157 B3XF	1457 b-i	42.1	4.3	1.19	30.9	84.6
11	NG 3195 B3XF	1454 b-i	42.0	4.2	1.19	33.0	85.9
12	DP 2333 B3XF	1449 b-i	41.8	4.6	1.20	31.9	84.4
13	PHY 400 W3FE	1448 b-i	42.5	4.1	1.15	33.2	83.3
14	PHY 1140B373-04 W3FE	1448 b-i	40.5	4.5	1.17	32.4	85.3
15	DP 2131 B3TXF	1445 b-i	42.9	4.1	1.23	30.4	82.5
16	NG 4343 B3TXF	1426 c-j	39.6	3.9	1.19	28.7	84.3
17	DG 3511 B3XF	1418 c-k	43.0	4.7	1.19	31.9	85.2
18	DP 2239 B3XF	1412 c-k	41.5	4.0	1.21	33.4	84.0
19	PHY 415 W3FE	1408 c-k	40.9	4.2	1.23	35.5	83.4
20	NG 4190 B3XF	1406 c-k	40.0	4.0	1.19	31.6	84.0
21	PHY 1140D328-04 W3FE	1396 d-l	41.3	4.1	1.23	33.7	85.5
22	PHY 1140A385-04 W3FE	1390 d-m	42.2	4.0	1.17	34.5	84.8
23	DG 4497 B3TXF	1380 e-m	43.8	4.1	1.15	31.5	81.8
24	DG 4530 B3TXF	1379 e-m	41.3	4.0	1.21	31.3	85.1
25	DP 2317 B3TXF	1370 f-m	39.2	3.8	1.20	32.8	82.8
26	PHY 360 W3FE	1364 g-m	39.6	4.3	1.19	32.6	82.6
27	PHY 1130D303-04 W3FE	1350 g-m	40.4	4.6	1.14	31.0	83.5
28	PHY 1130B333-04 W3FE	1348 g-m	40.5	4.2	1.17	34.9	84.7
29	DG 3519 B3XF	1342 g-m	41.0	4.1	1.22	32.4	85.6
30	PHY 411 W3FE	1340 g-n	41.9	4.6	1.14	31.6	84.0
31	NG 4335 B3TXF	1336 g-n	40.8	4.3	1.20	30.8	85.8
32	DG 4484 B3TXF	1327 h-o	43.7	4.0	1.12	32.7	82.7
33	AR 9383 B3TXF	1320 i-p	39.3	4.4	1.16	30.0	84.9
34	PHY 443 W3FE	1299 j-p	40.8	4.0	1.15	33.3	83.8
35	PHY 1150D490-04 W3FE	1294 j-p	41.1	4.1	1.17	30.6	82.7
36	AMX 20T079 B3XF	1294 j-p	40.9	4.1	1.20	31.2	83.6
37	DP 2141 NR B3XF	1280 k-p	42.4	4.6	1.17	33.2	84.0
38	AMX 160030-B B3XF	1264 l-p	41.0	4.4	1.20	31.8	83.7
39	PHY 332 W3FE	1252 m-q	39.4	3.8	1.25	34.5	84.0
40	DG 3425 B3XF	1202 n-r	40.4	4.1	1.28	35.0	84.0
41	AMX 21C005 B3TXF	1195 o-r	37.7	3.6	1.22	32.4	84.9
42	PHY 1150B437-04 W3FE	1182 pqr	38.8	4.1	1.15	34.9	83.2
43	AMX 20T114 B3XF	1120 qr	39.8	4.0	1.25	32.1	85.4
44	AMX 1600-A B3XF	1108 r	41.8	3.7	1.25	30.0	83.6
Average		1380	41.2	4.2	1.19	32.2	84.2
LSD (p≤0.05)		99					
CV (%)		7.2					

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

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

Tennessee AgResearch data of Raper et al. (2023).

