Tennessee Cotton Variety Test Results in 2005

Edited by
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INTRODUCTION

The purpose of the University of Tennessee cotton variety testing program is to provide an unbiased evaluation of new varieties for Tennessee commercial production. Experimental strains are also tested, and major cultivars are grown in county variety demonstrations. Results are intended to help cotton producers identify varieties that are well adapted to Tennessee, that produce high quality fiber, and that are relatively stable in yield performance. Results are also used by the seed industry, crop consultants, and the UT extension service to assess varietal adaptation to Tennessee field environments.

Information contained within this report covers the major components of the 2005 cotton variety testing program of the University of Tennessee. Information reported includes yield, fiber quality data, CCC loan values and selected growth characteristics from the Official Variety Trial (OVT) Roundup Ready Flex variety trials, the Preliminary Variety Trial and Stage IV Advanced strains testing. In addition to experiment station testing, the results from standard test demonstrations of cotton varieties in counties in West and Middle Tennessee are also included. A glossary is included at the end of this report to define technical terms and abbreviations used.

GENERAL PROCEDURES

Seed of commercial cultivars was provided by the respective companies from commercial seed lots. Smaller quantities of seed of experimental strains were furnished by the respective entrants. Seed sources are listed on the next page.

For small plot testing, varieties were assigned to plots arranged in a randomized complete block design. Fertilizer and lime were applied according to soil test results and UT recommendations for cotton. Seedbeds were prepared with conventional tillage methods at the Agricenter International, Fullen Farms and the Milan Research and Education Center while no-tillage methods were used at the West Tennessee Research and Education Center and Ames Plantation. Seed were planted on raised beds at the Agricenter International and Fullen Farms, and in flat seedbeds at the other locations. Varieties were planted in 2-row plots with row widths of 38 inches at all locations except Milan where a 40 inch spacing was used. A systemic insecticide and fungicide were applied in-furrow while planting. UT-recommended weed and pest control measures were uniformly applied to all plots. Seedcotton harvested from each plot was weighed at picking. Subsamples of seedcotton were collected from each plot, weighed, air-dried, and bulked by varietal entry. Gin turnout was determined for each entry using a 20-saw gin equipped with a stick machine, incline cleaners and two lint cleaners at the West Tennessee Research and Education Center. No heat was applied during ginning. Lint yields were calculated using seedcotton weights, gin turnouts, and harvested areas. A subsample of lint of each entry was analyzed by HVI procedures at the USDA Cotton Classing Office in Memphis, TN.

County Standard Test demonstrations were conducted in 2005 to evaluate commercial cultivar performance in multiple large plot environments. County standard testing included both early and medium/full-season transgenic cultivars. County standard tests of early-season transgenic cultivars were planted in 17 locations with each location containing 11 cultivars. County standard tests of medium/full-season transgenic cultivars were planted in 11 locations with each location containing 7 cultivars. Each cultivar was planted only once at each location and was maintained using the individual grower's production practices. Seedcotton samples were ginned and classed similarly to small-plot samples, as described above. Statistical analysis was not possible for each location but overall yield and fiber quality data were analyzed using Proc GLM using locations as replications.

ACKNOWLEDGMENTS

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- Dr. Rick Carlisle, Superintendent, Ames Plantation
- Dr. Blake A. Brown, Superintendent, Milan Research and Education Center
- Dr. Robert M. Hayes, Superintendent, West Tennessee Research and Education Center

We thank Dr. Jamie Jenkins, director of research and his farm crew at the Agricenter International in Memphis, for his collaboration in conducting trials at that location in 2005.

We thank Steve, Parker, Michael, Jimmy and Scott Fullen for their cooperation and support in conducting cotton variety testing on their farm in 2005.

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We appreciate the cooperation of county extension agents and producers who conducted the county variety demonstrations in 2005. We also appreciate the technical cooperation of the USDA-AMS Cotton Division Classing Office in Memphis, which provided the fiber quality data reported herein.

Special thanks to all who helped pick and gin cotton for these experiments.

