

# Cotton Variety Trial Results | 2024



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# Tennessee Cotton Variety Trial Results | 2024

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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 2024 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. Six OVTs and eight CSTs were conducted during 2024. Of the eight CSTs, two included both FE (Enlist) and XF (XtendFlex) cultivars and six included only XF 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

Six OVTs were planted in the 2024 growing season. These included four locations on University of Tennessee Research and Education Centers and two locations on producer farms. Seed of commercial cultivars and experimental lines was provided by respective companies. In all, 48 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 three locations, six lb

seedcotton samples from two replicates 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 plot was ginned at the UT Cotton MicroGin and classed at the USDA Classing Office in Memphis, TN.

### **Large Plot Variety Trials**

While fifteen CSTs were planned for the 2024 season, only eight were harvested. As all who are in the area know, 2024 provided an extremely challenging May which resulted in approximately one third of TN's planned acreage shifting into another commodity. Seed of commercial varieties was provided by each respective company. In all, 16 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 to generate turnout and allow for subsampling in order to collect information on fiber quality.

### **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 fixed. 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 2024 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) or BX (experimental)
- 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) or with experimental entries numbered with leading '23'
- Phytogen Seed Co., P.O. Box 27, Leland, MS 38756
  - Abbreviated as PHY (Phytogen) or with experimental entries numbered with leading '11'

### **Acknowledgements**

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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.



## 2024 Official Variety Trial Results



**Table OVT1.** 2024 Tennessee Official Variety Trial details.

<b>Location</b>	<b>Planting Date</b>	<b>Soil Type</b>	<b>Tillage</b>	<b>Irrigation</b>
Gift	05/13/2024	Loring Silt Loam	No-Till	None
Grand Junction <sup>1</sup>	05/02/2024	Memphis Silt Loam	No-Till	None
Jackson <sup>2</sup>	04/25/2024	Almo Silt Loam	No-Till	None
Jackson <sup>2</sup>	06/11/2024	Almo Silt Loam	No-Till	None
Milan <sup>3</sup>	05/31/2024	Grenada Silt Loam	No-Till	Pivot
Ridgely	04/25/2024	Reelfoot Silt Loam	No-Till	None

<sup>1</sup>Ames Plantation Research and Education Center, Grand Junction, TN

<sup>2</sup>West Tennessee Research and Education Center, Jackson, TN

<sup>3</sup>Milan Research and Education Center, Milan, TN

**Table OVT2.** Average lint yield and turnout of the 48 entries in the 2024 Official Variety Trials conducted in Gift, Grand Junction, Jackson (early and late planted), Milan, and Ridgely locations, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	23R9128B3TXF	1151 a <sup>‡</sup>	45.0 ab	4.2 k-r	1.15 o-s	30.0 k-o	82.4 k-q
2	1140F331-04	1150 ab	42.8 e-j	4.5 c-g	1.16 l-s	31.9 bcd	83.3 a-e
3	DP 2414 B3TXF	1128 abc	43.5 def	4.3 f-m	1.16 n-s	29.2 pqr	82.6 g-p
4	1140F330-04	1128 abc	42.8 e-i	4.4 e-k	1.16 i-r	30.9 f-j	82.7 e-o
5	NG 3195 B3XF	1122 a-d	41.6 l-q	4.3 g-n	1.16 j-s	30.1 j-n	83.1 a-i
6	DP 2038 B3XF	1089 a-e	45.4 a	4.6 abc	1.11 wx	29.4 n-q	81.6 r
7	DP 2537 B3TXF	1085 a-e	43.7 c-f	4.6 abc	1.16 i-r	30.6 i-l	83.1 a-j
8	ST 5931 AXTP	1077 a-f	41.9 k-p	3.9 t	1.19 c-f	30.8 g-k	83.2 a-g
9	1150F361-04	1076 a-g	41.6 l-r	4.3 g-n	1.21 abc	32.5 abc	83.5 abc
10	DP 2328 B3TXF	1076 a-g	43.0 efg	4.2 i-q	1.17 h-o	29.6 nop	82.4 j-q
11	1140F329-04	1071 a-h	43.1 efg	4.4 f-l	1.16 i-r	31.7 cde	82.7 e-o
12	1150F360-04	1067 a-i	41.6 l-q	4.4 e-k	1.20 b-e	32.5 ab	83.3 a-f
13	PHY415W3FE	1062 a-i	42.2 g-m	4.3 g-n	1.18 g-l	31.5 d-h	83.1 a-h
14	ST 6000AXTP	1060 a-i	44.1 cd	4.1 rs	1.19 c-f	31.5 d-h	83.1 a-j
15	AMX 12526 B3XF	1060 a-i	43.6 def	4.6 a-d	1.17 h-p	29.8 l-p	83.3 a-e
16	ST 4215 AXTP	1058 b-i	42.0 h-n	4.3 f-m	1.22 a	30.9 g-j	81.9 qr
17	DP 2333 B3XF	1057 c-i	42.4 g-m	4.5 bf	1.16 m-s	29.3 n-q	82.2 o-r
18	PHY443W3FE	1053 c-j	41.5 m-r	4.4 e-j	1.13 vwx	30.8 g-k	82.9 c-l
19	Armor 24X951 B3TXF	1045 c-k	44.6 abc	4.4 d-j	1.16 k-s	28.7 qr	82.2 n-r
20	DP 2317 B3TXF	1037 c-l	41.1 o-s	4.2 n-r	1.16 i-r	29.7 m-p	82.6 f-p
21	ST 5855 AXTP	1036 c-l	44.4 bcd	4.1 rs	1.17 h-o	31.7 cde	82.9 e-n
22	Armor 24X954 B3TXF	1029 d-l	42.5 g-l	4.3 h-o	1.14 tuv	28.5 rs	82.4 k-q
23	PHY411W3FE	1027 e-l	43.0 efg	4.5 c-h	1.11 x	30.8 g-k	82.3 k-q
24	DP 2115 B3XF	1027 e-l	42.3 g-m	4.5 b-f	1.17 h-r	29.8 m-p	82.9 c-m
25	PHY360W3FE	1026 e-l	41.0 p-s	4.3 f-m	1.15 n-t	29.6 nop	82.2 m-r
26	1130F309-04	1024 e-l	41.6 l-q	4.4 e-k	1.15 p-t	31.5 d-h	83.2 a-g
27	DP 2127 B3XF	1023 e-l	42.1 h-n	4.5 a-e	1.13 uvw	29.1 pqr	82.7 e-o
28	ST 4833 AXTP	1020 e-l	40.6 rs	4.1 o-s	1.19 c-g	31.0 e-i	82.7 e-o
29	DP 2211 B3TXF	1004 e-m	42.8 f-k	4.4 d-i	1.17 h-q	29.3 n-q	82.6 f-p
30	Armor 9371 B3XF	1002 e-m	42.3 g-m	4.3 f-n	1.16 l-s	29.2 o-r	83.2 a-f
31	DG 3528 B3XF	1002 e-m	41.5 m-r	4.2 l-r	1.18 f-j	29.2 pqr	82.4 i-q
32	PHY390W3FE	1002 e-m	42.4 g-m	4.1 o-s	1.16 j-s	30.6 i-l	82.3 l-q
33	BX 2556AXTP	1001 e-m	40.8 qrs	4.0 st	1.20 b-e	31.1 d-i	82.6 f-p
34	PHY332W3FE	997 e-m	40.5 s	4.2 l-r	1.18 e-i	30.9 f-j	82.5 h-q
35	PHY400W3FE	991 f-m	42.9 e-i	4.2 j-r	1.15 r-u	30.9 f-j	82.0 pqr
36	NG 4507 B3TXF	989 f-m	39.3 t	4.1 qrs	1.21 ab	30.8 h-k	83.0 b-k
37	1150F357-04	987 f-n	41.5 m-r	4.4 d-i	1.13 vwx	32.5 abc	83.1 a-j
38	DG 4434 B3TXF	985 g-n	43.6 def	4.1 p-s	1.18 g-k	29.4 n-q	82.2 n-r
39	DG 4530 B3TXF	981 h-n	41.9 j-p	4.2 m-r	1.17 h-n	29.2 pqr	82.7 e-o
40	NG 3457 B3XF	981 h-n	40.8 qrs	4.3 h-n	1.18 d-h	30.4 i-m	83.3 a-e
41	DP 2522 B3TXF	979 h-n	43.8 cde	4.3 f-m	1.14 s-v	29.2 pqr	82.5 g-p
42	PHY350W3FE	975 i-n	40.6 s	4.3 i-p	1.16 j-s	30.4 i-m	82.9 c-l
43	DG 3519 B3XF	961 j-o	41.2 n-s	4.2 l-r	1.21 abc	31.6 d-g	83.5 a-d
44	NG 3572 B3TXF	958 k-o	44.1 bcd	4.7 a	1.12 wx	27.9 s	82.7 e-o
45	DG 3511 B3XF	946 l-o	42.8 f-k	4.7 ab	1.15 p-t	31.7 c-f	83.6 a
46	NG 4405 B3TXF	922 mno	39.2 t	3.9 t	1.17 h-m	29.6 m-p	82.9 d-m
47	BX 2557AXTP	896 no	42.4 g-m	4.3 i-q	1.20 bcd	32.8 a	83.6 ab
48	Armor 9245 B3TXF	878 o	42.0 i-o	4.0 st	1.15 o-t	29.6 nop	82.3 l-q
	<b>Average</b>	<b>1029</b>	<b>42.3</b>	<b>4.3</b>	<b>1.17</b>	<b>30.4</b>	<b>82.8</b>
	LSD (p≤0.05)	93	0.9	0.2	0.02	0.8	0.7
	CV (%)	15.9	3.0	5.5	2.1	3.6	1.1