Table OVT7. Average lint yield, turnout, and fiber quality of 44 entries in the late planted 2023 West Tennessee Research and Education Official Variety 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	NG 3195 B3XF	1436 a	41.7 i-m	4.2 b-f	1.18 d-j	31.7 b-l	83.7 a-f
2	ST 5091 B3XF	1422 ab	42.6 d-j	3.9 h-l	1.16 f-l	30.4 l-r	82.3 e-i
3	DP 2115 B3XF	1403 abc	42.9 c-i	4.2 c-h	1.15 h-o	30.2 l-r	83.0 b-i
4	PX 1140D328-04 W3FE	1381 a-d	42.8 c-i	4.1 c-i	1.19 b-h	32.3 a-g	83.2 b-i
5	DP 2211 B3TXF	1355 a-e	44.1 bc	4.1 c-i	1.16 f-m	29.6 pqr	83.4 a-g
6	DG 4530 B3TXF	1345 a-f	42.1 g-l	3.9 i-l	1.19 a-h	30.7 h-r	84.8 a
7	PHY 415 W3FE	1344 a-f	42.0 g-m	4.1 c-j	1.19 a-h	32.2 a-h	83.5 a-f
8	AR 9371 B3XF	1344 a-f	43.6 b-e	4.2 b-f	1.15 h-o	30.5 j-r	83.3 a-h
9	DP 2127 B3XF	1344 a-f	43.5 b-f	4.6 a	1.13 k-o	30.3 l-r	84.1 a-d
10	DP 2038 B3XF	1344 a-f	44.1 bc	4.5 ab	1.14 j-o	30.3 l-r	83.1 b-i
11	PHY 443 W3FE	1335 a-f	41.7 i-m	4.0 d-j	1.15 h-o	32.2 a-h	83.6 a-f
12	ST 4595 B3XF	1304 a-g	43.3 b-g	4.3 b-e	1.16 g-n	30.3 l-r	82.6 d-i
13	DP 2131 B3TXF	1298 a-g	43.1 c-h	4.0 c-j	1.23 ab	30.3 l-r	82.9 c-i
14	PX 1140B373-04 W3FE	1295 a-g	41.0 k-o	4.1 c-i	1.19 a-g	32.1 a-i	84.5 ab
15	PHY 411 W3FE	1286 a-g	42.4 e-j	4.3 bc	1.11 o	30.9 f-l	82.2 f-i
16	DP 2239 B3XF	1285 a-g	41.3 j-n	3.9 i-l	1.22 abc	30.4 k-r	83.7 a-f
17	NG 4190 B3XF	1282 a-g	41.4 j-n	3.9 i-l	1.20 a-f	30.8 g-q	84.6 ab
18	PHY 360 W3FE	1280 a-g	40.8 l-o	4.1 c-j	1.16 f-l	30.0 n-r	82.6 d-i
19	PX 1140A385-04 W3FE	1266 a-h	43.6 b-e	4.2 b-f	1.14 i-o	33.0 abc	84.6 ab
20	PX 1130B333-04 W3FE	1257 a-i	40.8 l-o	4.2 b-g	1.16 g-n	33.3 a	83.8 a-f
21	PHY 400 W3FE	1244 b-j	42.2 f-k	3.7 klm	1.17 e-k	32.0 a-j	82.6 d-i
22	DP 2012 B3XF	1231 c-j	41.9 h-m	4.0 f-k	1.20 a-g	31.5 c-n	84.0 a-d
23	DP 2317 B3TXF	1225 c-j	41.3 j-n	3.9 h-l	1.17 e-k	30.7 h-r	83.5 a-f
24	DG 4497 B3TXF	1219 d-j	44.6 ab	4.2 c-h	1.12 mno	29.7 o-r	81.8 ghi
25	PX 1130D303-04 W3FE	1216 d-k	41.3 j-n	4.2 b-h	1.13 j-o	32.0 a-k	84.0 a-e
26	DG 3528 B3XF	1212 d-k	41.3 j-n	3.6 lm	1.22 a-d	30.3 l-r	84.1 a-d
27	DP 2333 B3XF	1200 d-k	44.0 bc	4.3 bcd	1.17 f-l	30.5 j-r	82.4 e-i
28	NG 4335 B3TXF	1198 d-k	41.4 j-n	4.2 b-f	1.17 f-l	31.1 f-p	83.6 a-f
29	PHY 332 W3FE	1197 d-k	39.8 op	3.7 klm	1.22 abc	31.7 b-m	83.1 b-i
30	DG 3511 B3XF	1186 e-l	43.0 c-h	4.3 b-e	1.18 c-i	33.1 ab	84.4 abc
31	AMX 20T079 B3XF	1170 f-m	40.7 mno	4.1 c-j	1.20 a-g	30.3 l-r	83.8 a-f
32	AR 9383 B3TXF	1147 g-m	39.3 p	4.2 b-f	1.14 j-o	29.2 r	82.5 d-i
33	AMX 20T157 B3XF	1143 g-m	39.7 op	3.9 i-l	1.17 e-k	31.1 e-p	82.6 d-i
34	DG 4484 B3TXF	1131 g-m	45.6 a	3.9 i-l	1.12 no	31.2 d-o	82.3 e-i
35	PX 1150B437-04 W3FE	1129 g-m	39.3 p	4.1 c-j	1.13 l-o	32.1 a-i	81.6 i
36	DG 3519 B3XF	1127 g-m	40.2 nop	4.0 e-k	1.20 a-g	32.5 a-f	83.2 a-i
37	NG 4343 B3TXF	1092 h-m	40.1 nop	3.9 i-l	1.16 f-l	31.0 f-p	82.9 c-i
38	AMX 21C005 B3TXF	1082 h-m	39.9 op	3.8 j-m	1.16 g-n	30.1 m-r	83.8 a-e
39	AMX 20T114 B3XF	1076 i-m	41.9 h-m	4.2 b-g	1.18 b-j	29.5 pqr	83.9 a-e
40	DP 2141 NR B3XF	1069 j-m	41.3 j-n	4.0 f-k	1.17 f-l	32.6 a-e	83.4 a-g
41	AMX 1600-A B3XF	1067 j-m	43.8 bcd	3.8 j-m	1.21 a-e	30.6 i-r	83.1 b-i
42	PX 1150D490-04 W3FE	1033 klm	41.7 h-m	3.9 g-l	1.13 l-o	29.4 qr	81.8 hi
43	AMX 160030-B B3XF	1008 lm	40.9 k-o	4.1 c-j	1.18 d-j	31.7 b-l	83.8 a-e
44	DG 3425 B3XF	998 m	41.1 k-o	3.6 m	1.23 a	32.7 a-d	83.8 a-e
Average		1227	41.9	4.0	1.17	31.1	83.3
LSD (p<0.05)		130	0.9	0.2	0.03	1.3	1.3
CV (%)		10.7	2.3	5.2	2.6	3.5	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 every plot.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT8. Average lint yield, turnout, and fiber quality of 44 entries in the 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 2127 B3XF	1888 a	44.0 a-d	5.1 ab	1.19 lmn	31.6 h-p	85.5 a
2	DP 2038 B3XF	1887 a	45.3 a	4.7 c-g	1.18 mno	31.8 h-n	82.8 op
3	DP 2115 B3XF	1883 a	41.9 d-m	4.8 a-f	1.21 g-l	31.6 i-p	84.2 b-m
4	PHY 400 W3FE	1878 a	42.6 b-k	4.5 g-j	1.24 c-g	33.8 bcd	84.4 a-l
5	PHY 360 W3FE	1850 ab	41.1 h-n	4.3 ij	1.18 no	31.0 l-q	82.9 nop
6	PHY 443 W3FE	1848 ab	40.6 k-n	4.8 b-g	1.19 lmn	33.5 c-f	84.0 d-o
7	PX 1130D303-04 W3FE	1840 ab	42.5 b-k	4.6 c-h	1.19 lmn	33.2 c-g	85.2 a-d
8	DP 2211 B3TXF	1829 ab	43.7 a-e	4.8 b-g	1.21 g-l	30.3 opq	84.1 c-n