SEED SOURCES

Seeds for the 2005 University of Tennessee cotton variety tests and demonstrations were provided by:

- American Cotton Breeders, Inc. 5210 88th Street, Lubbock, TX 79424.
- Bayer CropScience, 311 Poplar View Lane West, Collierville TN 38017
- Beltwide Cotton Genetics, 574 Green Tree Cove, Suite 101, Collierville TN 38017
- Croplan Genetics, 8700 Trail Lake Dr., Suite 100, Memphis, TN 38125
- Delta and Pine Land Co., P.O. Box 157, Scott MS 38772
- Phytogen Seed Co., P.O. Box 27, Leland MS 38756
- Royster-Clark, 70 N. Market Street, Mt. Sterling, OH 43143
- Stoneville Pedigreed Seed Co., 6625 Lenox Park Drive, Suite 117, Memphis TN 38115
- Syngenta Seeds, Inc., 356 Hosek Road, Victoria TX 77905
- United Agri-Products, 57 Germantown Court, Suite 200, Cordova, TN 38018

OFFICIAL VARIETY TRIALS
and
ROUNDUP READY FLEX VARIETY TRIALS

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Two types of replicated small-plot tests of commercial and experimental cultivars were conducted in 2005. A commercial cultivar test, the Official Variety Trial (OVTs) and tests including entries with the new Roundup Ready Flex technology were conducted at five locations in 2005. The OVTs had a total of 30 cultivars including 27 entries and three standard comparisons (checks). The Roundup Ready Flex (RRF) variety trial had a total of 40 cultivars, including 30 entries and 10 commercial standard checks. Of the 30 total entries in the OVTs, 29 were transgenic, including 14 cultivars with both *Bt* and RR genes, 7 cultivars containing the RR gene only, 3 cultivars with Bollgard II and Roundup Ready technology, 2 cultivars with Liberty Link technology, 3 cultivars with the Widestrike and RR genes and 1 conventional cultivar. The Roundup Ready Flex variety trial contained 25 cultivars with the Bollgard II and Roundup Ready Flex genes and 5 cultivars with only the Roundup Ready Flex technology.

All five locations were successfully planted between 4 May and 16 May 2005 (Table 1) despite dry conditions in mid-May. Both trials were planted in 40-inch rows with conventional tillage at Milan, 38-inch rows at Ames and Jackson with no tillage, and 38-inch conventionally tilled beds at Memphis and Fullen Farms. No irrigation was applied to any of the the 2005 OVTs. Conventional pest and weed management was uniformly applied to conventional and transgenic varieties at each of the OVT locations. The RRF variety trials received one topical application of glyphosate prior to the fifth true leaf stage. Conventional weed and pest control strategies were used for the remainder of the season. A defoliant and boll opener were applied to terminate each experiment following UT recommendations. With the exception of the Milan location, plots in all trials were picked once with a spindle picker modified to harvest seedcotton from individual plots. Seedcotton from two harvests was used at the Milan location.

With the exception of the Fullen Farms location, uniform fields were used. However, a sizeable area of poor soil was found throughout the middle of that location and the lowest yielding plot was omitted from the analysis of data for each variety. Overall conditions at each location were favorable throughout the year but significant dry periods were experienced immediately after planting and in early August. Heat unit accumulation in the latter part of the season masked maturity differences between varieties and drove most varieties to cutout in less than 85 days. Insect pest pressure was manageably low overall. A few insects were found in late July and August, but damage was light because of automatic, weekly over-sprays. Excellent harvest weather in October favored maturation of late-set bolls, and resulted in numerous harvest opportunities during the late season. No killing freeze occurred before final harvest at any location.

Because of abnormally low results, gin turnouts for both the OVT and Roundup Ready Flex OVT were adjusted using a correction factor determined from subsequent ginning of varieties found in each variety test. A common correction factor was uniformly applied to each variety in the trials, i.e. the same correction factor was used for each variety therefore no turnout rankings changed.

Table 1. Agronomic information for the 2005 Tennessee Official Cotton Variety Trials.

Location	Soil Type	Irrigation	Planting Date	Defoliation Date	Harvest Date
Agricenter International	Falaya silt loam	No	11-May	13-Sep	23-Sep
Ames Plantation	Memphis silt loam	No	4-May	14-Sep	29-Sep
Fullen Farms	Robinsonville silt loam	No	5-May	22-Sep	13-Oct
Milan Research and Education Center	Loring silt loam	No	16-May	22-Sep	11-Oct
West Tennessee Research and Education Center	Grenada silt loam	No	10-May	12-Sep	4-Oct

Table 2. Rainfall accumulation by month for the 2005 Tennessee Official Cotton Variety Trials.