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

<sup>†</sup>Turnout and fiber quality determined from ginning every plot at the Jackson early and late planted locations and two replicates of the Gift, Grand Junction, and Ridgely locations.

Tennessee AgResearch data of Raper et al. (2024).



**Table OVT3.** Average lint yield, turnout, and fiber quality of 48 entries in the 2024 Official Variety Trial conducted in Gift, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	1140F331-04	1552 a	42.7	4.4	1.21	33.2	84.4
2	AMX 12526 B3XF	1495 ab	43.6	4.6	1.20	31.5	84.4
3	DP 2328 B3TXF	1494 ab	45.1	4.0	1.22	31.4	83.5
4	1140F329-04	1487 abc	44.4	4.3	1.21	32.7	84.3
5	DP 2537 B3TXF	1477 a-d	43.3	4.4	1.21	31.7	84.2
6	DP 2414 B3TXF	1460 a-e	42.7	4.2	1.21	30.5	83.0
7	DP 2038 B3XF	1388 a-f	46.7	4.2	1.15	30.6	82.5
8	1150F361-04	1387 a-g	41.7	4.1	1.24	34.1	84.5
9	23R9128B3TXF	1386 a-g	45.5	4.2	1.16	30.3	82.6
10	NG 3195 B3XF	1377 a-h	41.6	4.0	1.20	30.1	84.0
11	Armor 9371 B3XF	1374 a-h	43.1	4.1	1.20	30.0	83.9
12	DP 2127 B3XF	1356 a-i	42.1	4.3	1.17	30.5	83.7
13	Armor 24X951 B3TXF	1354 a-i	43.2	4.0	1.21	29.9	83.0
14	DP 2115 B3XF	1331 b-j	42.8	4.4	1.19	30.5	83.5
15	Armor 24X954 B3TXF	1329 b-j	41.7	4.1	1.16	29.6	82.8
16	ST 5931 AXTP	1312 b-j	41.5	3.4	1.22	31.7	83.7
17	NG 4507 B3TXF	1307 b-j	39.9	4.0	1.25	32.4	83.2
18	NG 3572 B3TXF	1306 b-j	44.2	4.6	1.14	28.7	83.6
19	DP 2333 B3XF	1289 c-j	41.9	4.4	1.19	30.1	82.7
20	1130F309-04	1288 c-j	42.4	4.2	1.17	32.2	84.0
21	1140F330-04	1285 c-j	42.3	3.9	1.21	33.4	83.7
22	DP 2522 B3TXF	1284 c-j	43.7	4.3	1.17	30.2	82.5
23	PHY411W3FE	1278 d-j	44.4	4.2	1.12	32.1	83.4
24	PHY360W3FE	1273 e-j	40.4	4.1	1.18	30.5	81.8
25	PHY415W3FE	1272 e-j	41.4	3.8	1.24	33.9	85.0
26	DG 3511 B3XF	1269 e-j	42.1	4.4	1.19	33.0	85.2
27	BX 2556AXTP	1265 e-j	40.4	4.1	1.23	31.6	82.8
28	1150F360-04	1251 f-j	41.3	4.2	1.24	33.8	84.6
29	DP 2317 B3TXF	1236 f-k	39.6	4.1	1.22	31.0	84.2
30	PHY400W3FE	1228 f-l	43.2	3.9	1.19	33.1	83.3
31	ST 4215 AXTP	1217 f-l	38.9	4.3	1.25	31.1	83.3
32	ST 5855 AXTP	1216 f-l	43.6	3.9	1.18	32.2	83.2
33	PHY443W3FE	1216 f-l	40.7	4.1	1.17	33.3	83.6
34	1150F357-04	1207 f-l	42.5	4.2	1.15	33.7	83.4
35	DP 2211 B3TXF	1199 f-l	41.9	3.8	1.21	30.6	83.0
36	DG 4434 B3TXF	1186 g-l	42.8	3.7	1.20	30.9	82.3
37	DG 4530 B3TXF	1185 g-l	41.2	3.9	1.19	31.5	82.9
38	PHY350W3FE	1179 h-l	40.0	4.3	1.22	31.7	84.4
39	ST 4833 AXTP	1178 h-l	40.8	4.1	1.22	32.0	83.0
40	DG 3519 B3XF	1162 i-m	40.6	3.5	1.25	32.0	84.6
41	PHY390W3FE	1162 i-m	42.6	3.8	1.20	31.1	83.1
42	BX 2557AXTP	1161 i-m	43.3	4.1	1.20	32.2	83.9
43	ST 6000AXTP	1161 i-m	43.3	3.7	1.21	31.3	83.0
44	NG 3457 B3XF	1154 i-m	40.4	4.0	1.22	32.5	84.3
45	PHY332W3FE	1145 j-m	41.5	3.8	1.22	33.3	83.6
46	NG 4405 B3TXF	1041 klm	39.5	3.6	1.22	31.2	83.8
47	DG 3528 B3XF	1030 lm	41.7	3.8	1.23	31.5	83.2
48	Armor 9245 B3TXF	963 m	41.4	3.6	1.15	29.1	82.0
<b>Average</b>		<b>1274</b>	<b>42.2</b>	<b>4.0</b>	<b>1.20</b>	<b>31.5</b>	<b>83.5</b>
LSD (p<0.05)		203					
CV (%)		11.4					

‡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 two replicates of each treatment.

Tennessee AgResearch data of Raper et al. (2024).