9	PX 1140A385-04 W3FE	1812 abc	43.5 a-g	4.7 c-g	1.21 i-n	33.7 b-e	85.2 a-e
10	PX 1140B373-04 W3FE	1792 abc	40.7 k-n	4.7 b-g	1.20 j-n	33.1 c-i	85.5 ab
11	PHY 411 W3FE	1768 abc	41.5 f-n	4.7 c-g	1.16 op	32.3 e-l	84.1 c-n
12	PHY 332 W3FE	1759 abc	41.2 h-n	4.3 ij	1.25 b-e	33.0 c-h	84.0 c-o
13	AR 9371 B3XF	1742 abc	42.9 b-j	4.8 b-g	1.23 e-i	31.5 j-p	84.9 a-f
14	DP 2131 B3TXF	1730 abc	42.9 b-j	4.5 g-j	1.24 b-f	29.7 q	83.3 j-p
15	PX 1140D328-04 W3FE	1712 abc	40.2 lmn	4.7 c-g	1.25 b-f	33.3 c-g	84.2 b-m
16	DG 4530 B3TXF	1707 abc	43.2 a-h	4.5 e-i	1.21 g-l	29.8 q	84.3 a-l
17	AMX 20T157 B3XF	1706 abc	41.5 g-n	4.8 b-g	1.21 h-m	32.2 f-l	83.5 g-p
18	DG 3528 B3XF	1700 abc	42.4 b-k	4.5 g-j	1.26 abc	30.7 m-q	84.6 a-i
19	DG 3519 B3XF	1689 abc	40.7 k-n	4.8 b-g	1.25 b-e	32.9 c-j	85.2 a-e
20	DP 2239 B3XF	1689 abc	41.2 h-n	4.5 e-i	1.29 a	32.0 g-m	85.0 a-f
21	PX 1130B333-04 W3FE	1688 abc	39.8 n	4.3 hij	1.23 e-i	35.0 ab	85.3 abc
22	AR 9383 B3TXF	1668 abc	40.1 lmn	4.6 c-h	1.20 k-n	30.7 m-q	83.3 i-p
23	DP 2012 B3XF	1663 a-d	40.9 j-n	4.7 c-g	1.25 b-f	31.4 k-p	84.7 a-g
24	ST 4595 B3XF	1652 a-d	42.1 c-l	4.9 a-d	1.23 d-h	31.0 l-q	84.4 a-l
25	ST 5091 B3XF	1645 a-d	41.9 d-m	4.7 c-g	1.19 lmn	30.6 n-q	82.6 p
26	DP 2317 B3TXF	1629 a-d	41.4 g-n	4.7 c-g	1.21 h-m	32.5 d-k	83.8 f-p
27	NG 3195 B3XF	1625 a-d	43.4 a-g	4.8 a-f	1.21 h-l	31.3 k-p	85.3 abc
28	DP 2141 NR B3XF	1623 a-e	41.0 i-n	4.7 c-g	1.22 f-k	33.7 b-e	83.5 g-p
29	DG 4484 B3TXF	1595 a-f	44.4 ab	4.7 c-g	1.15 p	32.0 g-m	83.1 l-p
30	DG 3425 B3XF	1592 a-f	41.7 e-n	4.7 c-g	1.26 bcd	33.5 c-f	83.9 e-o
31	NG 4190 B3XF	1589 a-f	41.6 e-n	4.7 c-g	1.24 b-f	31.4 k-p	85.2 a-d
32	PHY 415 W3FE	1581 a-f	41.7 e-n	4.6 d-i	1.25 b-f	33.5 c-f	84.6 a-i
33	DP 2333 B3XF	1569 a-f	44.1 abc	4.9 a-d	1.21 i-n	30.7 m-q	84.6 a-j
34	NG 4335 B3TXF	1553 a-f	41.9 d-m	4.5 f-j	1.21 h-l	31.7 h-n	84.7 a-g
35	AMX 160030-B B3XF	1553 a-f	41.5 g-n	4.9 a-e	1.20 j-n	32.7 d-k	83.3 k-p
36	NG 4343 B3TXF	1539 b-f	39.7 n	4.5 f-j	1.21 h-n	30.6 m-q	83.3 h-p
37	DG 3511 B3XF	1539 b-f	43.6 a-f	5.1 a	1.21 h-m	33.3 c-g	84.4 a-k
38	AMX 21C005 B3TXF	1482 c-g	40.0 mn	4.2 j	1.23 f-j	31.7 h-o	85.0 a-f
39	PX 1150D490-04 W3FE	1330 d-h	40.1 lmn	4.6 e-i	1.19 lmn	30.3 pq	83.0 m-p
40	DG 4497 B3TXF	1287 e-h	44.1 abc	4.2 j	1.18 mno	34.3 abc	84.5 a-k
41	PX 1150B437-04 W3FE	1269 fgh	37.4 o	4.3 hij	1.21 i-n	35.7 a	84.7 a-h
42	AMX 1600-A B3XF	1201 gh	43.1 b-i	4.5 g-j	1.27 ab	30.6 m-q	84.4 a-l
43	AMX 20T079 B3XF	1044 hi	41.0 j-n	4.8 b-g	1.23 d-h	30.9 l-q	84.3 a-l
44	AMX 20T114 B3XF	817 i	40.8 j-n	4.9 abc	1.23 e-i	30.5 n-q	84.9 a-f
Average		1624	41.8	4.6	1.22	32.0	84.3
LSD ($p \leq 0.05$)		238	1.5	0.3	0.02	1.2	1.0
CV (%)		15.0	3.6	5.1	1.5	3.2	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 every plot.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT9. Average lint yield of 44 entries in the dryland 2023 Milan Research and Education Trial conducted in Milan, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)
1	NG 3195 B3XF	1642a
2	DP 2131 B3TXF	1639a
3	DP 2211 B3TXF	1624a
4	PX 1140B373-04 W3FE	1611ab
5	DP 2333 B3XF	1580abc
6	AR 9371 B3XF	1526a-d
7	PX 1140A385-04 W3FE	1522a-d
8	ST 4595 B3XF	1499a-e
9	PX 1140D328-04 W3FE	1493a-e
10	DP 2115 B3XF	1489a-e
11	DP 2141 NR B3XF	1483a-e
12	AMX 20T157 B3XF	1482a-e
13	PHY 400 W3FE	1464a-e
14	DG 4484 B3TXF	1447a-f
15	NG 4343 B3TXF	1436a-f
16	DG 4530 B3TXF	1436a-f
17	PHY 443 W3FE	1436a-f
18	AMX 21C005 B3TXF	1429a-f
19	PX 1130B333-04 W3FE	1419a-f
20	DP 2239 B3XF	1405a-f
21	ST 5091 B3XF	1384a-f
22	DP 2012 B3XF	1382a-f
23	NG 4335 B3TXF	1378a-f
24	AMX 20T079 B3XF	1378a-f
25	DP 2038 B3XF	1376a-f
26	NG 4190 B3XF	1371a-f
27	AR 9383 B3TXF	1369a-f
28	DP 2127 B3XF	1367a-f
29	PHY 360 W3FE	1343a-g
30	AMX 20T114 B3XF	1342a-g
31	PHY 332 W3FE	1329a-g
32	AMX 160030-B B3XF	1294b-g
33	DG 3511 B3XF	1288b-g
34	PX 1130D303-04 W3FE	1272c-g
35	DP 2317 B3TXF	1269c-g
36	PX 1150B437-04 W3FE	1233d-g
37	DG 3528 B3XF	1217d-g
38	DG 3425 B3XF	1212d-g
39	PX 1150D490-04 W3FE	1210d-g
40	PHY 415 W3FE	1201d-g
41	DG 4497 B3TXF	1179efg
42	PHY 411 W3FE	1178efg
43	DG 3519 B3XF	1137fg
44	AMX 1600-A B3XF	1026g
Average		1382
LSD (p<0.05)		230
CV (%)		16.9