Location	May	June	July	Aug.	Sept.	Oct.	Total
	----------inches----------						
Agricenter International	1.10	1.4	8.21	5.68	1.6	0.8	18.79
Ames Plantation	0.80	5.63	4.51	7.14	3.80	0.22	22.10
Fullen Farms	0.21	0.4	5.24	6.63	4.387	0.0	16.87
Milan Research and Education Center	1.0	5.08	5.32	8.09	3.77	0.33	23.59
West Tennessee Research and Education Center	0.36	6.78	4.80	1.79	3.86	0.14	17.73

Table 3. Heat unit accumulation by location for the 2005 Tennessee Official Cotton Variety Trials.

Location	May	June	July	Aug.	Sept.	Oct.	Total
	----------DD60s----------						
Agricenter International	372	651	696	768	568	207	3262
Ames Plantation	201	485	635	697	476	163	2657
Fullen Farms	285	539	646	702	478	--	2650
Milan Research and Education Center	218	454	577	616	385	110	2360
West Tennessee Research and Education Center	248	487	615	670	458	146	2622

Table 4. **Three year** average of gin turnout, lint yield and fiber quality of 8 cotton varieties in the Official Cotton Variety Trial, 2003-2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	Leaf Grade
		%	lb./a	units	in.	g/tex	%	
1	ST 5599BR	39.4	1502	43	1.10	30.2	81.7	3.9
2	ST 4892BR	39.0	1388	43	1.09	29.2	82.4	3.9
3	DP 555 BG/RR	38.7	1387	41	1.12	29.9	81.6	3.5
4	DP 444 BG/RR	39.4	1380	36	1.11	29.4	82.0	3.8
5	FM 960BR	37.7	1339	40	1.10	32.3	82.0	3.7
6	DP 451 B/RR	34.8	1298	41	1.12	28.2	82.1	3.3
7	PM 1218 BG/RR	38.9	1284	43	1.07	28.2	81.7	3.2
8	DP 449 BG/RR	37.0	1255	41	1.12	31.1	82.4	3.2
	Mean:	38.1	1354	41	1.10	29.8	82.0	3.6
	CV (%)	3.9	12.1	8.6	1.9	4.3	1.1	11.8
	LSD (0.05)	1.2	128	2.7	0.02	1.0	NS	0.3

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 5. **Two year** average of gin turnout, lint yield and fiber quality of 21 cotton varieties in the Official Cotton Variety Trial, 2004-2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	Leaf Grade
		%	lb./a	units	in.	g/tex	%	
1	ST 5599BR	39.4	1464	43	1.08	29.9	81.4	3.9
2	ST 5242BR	38.4	1412	42	1.08	28.4	81.6	3.4
3	DP 444 BG/RR	39.4	1400	37	1.10	29.4	81.8	3.8
4	ST 4892BR	39.2	1376	44	1.07	28.8	82.0	3.9
5	DP 432 RR	37.2	1361	42	1.09	29.0	82.1	4.0
6	ST 4575BR	38.7	1353	42	1.09	28.8	82.0	3.6
7	DP 555 BG/RR	38.6	1331	42	1.12	29.9	81.4	3.7
8	DP 488 BG/RR	37.0	1314	42	1.14	31.1	81.4	3.7
9	DP 451 B/RR	35.0	1306	42	1.12	27.9	81.9	3.3
10	DP 494 RR	38.4	1302	44	1.13	30.9	82.3	3.7
11	ST 4686R	38.9	1295	42	1.09	29.1	81.7	3.8
12	FM 960BR	37.9	1289	40	1.08	31.6	81.7	3.7
13	FM 966LL	36.7	1283	41	1.11	32.5	82.1	3.8
14	PM 1218 BG/RR	38.7	1282	43	1.06	27.9	81.5	3.2
15	PHY 410 R	36.8	1281	44	1.10	28.9	82.5	4.2
16	DP 449 BG/RR	37.4	1261	42	1.11	30.6	82.0	3.2
17	DP 434 RR	38.3	1254	39	1.13	28.5	81.8	3.2
18	FM 960RR	38.3	1233	38	1.11	32.3	81.7	4.0
19	FM 958LL	37.2	1230	41	1.13	31.8	81.7	3.7
20	FM 960B2R	36.8	1210	42	1.13	32.0	81.2	3.6
21	DP 424 BGII/RR	35.0	1191	42	1.09	27.6	81.8	3.2
	Mean:	37.8	1306	41	1.10	29.9	81.8	3.6
	CV (%)	3.9	11.8	8.0	2.1	4.5	1.0	11.7
	LSD (0.05)	1.3	136	2.9	0.02	1.2	0.7	0.4