**Table OVT4.** Average lint yield, turnout, and fiber quality of 48 entries in the 2024 Official Variety Trial conducted in Grand Junction, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	1140F331-04	1410 a	43.9	4.4	1.17	28.3	82.0
2	ST 6000AXTP	1401 ab	47.4	4.3	1.17	28.4	82.6
3	1150F361-04	1384 abc	43.4	4.5	1.20	29.0	82.7
4	1140F330-04	1365 a-d	43.2	4.4	1.17	29.2	82.6
5	DG 3528 B3XF	1355 a-e	43.0	4.4	1.18	26.7	82.4
6	DP 2414 B3TXF	1344 a-f	45.8	4.4	1.15	27.0	82.0
7	Armor 24X951 B3TXF	1330 a-g	46.9	4.7	1.17	26.9	82.7
8	PHY443W3FE	1330 a-g	44.1	4.6	1.11	28.3	82.5
9	PHY332W3FE	1328 a-g	41.6	4.3	1.17	28.7	81.9
10	NG 3195 B3XF	1307 a-g	43.1	4.4	1.14	27.6	82.5
11	PHY411W3FE	1306 a-g	44.8	4.7	1.11	29.1	81.7
12	DP 2038 B3XF	1302 a-g	45.7	4.8	1.09	27.3	80.4
13	Armor 9371 B3XF	1282 a-g	44.2	4.4	1.17	27.0	82.9
14	DG 4530 B3TXF	1282 a-g	43.5	4.1	1.16	25.9	81.3
15	ST 4833 AXTP	1272 a-g	41.3	4.2	1.20	28.1	81.8
16	23R9128B3TXF	1272 a-g	47.3	4.4	1.16	30.3	83.2
17	PHY415W3FE	1270 a-g	42.9	4.5	1.16	28.5	81.8
18	ST 5855 AXTP	1258 a-h	46.5	4.2	1.15	27.9	82.0
19	DP 2328 B3TXF	1238 a-i	44.4	4.4	1.17	26.7	81.9
20	1140F329-04	1236 a-i	44.0	4.5	1.16	28.9	81.7
21	DP 2115 B3XF	1231 a-i	44.0	4.6	1.15	27.0	82.3
22	1150F357-04	1228 a-i	45.1	4.5	1.12	29.0	81.9
23	DG 3511 B3XF	1213 a-k	43.3	4.8	1.16	29.4	82.0
24	1150F360-04	1208 a-j	41.7	4.5	1.18	30.1	81.7
25	DP 2333 B3XF	1204 a-j	42.4	4.8	1.15	27.7	81.7
26	1130F309-04	1202 a-j	43.4	4.5	1.16	29.2	82.9
27	ST 5931 AXTP	1200 a-j	43.9	4.1	1.18	28.9	81.9
28	NG 4507 B3TXF	1198 a-j	41.0	4.0	1.21	28.0	81.6
29	PHY350W3FE	1198 a-j	43.0	4.5	1.16	27.6	82.1
30	DP 2211 B3TXF	1198 a-j	45.7	4.6	1.14	26.3	80.8
31	PHY360W3FE	1184 b-l	42.1	4.6	1.17	27.9	81.5
32	BX 2556AXTP	1175 c-l	41.1	4.1	1.20	29.0	81.6
33	DG 4434 B3TXF	1170 c-l	45.9	4.4	1.16	26.3	81.9
34	DG 3519 B3XF	1170 c-l	43.0	4.2	1.21	29.1	82.6
35	DP 2127 B3XF	1167 c-l	45.4	4.7	1.12	27.1	82.2
36	DP 2537 B3TXF	1154 d-l	44.2	4.9	1.16	29.7	83.6
37	PHY400W3FE	1153 d-l	44.7	4.2	1.13	27.9	81.0
38	PHY390W3FE	1150 d-l	45.2	4.1	1.16	28.3	81.1
39	AMX 12526 B3XF	1143 e-l	44.4	4.7	1.15	27.8	82.5
40	DP 2317 B3TXF	1129 f-l	42.4	4.2	1.16	27.5	81.7
41	ST 4215 AXTP	1113 g-m	43.2	4.4	1.23	28.8	80.9
42	Armor 24X954 B3TXF	1113 g-m	45.3	4.4	1.12	26.4	81.6
43	NG 4405 B3TXF	1051 h-m	40.0	4.1	1.17	27.7	82.7
44	BX 2557AXTP	1032 i-m	45.0	4.1	1.18	30.8	83.4
45	Armor 9245 B3TXF	1004 j-m	44.4	4.2	1.18	26.0	80.6
46	DP 2522 B3TXF	978 klm	44.5	4.6	1.14	27.1	81.6
47	NG 3572 B3TXF	970 lm	46.2	4.8	1.12	24.8	82.3
48	NG 3457 B3XF	908 m	40.9	4.2	1.18	28.3	83.0
<b>Average</b>		<b>1211</b>	<b>43.9</b>	<b>4.4</b>	<b>1.16</b>	<b>28.0</b>	<b>82.0</b>
LSD (p≤0.05)		218					
CV (%)		12.9					

‡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 two replicates of each treatment.

Tennessee AgResearch data of Raper et al. (2024).