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

†Reported lint yield calculated by multiplying seedcotton yield per plot by average turnout observed for a given variety across all 2023 Official Variety Trial locations.

Tennessee AgResearch data of Raper et al. (2023).

Table OVT9. Average lint yield of 44 entries in the irrigated 2023 Milan Research and Education Trial conducted in Milan, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)
1	PHY 411 W3FE	1239a
2	PHY 360 W3FE	1120ab
3	DP 2131 B3TXF	1102abc
4	DG 4530 B3TXF	1098abc
5	DP 2115 B3XF	1052a-d
6	DP 2038 B3XF	1049a-d
7	PX 1140B373-04 W3FE	1046a-d
8	NG 4343 B3TXF	1036a-e
9	DG 3519 B3XF	1036a-e
10	PHY 332 W3FE	1029a-f
11	PX 1130D303-04 W3FE	1000a-g
12	PHY 400 W3FE	998a-g
13	NG 3195 B3XF	974a-h
14	DP 2239 B3XF	970a-h
15	PX 1140D328-04 W3FE	965a-i
16	NG 4190 B3XF	963a-i
17	DP 2211 B3TXF	961a-i
18	DP 2317 B3TXF	939b-i
19	DP 2333 B3XF	936b-i
20	DG 4484 B3TXF	932b-i
21	PX 1130B333-04 W3FE	929b-i
22	NG 4335 B3TXF	920b-i
23	PX 1150B437-04 W3FE	917b-i
24	ST 4595 B3XF	917b-i
25	AR 9371 B3XF	914b-i
26	AMX 20T157 B3XF	911b-i
27	DG 3511 B3XF	904b-i
28	DP 2012 B3XF	902b-i
29	PX 1150D490-04 W3FE	894b-i
30	DG 3528 B3XF	883b-i
31	PHY 415 W3FE	866b-i
32	ST 5091 B3XF	864b-i
33	AMX 20T079 B3XF	857b-i
34	PHY 443 W3FE	851b-i
35	AMX 1600-A B3XF	823c-i
36	DP 2127 B3XF	783d-i
37	DG 4497 B3TXF	753e-i
38	AMX 160030-B B3XF	746f-i
39	AR 9383 B3TXF	746f-i
40	AMX 21C005 B3TXF	732ghi
41	PX 1140A385-04 W3FE	729ghi
42	AMX 20T114 B3XF	693hij
43	DP 2141 NR B3XF	680ij
44	DG 3425 B3XF	424j
Average		911
LSD (p<0.05)		204
CV (%)		22.6

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

†Reported lint yield calculated by multiplying seedcotton yield per plot by average turnout observed for a given variety across all 2023 Official Variety Trial locations.

Tennessee AgResearch data of Raper et al. (2023).

2023 County Standard Trial Results



Two summary tables have been constructed from the 2023 CST data. The first (Table CST1) includes thirteen XtendFlex Varieties averaged across thirteen 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 2023 Tennessee County Standard Trial Program across thirteen trial locations.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)	Leaf Grade	HVI Color	Loan Value
1	DP 2115 B3XF	1563a	42.2cd	4.4ab	1.18bcd	31.0bc	84.3bc	4	31	55.85
2	DP 2038 B3XF	1490ab	44.1a	4.4abc	1.13f	30.2cde	82.4i	3	31	56.50
3	DP 2333 B3XF	1472b	42.3c	4.4abc	1.16e	30.0e	83.1fgh	4	31	55.65
4	ST 5091 B3XF	1447bc	41.5de	3.9f	1.19abc	30.9bcd	82.8hi	4	31	55.70
5	ST 4595 B3XF	1446bc	42.0cd	4.3bcd	1.19ab	30.8b-e	83.6efg	5	41	51.45
6	AR 9371 B3XF	1433bc	42.1cd	4.2cd	1.18bcd	30.2de	84.0cde	4	41	54.30
7	NG 3195 B3XF	1429bc	41.2e	4.3bcd	1.18cd	31.4b	84.4abc	3	31	57.35
8	DP 2012 B3XF	1426bc	40.5f	4.1ef	1.19ab	31.0bc	83.6def	4	31	55.90
9	DP 2127 B3XF	1411bcd	41.7de	4.5a	1.17de	30.5b-e	84.6ab	4	41	54.05
10	NG 4190 B3XF	1378cd	41.1e	4.1ef	1.20a	30.9bcd	84.0cde	4	31	55.80
11	DG 3511 B3XF	1375cd	42.1cd	4.4a	1.19abc	33.6a	84.9a	3	31	57.50
12	DG 4484 B3TXF	1338de	43.3b	4.2de	1.13f	30.5cde	82.9gh	4	41	53.85
13	AR 9383 B3TXF	1281e	39.2g	4.2de	1.18cd	30.2cde	84.2bcd	5	41	51.60
Average		1422	41.8	4.3	1.17	30.9	83.8	4	31	55.04
LSD (p<0.05)		56	0.5	0.1	0.01	0.6	0.4			
CV (%)		7.0	2.0	4.9	1.5	3.5	0.9			