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 6. Gin turnout, lint yield and fiber quality of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **5 Location Average**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	PhytoGen	PHY 370 WR	38.9	1416	44	1.07	30.2	82.1	31-2	4.0
2	PhytoGen	PHY 310 R	39.6	1409	42	1.07	30.7	81.6	41-1	3.6
3	Stoneville	ST 5599BR	38.5	1373	42	1.07	30.5	80.9	31-2	4.0
4	Stoneville	ST 4892BR	39.1	1359	44	1.07	30.3	81.7	31-2	4.0
5	Delta and Pine Land	DP 444 BG/RR	39.3	1356	37	1.08	30.2	81.1	31-2	3.8
6	Stoneville	ST 5242BR	38.2	1350	42	1.08	29.7	81.3	31-2	3.6
7	Stoneville	ST 4575BR	38.9	1314	43	1.07	29.7	81.8	31-2	3.4
8	Delta and Pine Land	DP 455 BG/RR	40.6	1310	40	1.09	31.1	80.2	31-3	3.4
9	Delta and Pine Land	DP 432 RR	37.4	1284	42	1.09	29.9	82.0	41-1	4.2
10	Delta and Pine Land	DP 393	38.1	1283	43	1.12	31.3	81.8	41-1	4.0
11	Delta and Pine Land	DP 445 BG/RR	38.6	1272	42	1.11	30.9	81.6	31-2	3.8
12	Stoneville	ST 4686R	39.1	1271	43	1.07	30.6	81.6	31-2	4.0
13	Delta and Pine Land	DP 494 RR	38.3	1262	43	1.12	31.7	81.6	41-1	3.8
14	Delta and Pine Land	DP 451 B/RR	34.9	1262	42	1.11	28.7	81.5	31-2	3.6
15	Delta and Pine Land	DP 555 BG/RR	37.7	1255	41	1.13	31.9	81.3	31-2	3.8
16	Delta and Pine Land	DP 449 BG/RR	37.0	1236	42	1.10	32.3	81.7	31-2	3.2
17	Delta and Pine Land	DP 434 RR	39.3	1228	39	1.12	29.7	81.0	31-2	3.4
18	PhytoGen	PHY 410 R	36.7	1215	43	1.08	30.0	81.9	41-1	4.4
19	PhytoGen	PHY 470 WR	37.1	1212	43	1.08	30.3	81.9	31-2	4.4
20	Delta and Pine Land	PM 1218 BG/RR	37.9	1205	44	1.04	29.1	81.3	31-2	3.2
21	FiberMax	FM 960BR	37.0	1194	40	1.07	32.1	81.0	31-2	3.8
22	Delta and Pine Land	DP 454 BG/RR	38.4	1187	38	1.06	29.0	80.9	41-1	4.4
23	Delta and Pine Land	DP 488 BG/RR	36.6	1185	41	1.12	32.4	80.7	41-1	3.8
24	FiberMax	FM 966LL	36.3	1175	40	1.08	33.0	81.4	31-2	3.8
25	Delta and Pine Land	DP 424 BII/RR	34.9	1161	42	1.09	28.1	82.1	31-2	3.4
26	FiberMax	FM 958LL	36.7	1150	41	1.13	33.1	81.1	31-2	4.0
27	FiberMax	FM 960RR	38.3	1142	39	1.10	33.3	81.0	31-2	4.0
28	PhytoGen	PHY 480 WR	35.7	1123	42	1.11	30.7	82.8	41-1	4.2
29	FiberMax	FM 960B2R	36.5	1108	42	1.12	33.2	80.3	31-2	3.6
30	Delta and Pine Land	DP 543 BII/RR	35.7	1079	43	1.09	30.5	80.9	31-2	3.0
		Mean:	37.7	1246	42	1.09	30.8	81.4	31-2	3.8
		CV (%)	2.3	6.3	4.0	1.8	4.2	0.9		11.0
		LSD (0.05)	1.1	98	2.0	0.02	1.6	0.9		0.5