**Table OVT4.** Average lint yield and turnout of the 48 entries in the early planted 2024 Official Variety Trial conducted in Jackson, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	1150F360-04	1021 ab	41.1 m-r	3.9 d-j	1.20 a-d	32.3 a-d	82.8 a-i
2	NG 3195 B3XF	1005 ac	41.2 l-q	4.1 b-h	1.17 c-m	30.8 e-n	83.5 ab
3	ST 4215 AXTP	992 a-d	42.4 e-o	4.0 c-i	1.21 a	30.5 f-q	81.5 jkl
4	ST 5855 AXTP	959 a-e	44.2 a-d	3.9 d-j	1.16 f-p	31.6 b-g	82.2 d-k
5	1140F330-04	939 a-f	43.3 a-j	4.1 b-f	1.16 e-o	31.1 c-k	82.0 f-l
6	ST 4833 AXTP	937 a-f	41.3 k-q	3.9 d-j	1.18 a-i	30.7 f-o	82.4 b-j
7	NG 3457 B3XF	926 a-g	41.7 i-p	4.1 b-h	1.18 a-i	31.2 c-k	82.9 a-h
8	NG 3572 B3TXF	918 a-g	44.7 a	4.5 a	1.13 p-s	28.8 rst	83.3 abc
9	ST 5931 AXTP	911 a-h	42.1 g-o	3.8 e-j	1.19 a-g	30.4 g-q	82.6 a-i
10	PHY443W3FE	907 a-i	42.1 g-o	4.1 b-f	1.13 o-s	30.6 f-q	82.5 b-j
11	1140F331-04	903 a-i	43.8 a-f	4.1 b-h	1.15 h-q	31.9 a-f	83.0 a-f
12	PHY411W3FE	898 a-i	44.1 a-d	4.1 b-f	1.12 rs	30.5 f-q	82.4 c-k
13	PHY415W3FE	897 a-i	42.5 d-n	3.9 d-j	1.18 a-j	31.5 b-g	83.0 a-f
14	PHY360W3FE	887 a-i	40.9 n-r	4.0 c-i	1.15 j-s	29.5 l-t	81.8 g-l
15	AMX 12526 B3XF	872 a-i	43.4 a-i	4.2 a-d	1.18 a-k	30.5 f-q	83.7 a
16	NG 4507 B3TXF	869 a-i	39.7 qrs	3.9 d-j	1.21 ab	31.1 c-k	83.1 a-e
17	Armor 24X954 B3TXF	868 a-i	42.8 c-l	4.1 b-f	1.13 p-s	28.5 st	81.8 i-l
18	23R9128B3TXF	864 a-i	44.5 ab	3.9 d-j	1.14 l-s	30.0 i-r	81.8 h-l
19	DP 2115 B3XF	863 a-i	42.3 f-o	4.1 b-h	1.16 g-q	30.0 i-r	83.0 a-f
20	1150F357-04	858 a-i	41.7 i-p	4.1 b-f	1.13 n-s	32.9 ab	83.1 a-f
21	ST 6000AXTP	850 a-i	43.2 a-j	3.9 d-j	1.18 a-i	31.4 b-i	82.7 a-i
22	BX 2556AXTP	848 a-i	41.1 m-r	3.8 g-j	1.19 a-h	31.4 b-i	82.6 a-i
23	DP 2211 B3TXF	842 a-i	43.0 b-k	4.0 c-i	1.16 g-q	29.1 q-t	82.8 a-i
24	DG 3528 B3XF	842 a-i	41.3 k-q	4.0 c-i	1.16 f-p	29.7 k-s	82.0 f-l
25	DP 2414 B3TXF	824 a-i	43.5 a-h	3.9 d-j	1.12 rs	29.6 l-t	81.5 jkl
26	1130F309-04	822 a-i	42.3 f-o	3.9 d-j	1.16 g-q	31.5 b-h	82.9 a-g
27	DP 2317 B3TXF	822 a-i	40.8 o-r	3.8 f-j	1.16 f-p	29.4 n-t	82.5 b-j
28	PHY400W3FE	819 a-i	42.8 c-l	3.7 ij	1.15 i-r	31.3 c-j	81.5 jkl
29	PHY390W3FE	812 a-i	42.6 d-n	3.8 g-j	1.17 b-l	30.9 d-l	82.8 a-i
30	NG 4405 B3TXF	802 b-j	38.9 s	3.8 g-j	1.18 a-k	30.4 g-q	82.7 a-i
31	DG 4530 B3TXF	802 b-j	41.7 i-p	4.2 b-e	1.17 d-m	28.2 t	82.5 b-j
32	Armor 24X951 B3TXF	798 d-j	44.0 a-e	4.1 b-g	1.15 i-r	29.2 p-t	82.0 f-l
33	1150F361-04	797 d-j	40.9 n-r	3.7 hij	1.20 abc	31.9 a-f	82.8 a-i
34	DP 2522 B3TXF	793 d-j	43.1 a-k	4.0 b-i	1.15 g-q	29.9 h-s	82.6 a-j
35	DP 2127 B3XF	786 c-j	41.1 m-r	4.1 b-h	1.12 qrs	29.4 n-t	82.7 a-i
36	DP 2328 B3TXF	778 e-j	41.8 h-p	3.8 g-j	1.16 g-q	30.4 g-q	82.0 e-l
37	DP 2537 B3TXF	776 e-j	43.6 a-g	4.3 abc	1.14 l-s	30.6 f-p	82.3 c-k
38	DG 3519 B3XF	776 e-j	41.6 j-p	3.9 d-j	1.19 a-e	31.5 b-h	83.4 abc
39	DG 4434 B3TXF	762 e-j	43.3 a-i	3.9 d-j	1.16 f-p	29.5 l-t	82.1 e-k
40	Armor 9245 B3TXF	758 e-j	41.7 i-p	3.9 d-j	1.15 k-s	29.8 j-s	82.6 a-j
41	Armor 9371 B3XF	757 e-j	41.6 j-p	3.9 d-j	1.15 k-s	29.2 o-t	82.9 a-h
42	DP 2038 B3XF	755 f-j	44.4 abc	4.1 b-h	1.12 s	29.3 o-t	81.0 l
43	DP 2333 B3XF	755 f-j	41.8 h-p	3.9 d-j	1.14 m-s	29.4 m-t	81.3 kl
44	BX 2557AXTP	724 g-j	41.0 n-r	4.1 b-f	1.19 a-f	33.2 a	83.3 a-d
45	1140F329-04	713 hij	42.7 c-m	3.8 f-j	1.17 c-m	32.2 a-e	82.5 b-j
46	DG 3511 B3XF	706 lj	43.3 a-i	4.4 ab	1.13 o-s	32.5 abc	83.4 abc
47	PHY350W3FE	704 lj	40.2 p-s	3.9 d-j	1.16 f-p	30.8 d-m	82.7 a-i
48	PHY332W3FE	588 J	39.4 rs	3.6 j	1.18 a-k	30.9 d-m	81.8 g-l
<b>Average</b>		<b>835</b>	<b>42.2</b>	<b>4.0</b>	<b>1.16</b>	<b>30.6</b>	<b>82.5</b>
LSD (p≤0.05)		202	1.7	0.3	0.03	0.4	1.2
CV (%)		17.3	2.9	6.1	2.0	3.4	1.0

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

†Turnout and fiber quality determined from ginning every plot.

Tennessee AgResearch data of Raper et al. (2024).