Table CST2. Average lint yield, gin turnout, and fiber quality of the six Enlist varieties entered in the 2023 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	PX 1130B333-04 W3FE	1456a	39.3d	4.0	1.18	33.4ab	85.0a	41	5	51.95
2	PX 1140B373-04 W3FE	1339ab	41.0abc	4.1	1.18	33.5ab	84.4ab	41	6	48.95
3	PHY 400 W3FE	1334ab	42.4ab	4.0	1.19	31.6c	83.0bc	41	5	51.70
4	PHY 360 W3FE	1330ab	40.3cd	4.2	1.16	29.1d	82.2c	41	5	51.35
5	PHY 411 W3FE	1301ab	40.8bcd	4.4	1.16	32.6bc	84.0ab	41	5	51.65
6	PX 1140A385-04 W3FE	1246b	42.5a	3.9	1.18	34.5a	84.5ab	41	5	51.90
Average		1334	41.1	4.1	1.17	32.4	83.8	41	5	51.25
LSD (p<0.05)		136	1.2	0.3	0.03	1.0	1.1			
CV (%)		9.6	2.8	7.9	2.4	2.8	1.2			

Table CST3. Results from the 2023 Crockett XtendFlex County Standard Trial planted May 30th and harvested Nov. 8th.

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	1251	43.1	3.8	1.18	30.7	83.3	31	4	55.75
2	NG 3195 B3XF	1155	42.5	4.5	1.17	30.8	84.2	31	3	57.15
3	DP 2333 B3XF	1151	44.8	3.8	1.11	27.1	80.9	21	3	56.75
4	DP 2012 B3XF	1143	41.7	3.3	1.17	30.4	82.2	31	3	52.45
5	DG 3511 B3XF	1135	42.3	3.5	1.16	31.6	82.8	31	3	57.20
6	DP 2127 B3XF	1133	43.7	3.8	1.15	29.4	82.8	31	4	55.55
7	DG 4484 B3TXF	1013	43.3	3.7	1.09	29.5	79.8	41	5	49.85
8	DP 2038 B3XF	1009	45.6	3.8	1.12	28.5	82.2	21	3	56.80
9	AR 9371 B3XF	979	42.5	3.5	1.19	30.4	83.2	31	3	57.15
10	ST 5091 B3XF	940	43.3	3.3	1.14	28.9	80.7	31	3	52.20
11	NG 4190 B3XF	901	41.5	4.1	1.16	30.1	83.7	31	3	57.20
12	ST 4595 B3XF	841	41.1	3.4	1.18	30.3	82.9	41	5	46.80
13	AR 9383 B3TXF	809	39.4	3.5	1.17	29.7	84.0	31	5	52.65
Average		1035	42.7	3.7	1.15	29.8	82.5	31	4	54.42

Table CST4. Results from the 2023 Dyer XtendFlex County Standard Trial planted May 17th and harvested Nov. 8th.

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	1915	43.1	4.5	1.21	31.8	84.6	41	4	54.35
2	DP 2127 B3XF	1795	41.7	4.4	1.17	29.4	84.1	31	3	57.00
3	DP 2333 B3XF	1769	41.8	4.2	1.20	29.9	82.8	31	4	55.55
4	NG 3195 B3XF	1766	41.4	4.2	1.18	31.1	84.1	31	4	55.95
5	DP 2038 B3XF	1736	43.1	4.4	1.15	30.6	82.6	31	3	57.05
6	DP 2012 B3XF	1703	40.8	4.1	1.20	30.6	83.9	31	4	55.75
7	ST 4595 B3XF	1689	41.1	4.2	1.20	30.3	83.0	41	4	54.25
8	AR 9371 B3XF	1686	41.7	4.4	1.18	29.7	82.5	31	3	56.95
9	DG 3511 B3XF	1674	42.8	4.4	1.16	32.4	82.8	31	2	57.60
10	ST 5091 B3XF	1665	39.9	4.6	1.15	32.4	83.1	41	5	51.60
11	DG 4484 B3TXF	1648	44.1	4.1	1.14	29.8	82.9	31	4	55.55
12	NG 4190 B3XF	1585	39.7	4.0	1.19	28.8	82.0	31	4	55.50
13	AR 9383 B3TXF	1530	38.9	4.1	1.17	29.8	84.3	41	4	54.00
Average		1705	41.6	4.3	1.18	30.5	83.3	34	4	55.47

Table CST5. Results from the 2023 Fayette XtendFlex County Standard Trial planted May 19th and harvested Oct. 25th.

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	1283	39.3	4.4	1.17	30.8	84.9	31	4	55.70
2	ST 5091 B3XF	1204	40.5	4.3	1.21	31.2	83.7	31	3	57.30
3	DG 4484 B3TXF	1167	42.9	4.5	1.12	28.9	82.1	31	3	56.30
4	AR 9383 B3TXF	1144	38.1	4.3	1.20	30.5	84.1	41	4	54.20
5	DP 2127 B3XF	1139	39.8	4.8	1.16	30.9	85.0	41	4	54.10
6	DP 2333 B3XF	1083	38.7	4.5	1.18	29.9	83.6	31	4	55.50
7	ST 4595 B3XF	1082	40.4	4.6	1.21	32.0	83.4	31	5	52.90
8	DP 2012 B3XF	1057	37.8	4.5	1.19	33.5	83.7	31	4	55.95
9	AR 9371 B3XF	1046	39.7	4.6	1.23	30.8	84.4	31	3	57.20
10	DP 2038 B3XF	1031	42.5	5.1	1.14	33.2	82.1	31	2	55.35
11	DP 2115 B3XF	1003	39.4	4.6	1.16	30.1	82.3	31	4	55.60
12	NG 4190 B3XF	952	39.3	4.5	1.21	31.5	84.0	41	5	51.65
13	DG 3511 B3XF	930	39.1	4.8	1.22	34.1	86.1	31	3	57.60
Average		1086	39.8	4.6	1.18	31.3	83.8	33	4	55.33

Table CST6. Results from the 2023 Gibson County Standard Trial including both Enlist and XtendFlex Varieties planted May 19th and harvested Oct. 25th.