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 7. Gin turnout and lint yield of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **Agricenter International, Memphis, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	PhytoGen	PHY 310 R	38.4	1514	36	1.11	31.2	82.5	41-1	4
2	PhytoGen	PHY 370 WR	37.3	1462	37	1.11	30.7	82.0	31-1	5
3	Stoneville	ST 5242BR	36.3	1438	35	1.08	32.2	80.5	31-1	4
4	Stoneville	ST 4892BR	37.0	1416	38	1.10	32.1	82.3	41-1	5
5	Stoneville	ST 5599BR	37.7	1411	37	1.11	31.8	80.6	41-1	4
6	Delta and Pine Land	DP 393	37.2	1403	40	1.17	33.1	82.4	31-1	4
7	Delta and Pine Land	DP 444 BG/RR	38.3	1382	32	1.10	29.0	80.7	31-2	4
8	Stoneville	ST 4575BR	37.9	1365	37	1.11	32.0	83.0	31-2	4
9	Delta and Pine Land	DP 432 RR	36.9	1348	36	1.14	31.8	83.6	41-1	5
10	Delta and Pine Land	DP 445 BG/RR	37.8	1340	36	1.14	34.1	82.1	31-2	4
11	Stoneville	ST 4686R	38.6	1294	35	1.11	31.3	81.6	31-2	4
12	Delta and Pine Land	DP 455 BG/RR	38.8	1279	34	1.13	31.5	80.3	31-1	4
13	FiberMax	FM 960BR	37.5	1251	31	1.09	34.1	82.5	31-1	4
14	PhytoGen	PHY 470 WR	35.7	1243	38	1.12	31.3	82.2	41-1	5
15	Delta and Pine Land	PM 1218 BG/RR	35.2	1236	34	1.07	30.3	81.5	31-1	4
16	PhytoGen	PHY 410 R	35.7	1234	38	1.09	31.1	82.4	41-1	4
17	Delta and Pine Land	DP 555 BG/RR	36.4	1232	37	1.16	33.0	81.5	31-2	4
18	Delta and Pine Land	DP 451 B/RR	33.8	1230	34	1.12	29.2	81.5	31-1	4
19	FiberMax	FM 960B2R	35.4	1226	35	1.15	33.9	81.2	31-1	4
20	FiberMax	FM 966LL	35.2	1215	36	1.10	35.6	81.8	41-1	4
21	Delta and Pine Land	DP 449 BG/RR	35.8	1203	37	1.13	35.6	82.5	31-1	4
22	Delta and Pine Land	DP 434 RR	36.7	1196	31	1.17	29.6	81.2	31-1	4
23	Delta and Pine Land	DP 424 BGII/RR	33.9	1186	34	1.10	27.9	82.1	31-2	4
24	PhytoGen	PHY 480 WR	34.6	1180	35	1.13	31.4	83.4	41-1	4
25	Delta and Pine Land	DP 488 BG/RR	35.5	1178	36	1.17	33.6	81.0	41-1	4
26	Delta and Pine Land	DP 494 RR	37.7	1170	39	1.16	33.9	82.4	41-1	5
27	FiberMax	FM 960RR	36.4	1166	32	1.14	34.6	80.9	31-2	4
28	Delta and Pine Land	DP 454 BG/RR	33.8	1133	33	1.11	29.5	81.6	41-1	5
29	FiberMax	FM 958LL	35.3	1118	32	1.16	35.1	81.0	31-1	5
30	Delta and Pine Land	DP 543 BGII/RR	33.7	1112	38	1.12	31.1	80.2	31-1	3
		Mean:	36.4	1272	35	1.12	32.1	81.8	31-2	4.2
		CV (%)		7.8						
		LSD (0.05)		139						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 8. Gin turnout, lint yield and fiber quality of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **Ames Plantation, Grand Junction, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	PhytoGen	PHY 370 WR	40.2	1474	42	1.07	29.1	81.3	31-4	4
2	PhytoGen	PHY 310 R	41.1	1417	37	1.10	31.2	81.0	31-2	4
3	Delta and Pine Land	DP 432 RR	37.7	1358	42	1.06	30.8	79.7	31-2	4