**Table OVT6.** Average lint yield and turnout of the 48 entries in the late planted 2024 Official Variety Trial conducted in Jackson, listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	23R9128B3TXF	795 a	42.6 abc	4.5 j-n	1.15 c-l	29.4 l-r	82.3 c-j
2	DP 2537 B3TXF	782 ab	42.0 a-f	4.8 c-h	1.15 c-k	30.3 h-o	82.6 a-j
3	ST 6000AXTP	752 abc	42.4 a-e	4.4 l-o	1.18 a-d	32.0 b-g	83.2 a-e
4	DP 2522 B3TXF	751 abc	42.5 a-d	4.7 e-k	1.10 n-r	28.3 r	82.5 a-j
5	ST 5855 AXTP	724 a-d	43.1 ab	4.4 l-o	1.16 b-i	32.2 b-f	83.4 a-d
6	1140F330-04	715 a-e	41.1 c-i	4.9 a-f	1.13 i-q	30.8 f-l	82.7 a-j
7	DP 2333 B3XF	708 a-f	41.6 b-h	4.8 b-f	1.15 c-j	29.5 l-r	83.0 a-i
8	DG 4530 B3TXF	707 a-f	40.8 d-j	4.3 n-r	1.17 b-g	29.6 l-r	83.8 ab
9	ST 4215 AXTP	697 a-g	42.1 a-f	4.7 c-i	1.21 a	32.2 b-f	82.1 d-j
10	Armor 9245 B3TXF	676 a-h	39.9 i-n	4.1 pqr	1.13 g-o	31.2 c-j	82.8 a-j
11	DP 2414 B3TXF	674 a-h	41.8 b-g	4.7 c-i	1.14 e-n	28.4 r	83.1 a-g
12	DP 2038 B3XF	667 a-h	43.6 a	5.1 a	1.09 pqr	29.6 l-r	82.2 c-j
13	ST 5931 AXTP	666 a-h	40.1 h-n	4.1 r	1.19 abc	31.1 d-j	83.8 ab
14	DP 2317 B3TXF	652 a-h	39.6 i-o	4.6 g-m	1.14 f-o	30.4 h-o	82.6 a-j
15	DG 3528 B3XF	650 a-h	39.3 j-p	4.3 m-q	1.17 b-h	28.7 pqr	82.4 b-j
16	DP 2115 B3XF	617 a-i	39.9 i-n	5.0 abc	1.14 d-m	29.4 l-r	82.0 e-j
17	PHY360W3FE	611 a-j	39.2 k-p	4.7 d-j	1.13 g-o	30.0 j-p	83.2 a-e
18	DP 2328 B3TXF	608 a-j	40.9 d-j	4.7 e-k	1.17 b-g	29.9 j-q	82.8 a-j
19	PHY443W3FE	603 a-j	39.0 l-q	4.7 d-j	1.10 o-r	30.4 h-o	82.8 a-j
20	NG 3457 B3XF	598 a-j	38.8 n-q	4.9 a-f	1.15 c-k	30.0 j-p	83.4 a-d
21	PHY390W3FE	597 a-j	39.4 j-p	4.7 f-l	1.11 m-r	30.2 i-o	81.7 ij
22	BX 2556AXTP	596 a-j	39.2 k-p	4.1 qr	1.17 a-f	30.7 g-m	82.8 a-j
23	PHY415W3FE	589 b-j	40.8 d-j	4.8 b-f	1.13 g-p	31.1 c-j	82.8 a-j
24	NG 3572 B3TXF	589 b-j	41.1 c-i	5.0 a-d	1.09 qr	28.3 r	81.8 f-j
25	1140F329-04	584 b-j	40.7 e-k	4.9 a-f	1.12 j-r	31.2 c-j	82.4 c-j
26	1130F309-04	583 b-j	38.2 opq	4.9 a-e	1.10 n-r	31.3 c-j	82.9 a-j
27	Armor 24X954 B3TXF	575 c-j	39.9 i-n	4.7 f-l	1.14 e-n	28.5 r	82.7 a-j
28	DP 2211 B3TXF	573 c-j	40.1 h-n	5.0 a-d	1.15 c-l	29.6 k-r	82.4 c-j
29	1140F331-04	571 c-j	39.9 i-n	5.0 abc	1.11 l-r	32.4 a-e	83.1 a-f
30	NG 4405 B3TXF	571 c-j	37.3 qr	4.2 o-r	1.14 d-m	29.2 n-r	82.8 a-j
31	Armor 24X951 B3TXF	550 c-j	42.9 ab	4.7 e-k	1.14 f-o	29.0 o-r	81.7 hij
32	DG 4434 B3TXF	547 d-j	42.0 a-f	4.4 k-n	1.16 b-i	29.3 m-r	82.1 d-j
33	PHY332W3FE	535 d-j	38.8 n-q	4.8 b-g	1.15 c-l	30.2 i-o	82.7 a-j
34	Armor 9371 B3XF	526 d-j	40.1 h-n	4.7 d-j	1.13 h-q	29.3 m-r	83.3 a-e
35	ST 4833 AXTP	518 e-j	37.9 pqr	4.4 m-p	1.18 abc	31.5 b-i	83.0 a-i
36	1150F360-04	517 e-j	40.1 h-n	4.8 b-f	1.15 c-k	32.8 ab	83.3 a-e
37	NG 3195 B3XF	515 e-j	39.9 i-n	4.7 c-i	1.11 k-r	30.7 g-m	82.0 e-j
38	AMX 12526 B3XF	512 e-j	41.9 b-f	4.8 b-g	1.14 d-m	29.4 l-r	82.3 c-j
39	PHY411W3FE	507 f-j	39.3 j-p	4.8 b-g	1.08 r	30.4 h-n	81.6 j
40	DG 3519 B3XF	503 g-j	38.9 m-q	4.7 e-k	1.17 a-f	32.4 a-d	83.1 a-h
41	PHY400W3FE	494 hij	40.6 f-l	4.9 b-f	1.12 j-r	30.7 g-m	82.0 e-j
42	PHY350W3FE	494 hij	38.8 n-q	4.6 g-m	1.12 j-r	29.9 j-q	82.3 c-j
43	DG 3511 B3XF	493 hij	40.6 f-l	5.0 abc	1.14 f-o	31.0 e-k	83.3 a-e
44	1150F357-04	489 hij	38.6 n-q	4.8 b-f	1.10 n-r	31.6 b-h	82.3 c-j
45	1150F361-04	461 hij	40.1 g-n	4.9 a-f	1.18 a-e	32.5 abc	83.5 abc
46	NG 4507 B3TXF	436 lj	36.3 r	4.5 i-n	1.18 a-d	30.1 i-o	82.5 b-j
47	DP 2127 B3XF	433 lj	39.8 i-o	5.1 ab	1.10 o-r	28.6 qr	81.8 g-j
48	BX 2557AXTP	409 J	40.5 f-m	4.5 h-n	1.20 ab	33.8 a	83.9 a
	<b>Average</b>	<b>592</b>	<b>40.3</b>	<b>4.7</b>	<b>1.14</b>	<b>30.4</b>	<b>82.7</b>
	LSD (p≤0.05)	202	1.6	0.3	0.04	1.4	1.4
	CV (%)	24.4	2.5	3.9	2.4	3.3	1.2

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

†Turnout and fiber quality determined from ginning every plot.

Tennessee AgResearch data of Raper et al. (2024).



**Table OVT7.** Average lint yield of 48 entries in the irrigated 2024 Milan Research and Education Trial conducted in Milan, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)
1	1140F330-04	1086 a
2	23R9128B3TXF	1042 ab
3	NG 3195 B3XF	1030 abc
4	ST 4215 AXTP	1007 a-d
5	ST 5931 AXTP	974 ae
6	NG 3457 B3XF	959 a-f
7	1150F360-04	952 a-f
8	DP 2317 B3TXF	951 a-f
9	AMX 12526 B3XF	949 a-g
10	DP 2537 B3TXF	946 a-g
11	DP 2127 B3XF	932 a-g
12	1150F361-04	923 a-g
13	1140F331-04	919 a-h
14	DG 4434 B3TXF	916 a-h
15	PHY390W3FE	915 a-h
16	ST 4833 AXTP	914 a-h
17	DP 2414 B3TXF	910 a-h
18	PHY415W3FE	893 a-h
19	NG 4507 B3TXF	890 a-i
20	1150F357-04	870 a-j
21	1140F329-04	866 a-j
22	PHY332W3FE	862 a-j
23	PHY400W3FE	860 a-j
24	DP 2038 B3XF	859 a-j
25	DP 2211 B3TXF	857 a-j
26	DP 2328 B3TXF	856 a-j
27	DP 2115 B3XF	854 a-j
28	PHY350W3FE	853 a-j
29	DP 2333 B3XF	853 a-j
30	Armor 24X954 B3TXF	833 b-j
31	ST 6000AXTP	825 b-j
32	Armor 24X951 B3TXF	816 b-j
33	NG 3572 B3TXF	814 b-j
34	PHY443W3FE	812 b-j
35	DG 3519 B3XF	802 b-k
36	PHY360W3FE	791 c-k
37	NG 4405 B3TXF	785 c-k
38	PHY411W3FE	773 d-k
39	1130F309-04	764 d-k
40	DP 2522 B3TXF	750 e-k
41	DG 3511 B3XF	733 e-k
42	ST 5855 AXTP	723 f-k
43	BX 2557AXTP	715 f-k
44	Armor 9245 B3TXF	706 g-k
45	BX 2556AXTP	677 h-k
46	DG 3528 B3XF	646 ijk
47	Armor 9371 B3XF	637 jk
48	DG 4530 B3TXF	561 k
<b>Average</b>		<b>851</b>
LSD (p≤0.05)		245
CV (%)		20.6

‡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 2024 Official Variety Trial locations.

Tennessee AgResearch data of Raper et al. (2024).