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	1424	41.4	4.5	1.18	31.2	83.9	41	4	54.30
2	PHY 400 W3FE	1356	42.2	3.5	1.15	30.5	81.7	41	5	51.35
3	PHY 360 W3FE	1278	39.4	3.7	1.12	27.1	80.0	41	5	51.10
4	ST 4595 B3XF	1254	40.5	3.5	1.16	29.1	82.6	41	5	51.25
5	PX 1130B333-04 W3FE	1251	38.7	3.3	1.18	33.5	84.4	41	4	49.90
6	DP 2038 B3XF	1226	42.1	3.6	1.13	29.2	81.6	41	4	53.55
7	DG 3511 B3XF	1222	42.6	3.6	1.18	32.6	84.4	31	5	52.95
8	ST 5091 B3XF	1217	39.8	3.3	1.19	31.0	82.1	41	5	46.95
9	DP 2012 B3XF	1184	39.4	3.7	1.14	28.6	80.9	41	4	53.80
10	AR 9383 B3TXF	1166	38.4	3.7	1.17	30.6	83.6	41	6	48.60
11	PHY 411 W3FE	1163	43.3	4.5	1.17	31.7	84.6	41	5	51.65
12	NG 4190 B3XF	1116	40.7	3.3	1.20	33.3	85.0	41	6	44.30
13	DP 2333 B3XF	1107	41.0	3.5	1.14	30.2	81.7	41	4	53.90
14	DP 2127 B3XF	1073	39.3	3.4	1.18	30.8	83.6	41	6	43.90
15	PX 1140A385-04 W3FE	1068	42.2	3.0	1.20	32.3	84.0	41	5	45.40
16	NG 3195 B3XF	1060	39.6	3.5	1.17	32.3	83.7	41	4	54.15
17	PX 1140B373-04 W3FE	1056	40.5	3.3	1.14	33.1	82.0	41	6	44.15
18	AR 9371 B3XF	1041	39.5	3.4	1.20	30.9	82.6	51	6	42.10
19	DG 4484 B3TXF	991	41.2	4.1	1.13	29.1	82.2	41	6	48.40
Average		1171	40.6	3.6	1.16	30.9	82.9	41	5	49.56

Table CST7. Results from the 2023 Hardeman XtendFlex County Standard Trial planted May 19th and harvested Nov. 3rd.

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	1713	42.6	4.4	1.20	32.2	83.3	41	4	54.30
2	DP 2115 B3XF	1546	41.6	4.4	1.16	31.2	83.6	41	4	54.15
3	DP 2012 B3XF	1540	41.2	4.2	1.19	32.2	84.1	31	4	55.95
4	DG 3511 B3XF	1488	42.6	4.8	1.20	33.3	85.6	31	3	57.55
5	DP 2038 B3XF	1472	44.5	4.4	1.13	29.3	81.7	31	3	56.30
6	ST 5091 B3XF	1418	42.6	3.9	1.17	29.6	82.7	31	3	57.00
7	DP 2333 B3XF	1417	43.4	4.7	1.14	30.5	81.8	31	3	57.00
8	NG 4190 B3XF	1409	41.6	4.2	1.20	31.2	83.8	31	4	55.90
9	NG 3195 B3XF	1391	42.6	4.3	1.20	31.7	85.5	31	3	57.40
10	DP 2127 B3XF	1366	42.4	4.8	1.15	30.4	83.4	41	3	54.65
11	AR 9371 B3XF	1200	42.0	4.5	1.12	29.3	83.0	31	3	56.40
12	AR 9383 B3TXF	1199	39.6	4.1	1.19	31.5	84.7	41	4	54.45
13	DG 4484 B3TXF	1193	43.2	4.4	1.13	31.1	84.1	31	4	55.30
Average		1412	42.3	4.4	1.17	31.0	83.6	34	3	55.87

Table CST8. Results from the Ames Plantation location of the 2023 Hardeman XtendFlex County Standard Trial including both Enlist and XtendFlex Varieties planted May 9th and harvested Oct. 25th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	PX 1130B333-04	1762	38.8	4.1	1.17	33.4	85.1	41	6	49.00
2	DP 2038 B3XF	1727	44.6	4.6	1.12	29.2	81.3	41	4	53.55
3	AR 9371 B3XF	1697	43.2	4.4	1.17	29.1	84.4	41	4	53.90
4	DP 2333 B3XF	1641	40.9	4.5	1.16	29.5	83.5	41	5	51.30
5	DP 2115 B3XF	1615	39.1	4.1	1.17	33.2	85.0	41	5	51.95
6	DP 2127 B3XF	1574	40.3	4.6	1.16	30.2	84.8	41	5	51.50
7	DG 4484 B3TXF	1509	44.8	4.4	1.11	31.0	83.4	41	5	51.45
8	PX 1140B373-04	1475	41.8	4.6	1.18	32.6	84.8	41	7	47.25
9	NG 4190 B3XF	1472	42.2	4.4	1.18	29.1	83.8	41	5	51.30
10	ST 5091 B3XF	1461	41.2	4.0	1.16	30.3	82.0	41	5	51.50
11	ST 4595 B3XF	1453	42.1	4.7	1.18	29.1	83.6	41	5	51.30
12	NG 3195 B3XF	1447	41.6	4.4	1.19	31.3	85.0	41	4	54.40
13	DG 3511 B3XF	1435	42.5	4.8	1.18	33.8	85.1	31	4	56.05
14	PHY 360 W3FE	1386	40.5	4.3	1.16	28.5	82.6	51	6	46.50
15	AR 9383 B3TXF	1330	38.5	4.6	1.18	29.9	84.9	51	7	45.45
16	PHY 411 W3FE	1318	40.3	4.7	1.08	31.8	81.3	51	5	47.70
17	DP 2012 B3XF	1293	40.1	4.4	1.17	29.8	83.4	41	5	51.30
18	PHY 400 W3FE	1231	41.1	4.2	1.14	30.5	83.1	41	5	51.55
19	PX 1140A385-04	1213	42.7	4.5	1.14	33.7	84.1	51	6	47.10
		1476	41.4	4.4	1.16	30.8	83.7	43	5	50.74