4	Stoneville	ST 5242BR	40.6	1311	40	1.13	32.8	82.1	31-2	4
5	Delta and Pine Land	DP 444 BG/RR	41.1	1285	34	1.11	29.8	80.5	31-2	4
6	Stoneville	ST 4575BR	40.0	1269	41	1.09	30.0	82.6	31-2	3
7	Stoneville	ST 4892BR	39.8	1261	39	1.06	30.1	80.1	31-2	4
8	Stoneville	ST 4686R	39.5	1239	40	1.09	33.8	82.0	31-2	4
9	Delta and Pine Land	DP 424 BGII/RR	36.1	1230	40	1.11	28.1	82.1	31-2	4
10	Delta and Pine Land	DP 555 BG/RR	36.8	1216	36	1.17	32.5	82.1	31-1	3
11	Stoneville	ST 5599BR	39.4	1214	40	1.07	30.7	80.3	31-2	4
12	Delta and Pine Land	DP 494 RR	39.0	1212	39	1.09	29.6	81.5	31-2	4
13	Delta and Pine Land	DP 449 BG/RR	38.2	1205	40	1.09	31.7	81.3	31-2	3
14	Delta and Pine Land	DP 451 B/RR	35.8	1183	37	1.11	27.6	80.7	31-2	4
15	FiberMax	FM 966LL	37.4	1166	38	1.07	29.4	81.7	31-2	4
16	PhytoGen	PHY 470 WR	39.3	1162	42	1.07	30.3	81.8	31-2	4
17	Delta and Pine Land	DP 445 BG/RR	39.7	1159	42	1.10	29.7	81.4	31-2	4
18	PhytoGen	PHY 410 R	38.1	1153	42	1.10	30.6	82.5	41-1	5
19	FiberMax	FM 960BR	37.9	1150	37	1.08	30.7	81.2	31-2	4
20	FiberMax	FM 958LL	37.1	1149	38	1.15	31.1	80.6	31-2	4
21	Delta and Pine Land	DP 455 BG/RR	41.6	1143	37	1.11	32.1	80.4	31-1	3
22	Delta and Pine Land	DP 454 BG/RR	40.5	1120	34	1.08	28.7	80.4	41-1	4
23	Delta and Pine Land	DP 393	38.8	1101	41	1.10	29.6	81.4	31-2	4
24	Delta and Pine Land	DP 434 RR	40.1	1097	36	1.08	30.9	79.5	31-1	4
25	Delta and Pine Land	PM 1218 BG/RR	39.4	1092	42	1.05	27.3	81.6	31-2	3
26	Delta and Pine Land	DP 543 BGII/RR	36.3	1062	41	1.09	30.2	82.2	31-2	3
27	Delta and Pine Land	DP 488 BG/RR	36.8	1059	36	1.15	31.0	80.1	41-1	4
28	FiberMax	FM 960RR	38.5	1033	33	1.09	31.3	81.1	31-1	4
29	PhytoGen	PHY 480 WR	37.7	1009	40	1.11	31.1	82.6	41-1	4
30	FiberMax	FM 960B2R	36.7	1002	38	1.14	33.0	79.7	31-2	3
		Mean:	38.7	1184	39	1.10	30.5	81.2	31-2	3.8
		CV (%)		9.7						
		LSD (0.05)		161						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 9. Gin turnout, lint yield and fiber quality of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **Fullen Farms, Ashport**, **TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf
			%	lb./a	units	in.	g/tex	%		
1	Delta and Pine Land	DP 494 RR	37.8	1526	47	1.12	31.2	81.5	41-1	3
2	Delta and Pine Land	DP 555 BG/RR	39.4	1477	46	1.11	30.9	81.3	41-1	4
3	Phytogen	PHY 370 WR	38.6	1455	45	1.06	29.3	82.0	41-1	3
4	Stoneville	ST 5599BR	37.1	1434	46	1.04	28.8	80.4	41-1	4
5	Delta and Pine Land	DP 455 BG/RR	39.3	1422	42	1.04	30.9	78.5	41-1	3
6	Delta and Pine Land	DP 488 BG/RR	35.9	1411	46	1.13	32.0	81.1	41-1	3
7	Stoneville	ST 4892BR	38.7	1403	48	1.06	29.8	81.1	41-1	3
8	Delta and Pine Land	DP 434 RR	38.7	1402	40	1.10	29.9	80.8	41-1	3