**Table OVT8.** Average lint yield, turnout, and fiber quality of 48 entries in the 2024 Official Variety Trial conducted in Ridgely, TN listed by yield rank.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout <sup>†</sup> (%)	Mic	Length (in.)	Strength (g/tex)	Unif (%)
1	DP 2038 B3XF	1562 a	47.3	4.9	1.12	30.3	81.9
2	23R9128B3TXF	1551 ab	46.1	4.3	1.15	30.9	82.2
3	1140F331-04	1542 ab	43.7	4.7	1.17	33.3	84.5
4	1140F329-04	1542 ab	43.8	4.4	1.18	33.8	83.2
5	DP 2333 B3XF	1534 ab	43.8	4.9	1.15	29.9	82.1
6	DP 2414 B3TXF	1528 abc	43.7	4.5	1.20	31.0	83.6
7	NG 3195 B3XF	1500 a-d	42.2	4.3	1.19	30.4	83.8
8	DG 3528 B3XF	1496 a-e	42.6	4.5	1.16	29.5	82.4
9	1150F360-04	1489 a-e	43.6	4.6	1.23	33.8	84.0
10	1130F309-04	1488 a-e	42.5	4.5	1.19	33.6	83.4
11	DP 2328 B3TXF	1480 a-e	44.2	4.5	1.14	28.4	81.7
12	PHY332W3FE	1470 a-e	41.6	4.5	1.20	32.2	82.6
13	PHY443W3FE	1460 a-f	41.6	4.6	1.16	32.5	83.5
14	1150F361-04	1457 a-f	41.8	4.4	1.23	35.5	84.5
15	Armor 24X954 B3TXF	1455 a-f	43.0	4.1	1.12	29.6	83.0
16	PHY415W3FE	1453 a-f	42.1	4.6	1.18	33.1	83.1
17	DP 2127 B3XF	1451 a-f	43.3	4.7	1.16	30.3	84.0
18	BX 2556AXTP	1445 a-f	41.6	4.0	1.21	33.3	83.0
19	Armor 9371 B3XF	1438 a-f	43.3	4.7	1.16	30.8	83.2
20	DP 2317 B3TXF	1433 a-f	42.5	4.2	1.15	30.5	82.1
21	Armor 24X951 B3TXF	1421 a-f	45.9	4.7	1.13	28.1	82.1
22	PHY350W3FE	1421 a-f	40.9	4.5	1.17	32.4	83.8
23	PHY360W3FE	1413 a-f	41.9	4.4	1.15	29.5	81.4
24	PHY411W3FE	1401 a-f	43.0	4.6	1.14	32.6	83.2
25	ST 5931 AXTP	1401 af	41.4	3.9	1.19	32.2	83.5
26	PHY400W3FE	1391 a-g	43.8	4.5	1.16	31.5	82.6
27	AMX 12526 B3XF	1386 a-g	44.2	4.8	1.16	29.9	84.2
28	1140F330-04	1378 a-h	43.7	4.5	1.17	29.9	83.3
29	PHY390W3FE	1375 a-h	42.7	4.2	1.18	33.2	82.9
30	ST 6000AXTP	1373 a-h	44.2	4.0	1.23	34.0	83.6
31	DP 2537 B3TXF	1373 a-h	44.4	4.8	1.16	31.3	83.5
32	DP 2211 B3TXF	1356 a-h	44.2	4.7	1.19	30.7	83.4
33	DG 4530 B3TXF	1351 a-h	41.4	4.5	1.17	31.6	82.1
34	DG 3519 B3XF	1351 a-h	41.9	4.5	1.24	32.5	84.3
35	NG 3457 B3XF	1342 a-h	40.8	4.1	1.19	30.2	83.0
36	ST 5855 AXTP	1339 a-h	44.3	3.8	1.21	34.5	83.4
37	BX 2557AXTP	1334 a-h	43.4	4.5	1.20	33.2	83.5
38	DG 4434 B3TXF	1327 b-h	43.5	4.1	1.21	31.1	82.5
39	ST 4215 AXTP	1321 b-h	41.0	4.4	1.20	31.0	81.4
40	DP 2522 B3TXF	1320 b-h	44.6	4.2	1.17	30.9	83.3
41	ST 4833 AXTP	1302 c-h	41.8	4.1	1.18	32.5	83.2
42	DG 3511 B3XF	1284 d-h	44.1	5.0	1.17	32.6	84.6
43	1150F357-04	1284 d-h	40.6	4.5	1.15	35.7	85.1
44	NG 4405 B3TXF	1283 d-h	40.5	3.7	1.17	29.8	82.4
45	DP 2115 B3XF	1266 e-h	42.5	4.6	1.20	32.2	84.4
46	NG 4507 B3TXF	1236 fgh	39.9	4.1	1.25	32.6	84.6
47	Armor 9245 B3TXF	1163 gh	42.6	4.2	1.14	30.1	82.4
48	NG 3572 B3TXF	1153 H	44.8	4.8	1.10	27.5	82.7
	<b>Average</b>	<b>1398</b>	<b>43.0</b>	<b>4.4</b>	<b>1.17</b>	<b>31.6</b>	<b>83.1</b>
	LSD (p≤0.05)	231					
	CV (%)	11.8					

‡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 two replicates of each treatment.

Tennessee AgResearch data of Raper et al. (2024).

## 2024 County Standard Trial Results



Only one summary table was constructed from the 2024 CST data, since we were unable to establish more than two locations containing the Phytogen Varieties.

**Table CST1.** Average lint yield, gin turnout, and fiber quality of the eleven XtendFlex varieties entered in the 2024 Tennessee County Standard Trial Program across eight 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 2414 B3TXF	1159a	42.9ab	4.1bcd	1.15abc	29.7bc	83.0ab	4	41	53.75
2	DP 2333 B3XF	1083ab	42.0bc	4.4b	1.14cd	29.7bc	82.2c	4	41	53.60
3	DP 2328 B3TXF	1075b	43.7a	4.1bcd	1.16ab	29.9ab	82.2c	4	41	53.70
4	DP 2211 B3TXF	1071b	41.9bc	4.1cd	1.17a	30.8a	83.6a	4	41	53.90
5	DP 2115 B3XF	1061b	41.4cd	4.3bc	1.15bcd	30.5ab	83.4ab	4	41	53.80
6	DP 2127 B3XF	1060b	42.0bc	4.6a	1.13d	30.4ab	83.6a	4	41	53.55
7	NG 3457 B3XF	1052bc	40.3de	4.0d	1.17a	30.1ab	83.2ab	4	41	53.90
8	AR 9371 B3XF	1011bcd	41.2cd	4.0d	1.17ab	30.4ab	83.2ab	4	41	53.90
9	AR 9383 B3TXF	977cd	39.3e	4.1cd	1.15bcd	28.8c	82.8bc	4	41	53.65
10	NG 4405 B3TXF	965d	39.6e	3.7e	1.16abc	30.1ab	82.8bc	4	41	53.85
11	DG 4530 B3TXF	958d	40.9cd	4.0d	1.16ab	30.3ab	83.3ab	4	41	53.90
	<b>Average</b>	<b>1043</b>	<b>41.4</b>	<b>4.1</b>	<b>1.16</b>	<b>30.1</b>	<b>83.3</b>	<b>4</b>	<b>41</b>	<b>53.80</b>
	LSD (p<0.05)	79.7	1.2	0.2	0.02	1.0	0.7			
	CV (%)	7.6	2.9	5.7	1.7	3.3	0.9			



**Table CST2.** Results from the 2024 Fayette XtendFlex County Standard Trial planted May 31<sup>st</sup> and harvested Nov. 11<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2211 B3TXF	879	43.2	4.7	1.13	29.2	83.3	4	51	49.85
2	DP 2333 B3XF	874	43.3	5.0	1.08	27.2	81.4	4	51	46.90
3	DP 2127 B3XF	850	42.1	5.4	1.11	28.8	83.3	3	51	45.80
4	AR 9383 B3TXF	850	39.4	4.5	1.11	26.2	81.7	5	51	47.95
5	DP 2414 B3TXF	818	42.1	4.4	1.15	29.2	83.2	3	51	49.85
6	NG 4405 B3TXF	815	39.9	4.0	1.10	29.0	81.7	4	51	49.55
7	AR 9371 B3XF	812	42.3	5.0	1.12	28.0	82.2	3	51	47.25
8	NG 3457 B3XF	790	41.2	4.9	1.15	28.9	82.6	3	52	47.45
9	DP 2115 B3XF	783	40.6	5.0	1.12	28.4	82.1	4	52	44.80
10	DP 2328 B3TXF	729	43.4	4.7	1.14	28.6	81.5	4	51	49.70
11	DG 4530 B3TXF	629	41.8	4.6	1.14	28.1	82.4	4	51	49.75
<b>Average</b>		<b>803</b>	<b>41.8</b>	<b>4.7</b>	<b>1.12</b>	<b>28.3</b>	<b>82.3</b>	<b>4</b>	<b>51</b>	<b>48.08</b>