Table CST9. Results from the 2023 Haywood (Booth) XtendFlex County Standard Trial planted May 20th and harvested Nov. 2nd.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2038 B3XF	1511	44.3	4.4	1.13	30.8	82.7	31	3	56.50
2	ST 5091 B3XF	1492	43.0	4.0	1.18	30.9	82.8	41	5	51.50
3	AR 9371 B3XF	1465	43.8	4.4	1.16	29.3	84.3	41	4	53.90
4	DP 2333 B3XF	1460	42.8	4.8	1.15	29.1	83.4	31	3	56.95
5	DP 2127 B3XF	1422	42.3	4.5	1.16	30.2	84.4	31	3	57.15
6	DP 2115 B3XF	1414	43.3	4.5	1.17	31.7	84.6	31	4	55.85
7	ST 4595 B3XF	1390	42.6	4.4	1.19	32.0	84.4	41	4	54.35
8	NG 3195 B3XF	1363	42.5	4.4	1.17	30.6	84.3	31	3	57.15
9	AR 9383 B3TXF	1359	40.6	4.5	1.16	28.5	84.4	41	5	51.30
10	DG 3511 B3XF	1317	42.3	4.5	1.18	34.9	85.2	31	3	57.55
11	NG 4190 B3XF	1295	40.3	3.9	1.22	32.5	84.7	31	4	55.95
12	DP 2012 B3XF	1295	40.7	4.1	1.18	31.2	84.4	31	4	55.95
13	DG 4484 B3TXF	1149	42.6	4.0	1.12	31.6	84.0	41	5	51.60
		1379	42.4	4.3	1.17	31.0	84.1	35	4	55.05

Table CST10. Results from the 2023 Haywood (Farmer) XtendFlex County Standard planted May 10th and harvested Nov. 25th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2012 B3XF	1523	40.4	4.3	1.20	31.3	83.7	41	3	55.00
2	ST 5091 B3XF	1433	42.8	4.2	1.19	30.9	83.0	41	6	48.60
3	DP 2115 B3XF	1378	43.7	4.8	1.17	29.9	84.6	41	4	53.90
4	DP 2038 B3XF	1327	45.4	5.0	1.11	29.5	82.5	31	2	54.25
5	DG 4484 B3TXF	1326	44.3	4.6	1.11	29.3	82.2	41	5	51.10
6	AR 9371 B3XF	1319	43.2	4.8	1.16	31.4	84.8	41	3	54.85
7	ST 4595 B3XF	1314	43.0	4.7	1.16	30.8	83.4	41	5	51.45
8	NG 3195 B3XF	1281	41.5	4.5	1.17	32.5	84.7	41	3	54.85
9	NG 4190 B3XF	1281	42.1	4.4	1.18	31.1	84.0	41	4	54.35
10	DP 2127 B3XF	1260	43.8	5.1	1.16	30.8	86.4	41	3	52.40
11	DG 3511 B3XF	1204	42.4	4.9	1.15	32.8	84.2	41	3	54.85
12	AR 9383 B3TXF	1024	40.4	4.9	1.16	30.8	84.7	41	5	51.50
13	DP 2012 B3XF	1523	40.4	4.3	1.20	31.3	83.7	41	3	55.00
	Average	1306	42.7	4.7	1.16	30.9	84.0	40	4	53.09

Table CST11. Results from the 2023 Haywood (Williams) XtendFlex County Standard planted May 18th 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	DP 2115 B3XF	1829	42.6	4.5	1.21	29.7	85.5	31	4	55.60
2	AR 9371 B3XF	1793	42.2	4.5	1.20	29.7	84.4	31	4	55.55
3	ST 4595 B3XF	1693	42.9	4.6	1.19	31.8	83.2	31	4	55.80
4	ST 5091 B3XF	1693	42.6	4.1	1.20	31.8	84.2	31	4	55.95
5	DP 2012 B3XF	1684	41.0	4.2	1.22	33.0	84.5	31	3	57.60
6	DP 2038 B3XF	1683	45.2	4.7	1.15	29.7	83.6	31	2	57.35
7	NG 3195 B3XF	1671	40.9	4.4	1.16	32.5	84.0	31	4	55.85
8	DP 2333 B3XF	1645	41.6	4.5	1.18	30.8	84.2	31	4	55.70
9	NG 4190 B3XF	1620	41.6	4.1	1.23	31.5	84.2	41	4	54.45
10	AR 9383 B3TXF	1590	40.1	4.5	1.20	29.5	85.4	41	6	48.45
11	DG 3511 B3XF	1496	41.3	4.4	1.22	32.4	86.8	31	3	57.45
12	DP 2127 B3XF	1445	42.0	4.8	1.17	30.4	85.0	31	4	55.75
13	DG 4484 B3TXF	1420	42.1	4.5	1.13	30.8	83.7	31	4	55.10
Average		1636	42.0	4.4	1.19	31.0	84.5	33	4	55.43

Table CST12. Results from the 2023 Lake XtendFlex County Standard planted May 4th and harvested Nov. 15th.

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	1665	41.6	4.0	1.15	29.6	82.4	31	3	57.00
2	DG 3511 B3XF	1625	41.3	4.1	1.20	35.5	84.2	31	3	57.60
3	DP 2038 B3XF	1585	42.2	3.6	1.12	29.3	81.5	31	3	56.30
4	DP 2333 B3XF	1584	41.6	4.1	1.14	29.8	81.9	31	3	56.95
5	AR 9371 B3XF	1577	41.0	3.7	1.19	31.2	83.4	31	3	57.40
6	NG 4190 B3XF	1551	40.6	3.6	1.19	28.6	81.9	31	3	56.85
7	ST 4595 B3XF	1540	41.8	3.9	1.19	29.4	82.9	31	4	55.55
8	DP 2012 B3XF	1521	38.5	3.8	1.22	31.7	83.2	31	3	57.40
9	DG 4484 B3TXF	1480	40.9	3.6	1.15	31.1	82.5	31	4	55.75
10	ST 5091 B3XF	1463	40.3	3.6	1.21	29.6	81.3	31	3	56.90
11	NG 3195 B3XF	1441	40.3	3.9	1.16	29.8	81.8	31	3	56.95
12	DP 2127 B3XF	1301	39.8	4.0	1.19	30.6	84.9	31	3	57.30
13	AR 9383 B3TXF	1155	36.8	3.1	1.18	29.9	81.6	41	5	44.95
Average		1499	40.5	3.8	1.18	30.5	82.6	32	3	55.92

Table CST13. Results from the 2023 Lauderdale XtendFlex County Standard planted May 9th 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	DP 2115 B3XF	1548	42.9	4.3	1.22	31.8	85.3	31	4	55.90
2	ST 5091 B3XF	1459	40.0	4.0	1.27	32.2	84.1	31	3	57.45
3	NG 3195 B3XF	1436	40.9	4.2	1.22	32.9	85.9	31	3	57.50
4	AR 9383 B3TXF	1433	39.3	4.2	1.22	30.3	84.2	41	5	51.60
5	AR 9371 B3XF	1419	42.0	4.3	1.22	30.2	85.9	31	3	57.25
6	DP 2038 B3XF	1381	43.2	4.5	1.16	33.1	83.3	41	3	54.95
7	DP 2012 B3XF	1380	40.3	4.1	1.24	30.4	84.5	31	3	57.30
8	ST 4595 B3XF	1377	40.1	4.2	1.26	33.8	85.7	41	5	51.95
9	DP 2333 B3XF	1362	41.3	4.4	1.19	33.8	84.3	41	3	55.20
10	NG 4190 B3XF	1355	39.9	4.0	1.23	31.6	85.1	31	4	56.00
11	DP 2127 B3XF	1317	40.7	4.6	1.19	31.7	85.5	31	3	57.40
12	DG 3511 B3XF	1158	40.9	4.6	1.22	36.9	86.0	31	3	57.60
13	DP 2115 B3XF	1548	42.9	4.3	1.22	31.8	85.3	31	4	55.90
Average		1385	41.0	4.3	1.22	32.4	85.0	34	4	55.84

Table CST14. Results from the 2023 Lincoln XtendFlex County Standard planted May 11th and harvested Oct. 24th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2038 B3XF	2057	47.2	4.4	1.11	29.3	82.3	21	2	57.20
2	DP 2115 B3XF	2029	44.6	4.5	1.20	31.6	86.8	31	3	57.45
3	DP 2127 B3XF	1951	44.9	4.4	1.17	31.2	85.5	31	3	57.35
4	NG 3195 B3XF	1876	42.3	4.4	1.17	31.2	84.0	31	2	57.70
5	ST 5091 B3XF	1875	44.3	3.8	1.20	30.8	83.8	31	3	57.25
6	AR 9371 B3XF	1819	44.6	4.3	1.15	30.2	84.7	31	4	55.70
7	DP 2333 B3XF	1819	46.2	4.8	1.15	29.1	83.7	31	3	56.95
8	ST 4595 B3XF	1806	45.4	4.3	1.18	29.9	83.7	31	4	55.50
9	DP 2012 B3XF	1796	43.3	4.2	1.20	30.7	85.3	31	3	57.35
10	NG 4190 B3XF	1789	43.6	4.3	1.21	29.8	85.5	31	4	55.60
11	NG 5150 B3XF	1782	42.5	4.3	1.21	29.2	84.5	31	3	57.05
12	DG 4484 B3TXF	1725	46.3	4.1	1.17	32.2	84.0	31	4	55.95
13	DG 3511 B3XF	1670	44.9	4.6	1.19	32.9	86.0	31	4	55.95
14	AR 9383 B3TXF	1636	41.2	4.4	1.15	30.4	84.8	41	3	54.70
Average		1831	44.4	4.3	1.18	30.6	84.6	31	3	56.55

Table CST15. Results from the 2023 Madison County Standard including Enlist and XtendFlex Varieties planted May 9th 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	DP 2115 B3XF	1696	42.1	4.6	1.18	31.0	83.7	31	3	57.30
2	ST 4595 B3XF	1643	41.6	4.4	1.22	29.2	84.0	41	5	51.35
3	DP 2333 B3XF	1631	42.8	4.6	1.17	30.1	84.9	31	3	57.15
4	DP 2038 B3XF	1625	43.8	4.4	1.15	30.9	83.2	31	3	57.10
5	NG 4190 B3XF	1593	41.4	4.2	1.21	32.2	84.5	31	3	57.45
6	AR 9371 B3XF	1591	41.9	4.3	1.17	29.7	84.3	41	4	53.90
7	DP 2127 B3XF	1574	41.0	4.6	1.17	30.4	84.9	41	3	54.70
8	PX 1140B373-04	1533	40.1	4.1	1.19	33.8	84.5	41	4	54.60
9	PHY 400 W3FE	1522	42.3	4.0	1.22	31.8	82.9	41	5	51.65
10	PHY 411 W3FE	1518	39.9	3.9	1.20	34.1	85.1	41	5	51.95
11	DG 3511 B3XF	1517	42.0	4.7	1.19	33.4	84.8	31	3	57.50
12	PX 1140A385-04	1508	43.1	4.2	1.18	35.2	84.7	31	5	53.20
13	ST 5091 B3XF	1496	39.5	3.9	1.22	31.7	83.4	31	4	55.90
14	DG 4484 B3TXF	1438	43.4	4.5	1.13	31.4	84.1	41	4	54.00
15	DP 2012 B3XF	1423	40.9	4.1	1.19	29.9	83.4	31	3	57.10
16	PX 1130B333-04	1413	39.9	4.6	1.16	32.1	84.9	41	4	54.20
17	NG 3195 B3XF	1408	40.3	4.4	1.18	31.2	84.9	31	2	57.75
18	PHY 360 W3FE	1346	39.5	4.2	1.17	30.3	82.3	31	4	55.70
19	AR 9383 B3TXF	1283	38.7	4.5	1.16	31.2	84.0	41	4	54.20
		1514	41.3	4.3	1.18	31.6	84.1	36	4	55.09

Table CST16. Results from the 2023 Tipton Enlist County Standard planted May 24th and harvested Oct. 16th.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	PX 1130B333-04	1398	39.8	3.9	1.20	34.6	85.5	31	4	56.15
2	PHY 360 W3FE	1310	42.0	4.4	1.20	30.3	83.9	41	6	48.50
3	PX 1140B373-04	1291	41.7	4.2	1.21	34.4	86.1	41	6	49.05
4	PHY 400 W3FE	1229	43.8	4.1	1.23	33.4	84.4	41	5	51.90
5	PHY 411 W3FE	1203	39.6	4.4	1.18	32.8	85.0	41	6	48.75
6	PX 1140A385-04	1194	42.0	4.0	1.21	36.7	85.0	41	5	51.95
	Average	1271	41.5	4.2	1.21	33.7	85.0	39	5	51.05

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.
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