**Table CST3.** Results from the first of two 2024 Gibson XtendFlex County Standard Trials. This location was planted May 30<sup>th</sup> and harvested Oct. 25<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2328 B3TXF	1028	44.4	2.9	1.16	31.1	81.7	5	31	43.45
2	DP 2115 B3XF	945	41.7	3.4	1.14	32.1	82.3	4	31	50.70
3	DP 2127 B3XF	938	41.7	3.5	1.14	32.1	84.6	4	31	55.50
4	NG 3457 B3XF	926	39.9	3.3	1.17	30.7	83.8	5	31	47.90
5	DP 2414 B3TXF	917	42.5	3.2	1.19	31.7	82.8	4	31	49.05
6	DP 2211 B3TXF	882	40.1	3.2	1.19	32.8	84.7	4	31	49.15
7	DP 2333 B3XF	875	41.0	3.7	1.16	30.5	82.2	5	31	52.65
8	AR 9371 B3XF	864	38.9	3.4	1.20	33.1	83.9	4	31	50.85
9	AR 9383 B3TXF	828	37.4	2.9	1.19	29.6	83.6	5	31	43.25
10	DG 4530 B3TXF	802	40.1	3.1	1.19	30.2	82.8	4	31	48.90
11	NG 4405 B3TXF	756	38.2	3.1	1.22	32.5	83.4	5	41	45.20
<b>Average</b>		<b>887</b>	<b>40.5</b>	<b>3.2</b>	<b>1.18</b>	<b>31.5</b>	<b>83.3</b>	<b>4</b>	<b>31</b>	<b>48.78</b>

**Table CST4.** Results from the second of two 2024 Gibson XtendFlex County Standard Trials. This location was planted May 21<sup>st</sup> and harvested Nov. 4<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2414 B3TXF	1642	42.0	4.1	1.18	30.2	83.3	4	41	54.00
2	DP 2333 B3XF	1605	41.4	4.3	1.17	31.6	83.5	6	41	48.80
3	DP 2211 B3TXF	1590	43.4	4.1	1.22	30.1	84.6	4	41	54.05
4	DP 2127 B3XF	1414	39.4	4.3	1.15	32.3	83.8	5	41	51.50
5	NG 4405 B3TXF	1398	38.5	3.7	1.19	30.8	84.6	5	41	51.55
6	DP 2115 B3XF	1386	38.8	4.0	1.18	31.7	84.3	5	41	51.70
7	NG 3457 B3XF	1372	39.0	3.9	1.21	30.9	84.1	5	41	51.55
8	AR 9371 B3XF	1361	39.1	3.7	1.20	32.0	83.2	6	41	48.90
9	DP 2328 B3TXF	1315	42.9	4.3	1.17	30.4	83.2	4	41	53.80
10	AR 9383 B3TXF	1314	36.6	3.8	1.20	30.7	84.7	5	41	51.55
11	DG 4530 B3TXF	1290	39.6	4.3	1.17	29.3	83.4	3	41	54.20
<b>Average</b>		<b>1426</b>	<b>40.1</b>	<b>4.0</b>	<b>1.19</b>	<b>30.9</b>	<b>83.9</b>	<b>5</b>	<b>41</b>	<b>51.96</b>

**Table CST5.** Results from the 2024 Haywood XtendFlex County Standard Trial planted May 16<sup>th</sup> and harvested Nov. 11<sup>th</sup>.

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	1234	42.9	4.1	1.18	29.8	84.8	4	31	55.30
2	DP 2414 B3TXF	1181	43.3	4.0	1.18	29.3	83.0	4	41	53.85
3	DP 2333 B3XF	1089	42.9	4.2	1.14	28.2	81.7	3	41	54.15
4	DP 2328 B3TXF	1087	44.1	4.0	1.16	30.2	82.1	4	41	53.85
5	DP 2211 B3TXF	1062	43.3	3.8	1.22	34.3	84.0	6	41	49.05
6	DP 2127 B3XF	1048	41.9	4.3	1.14	30.2	83.7	3	31	56.55
7	AR 9371 B3XF	996	42.8	4.1	1.17	29.5	83.8	3	31	56.50
8	NG 3457 B3XF	960	40.2	3.8	1.18	30.9	83.4	4	31	55.40
9	NG 4405 B3TXF	941	40.2	3.6	1.16	29.0	83.4	5	41	51.20
10	DG 4530 B3TXF	939	41.2	3.8	1.18	31.1	84.7	4	41	54.20
11	AR 9383 B3TXF	892	38.7	4.0	1.16	29.3	83.0	5	41	51.30
<b>Average</b>		<b>1039</b>	<b>41.9</b>	<b>4.0</b>	<b>1.17</b>	<b>30.2</b>	<b>83.4</b>	<b>4</b>	<b>41</b>	<b>53.76</b>

**Table CST6.** Results from the 2024 Lauderdale XtendFlex County Standard Trial planted May 30<sup>th</sup> and harvested Oct. 30<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2414 B3TXF	1044	42.3	4.3	1.13	30.6	83.5	4	31	54.75
2	NG 3457 B3XF	880	40.2	4.2	1.17	30.7	83.0	4	31	55.40
3	AR 9371 B3XF	873	39.0	3.8	1.16	31.0	82.6	6	41	48.85
4	DP 2211 B3TXF	820	39.3	4.3	1.18	31.8	84.2	4	31	55.50
5	DP 2115 B3XF	803	41.5	4.2	1.16	32.0	84.6	5	31	52.90
6	AR 9383 B3TXF	780	42.2	4.4	1.16	30.0	83.1	4	31	55.30
7	NG 4405 B3TXF	773	40.3	3.8	1.16	30.9	82.8	5	41	51.40
8	DG 4530 B3TXF	734	42.1	4.0	1.18	32.9	84.9	4	31	55.60
9	DP 2127 B3XF	730	40.8	4.4	1.16	30.9	84.1	5	41	51.40
10	DP 2333 B3XF	693	40.3	3.8	1.17	31.2	82.9	5	31	52.80
	<b>Average</b>	<b>813</b>	<b>40.8</b>	<b>4.1</b>	<b>1.16</b>	<b>31.2</b>	<b>83.6</b>	<b>5</b>	<b>34</b>	<b>53.39</b>

**Table CST7.** Results from the 2024 Lincoln XtendFlex County Standard Trial planted May 22<sup>nd</sup> and harvested Nov 8<sup>th</sup>.

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	1445	44.7	4.9	1.06	27.7	79.5	3	41	51.85
2	DP 2414 B3TXF	1437	44.5	4.4	1.16	28.4	82.4	3	41	54.10
3	AR 24X951 B3TXF	1415	44.8	4.5	1.16	27.7	82.5	3	41	54.10
4	NG 3195 B3XF	1412	42.3	4.6	1.16	30.4	82.0	3	41	54.30
5	DP 2127 B3XF	1378	43.4	5.0	1.13	27.2	82.4	3	41	51.45
6	DP 2333 B3XF	1369	43.9	4.7	1.16	27.6	80.7	3	41	54.05
7	DP 2211 B3TXF	1358	42.8	4.4	1.16	27.2	82.8	3	41	54.10
8	DP 2328 B3TXF	1346	44.1	4.7	1.16	27.0	81.2	3	41	54.05
9	AR 9371 B3XF	1337	42.2	3.5	1.19	30.3	82.7	3	41	54.55
10	NG 3457 B3XF	1324	41.1	4.3	1.16	28.6	80.9	4	41	53.50
11	ST 6000 AXTP	1324	45.6	4.3	1.16	30.6	81.5	4	41	53.70
12	DP 2115 B3XF	1321	43.0	4.7	1.13	27.9	81.9	3	41	53.90
13	NG 4405 B3TXF	1242	40.1	4.0	1.19	29.0	83.2	4	41	53.85
14	AR 9245 B3TXF	1201	42.4	4.1	1.13	30.1	81.2	4	41	53.55
15	AR 24X954 B3TXF	1192	40.7	4.6	1.09	25.7	81.5	3	41	48.05
16	AR 9383 B3TXF	1172	41.9	4.6	1.09	25.6	79.9	4	41	47.10
17	DG 4530 B3TXF	1096	37.7	4.2	1.13	29.4	81.1	3	41	54.05
	<b>Average</b>	<b>1316</b>	<b>42.7</b>	<b>4.4</b>	<b>1.14</b>	<b>28.3</b>	<b>81.6</b>	<b>3</b>	<b>41</b>	<b>52.96</b>

**Table CST8.** Results from the first of two 2024 Madison Enlist and XtendFlex County Standard Trial including both Enlist and XtendFlex Varieties planted May 13<sup>th</sup> and harvested Oct. 27<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	DP 2414 B3TXF	970	43.7	4.4	1.12	28.5	83.2	3	31	55.85
2	DP 2127 B3XF	924	43.9	5.0	1.11	31.3	82.8	2	31	53.90
3	NG 3457 B3XF	922	40.5	4.1	1.15	30.1	84.3	3	31	56.70
4	DP 2328 B3TXF	909	43.6	4.4	1.16	31.5	81.7	4	31	55.35
5	DG 4530 B3TXF	907	42.6	4.2	1.14	30.0	82.8	3	31	56.60
6	DP 2333 B3XF	906	42.4	4.7	1.1	30.2	82.0	3	31	54.50
7	AR 9383 B3TXF	883	39.4	4.2	1.12	29.4	82.6	5	41	51.15
8	PHY 411 W3FE	879	42.0	4.2	1.1	33.5	83.3	3	31	54.90
9	PHY 443 W3FE	863	40.1	4.4	1.13	32.2	83.2	3	31	56.20
10	DP 2115 B3XF	856	41.3	4.5	1.12	31.8	83.5	3	31	56.20
11	NG 4405 B3TXF	850	40.9	3.8	1.13	29.6	81.6	5	41	51.10
12	PHY 360 W3FE	848	40.6	3.9	1.15	30.6	82.5	4	41	53.85
13	DP 2211 B3TXF	846	42.7	4.1	1.12	30.9	82.7	3	31	56.10
14	AR 9371 B3XF	824	43.5	4.4	1.12	29.3	83.8	3	31	55.90
15	PHY 415 W3FE	812	41.4	4.4	1.17	33.6	84.0	4	31	55.60
16	PHY 332 W3FE	788	39.5	4.0	1.15	32.2	83.7	3	31	56.80
17	DP 2414 B3TXF	970	43.7	4.4	1.12	28.5	83.2	3	31	55.85
18	DP 2127 B3XF	924	43.9	5.0	1.11	31.3	82.8	2	31	53.90
19	NG 3457 B3XF	922	40.5	4.1	1.15	30.1	84.3	3	31	56.70
<b>Average</b>		<b>874</b>	<b>41.8</b>	<b>4.3</b>	<b>1.13</b>	<b>30.9</b>	<b>83.0</b>	<b>3</b>	<b>31</b>	<b>55.04</b>



**Table CST9.** Results from the second of two 2024 Madison County Standard Trials including Enlist and XtendFlex Varieties planted May 9<sup>th</sup> and harvested Oct. 11<sup>th</sup>.

Yield Rank	Variety	Lint Yield (lb/ac)	Turnout (%)	Mic	Length (in.)	Strength (g/tex)	Unif. (%)	HVI Color	Leaf Grade	Loan Value
1	1140F331-04 W3FE	1479	42.3	3.6	1.18	32.6	83.9	6	41	48.80
2	NG 3195 B3XF	1456	45.7	4.4	1.20	29.4	83.6	3	41	54.45
3	1150F361-04 W3FE	1450	40.0	4.2	1.22	33.2	83.8	6	41	49.00
4	1150F357-04 W3FE	1434	42.8	4.0	1.17	33.1	83.3	6	41	49.00
5	1150F360-04 W3FE	1415	42.5	3.9	1.19	33.1	83.9	6	41	49.00
6	PHY 415 W3FE	1411	44.2	3.8	1.18	35.1	83.9	6	51	47.30
7	DP 2038 B3XF	1359	43.2	3.8	1.16	31.9	84.2	3	31	56.85
8	DP 2328 B3TXF	1341	43.5	4.0	1.19	29.5	83.8	4	41	53.85
9	1140F330-04 W3FE	1290	42.0	4.3	1.15	33.4	84.6	6	41	48.95
10	1140F329-04 W3FE	1277	41.4	4.1	1.17	33.1	82.6	6	51	47.25
11	DG 4530 B3TXF	1270	42.1	3.5	1.19	31.5	84.0	4	41	54.10
12	DP 2414 B3TXF	1263	42.9	4.2	1.12	29.9	82.8	3	31	55.95
13	DP 2333 B3XF	1255	41.0	4.4	1.16	30.8	83.1	3	31	56.55
14	NG 3457 B3XF	1238	40.4	3.8	1.19	29.9	83.4	4	31	55.25
15	PHY 400 W3FE	1228	41.5	3.9	1.17	32.8	83.0	5	41	51.60
16	ST 5091 B3XF	1208	40.1	3.6	1.17	30.1	81.5	4	41	53.70
17	1130F309-04 W3FE	1206	39.0	3.8	1.13	31.8	82.5	4	31	54.95
18	PHY 411 W3FE	1201	41.2	4.2	1.12	31.6	83.1	5	41	51.50
19	PHY 332 W3FE	1201	41.1	4.0	1.19	31.7	83.1	4	41	54.15
20	DP 2127 B3XF	1197	43.2	4.8	1.10	30.6	83.9	3	31	54.55
21	PHY 360 W3FE	1193	37.0	3.9	1.16	30.7	81.2	5	41	51.35
22	DP 2115 B3XF	1161	41.3	4.3	1.16	30.1	84.0	4	41	53.85
23	PHY 443 W3FE	1138	39.4	3.9	1.15	33.2	83.1	4	41	54.15
24	DP 2211 B3TXF	1132	40.6	4.0	1.16	30.2	82.8	3	31	56.60
25	AR 9383 B3TXF	1093	38.4	4.3	1.14	29.4	83.8	4	41	53.65
26	AR 9371 B3XF	1024	42.0	4.4	1.17	30.1	83.1	4	41	53.80
27	NG 4405 B3TXF	943	38.8	3.3	1.14	29.7	82.0	4	41	48.90
<b>Average</b>		<b>1254</b>	<b>41.4</b>	<b>4.0</b>	<b>1.16</b>	<b>31.4</b>	<b>83.3</b>	<b>4</b>	<b>41</b>	<b>52.56</b>

## 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.

<b>Length (32nds)</b>	<b>Length (Inches)</b>	<b>Length (32nds)</b>	<b>Length (Inches)</b>
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.

<b>Market Value</b>	<b>HVI Micronaire</b>
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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