9	Delta and Pine Land	DP 393	37.5	1397	44	1.10	31.2	81.4	41-3	4
10	Phytogen	PHY 310 R	39.7	1391	45	1.05	29.3	81.6	41-1	3
11	Delta and Pine Land	DP 444 BG/RR	38.7	1371	41	1.08	28.7	81.6	41-1	3
12	Delta and Pine Land	DP 445 BG/RR	36.6	1328	42	1.09	29.7	80.7	41-1	4
13	Phytogen	PHY 410 R	35.1	1323	44	1.07	29.8	81.6	41-2	4
14	Delta and Pine Land	DP 451 B/RR	34.1	1323	46	1.10	27.4	80.4	41-1	3
15	Delta and Pine Land	DP 432 RR	37.2	1318	44	1.09	29.0	81.2	41-1	4
16	Delta and Pine Land	DP 449 BG/RR	36.8	1307	44	1.10	30.1	80.9	31-2	3
17	Stoneville	ST 5242BR	36.9	1301	45	1.06	28.4	81.3	31-2	3
18	Stoneville	ST 4575BR	38.6	1269	45	1.05	28.8	80.8	41-1	3
19	Delta and Pine Land	DP 454 BG/RR	39.1	1250	40	1.03	28.7	81.2	41-2	4
20	FiberMax	FM 966LL	35.4	1217	44	1.09	33.0	81.5	41-1	4
21	Delta and Pine Land	PM 1218 BG/RR	37.5	1216	50	1.02	27.5	81.8	41-1	3
22	Stoneville	ST 4686R	37.2	1198	46	1.06	28.7	79.5	41-1	4
23	Phytogen	PHY 470 WR	35.9	1188	46	1.07	30.4	81.5	41-1	4
24	Phytogen	PHY 480 WR	34.1	1184	45	1.09	30.5	82.4	41-4	4
25	FiberMax	FM 958LL	36.2	1164	47	1.12	33.7	81.5	41-1	3
26	Delta and Pine Land	DP 424 BGII/RR	34.9	1144	45	1.07	28.3	82.1	41-1	3
27	FiberMax	FM 960BR	37.1	1131	45	1.07	32.3	81.2	41-1	3
28	Delta and Pine Land	DP 543 BGII/RR	37.1	1119	46	1.07	30.1	79.7	41-1	3
29	FiberMax	FM 960RR	37.9	1109	45	1.08	33.0	80.5	41-1	4
30	FiberMax	FM 960B2R	35.8	1028	46	1.11	33.0	80.2	41-1	3
		Mean:	37.2	1294	45	1.08	30.1	81.0	41-1	3.4
		CV (%)		12.5						
		LSD (0.05)		264						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 10. Gin turnout, lint yield and fiber quality of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **Milan Research and Education Center, Milan, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf
			%	lb./a	units	in.	g/tex	%		
1	Stonveville	ST 5599BR	39.0	1332	49	1.03	31.2	82.5	31-3	4
2	Delta and Pine Land	DP 444 BG/RR	39.1	1281	44	1.07	29.1	81.5	31-2	4
3	Stonveville	ST 4575BR	39.2	1261	52	1.04	28.7	81.5	31-3	3
4	Stonveville	ST 4686R	40.6	1249	49	1.01	30.0	82.1	31-3	4
5	Delta and Pine Land	DP 455 BG/RR	41.0	1238	48	1.08	30.0	81.9	32-1	3
6	Delta and Pine Land	DP 445 BG/RR	39.7	1234	49	1.08	30.8	83.1	31-1	3
7	PhytoGen	PHY 310 R	39.5	1205	51	1.03	31.7	81.8	31-1	3
8	FiberMax	FM 960BR	36.7	1175	50	1.06	34.2	82.4	31-3	4
9	Delta and Pine Land	DP 454 BG/RR	38.7	1168	46	1.02	28.4	81.4	31-2	5
10	Delta and Pine Land	DP 434 RR	41.3	1162	50	1.11	30.1	82.4	31-1	3
11	Stonveville	ST 5242BR	37.9	1161	50	1.06	27.6	81.9	31-1	3
12	FiberMax	FM 958LL	38.1	1161	49	1.15	35.4	81.7	31-2	4
13	Delta and Pine Land	DP 451 B/RR	34.9	1160	50	1.10	30.2	82.7	21-2	3
14	Delta and Pine Land	DP 393	38.8	1134	50	1.12	31.7	82.5	41-3	4
15	PhytoGen	PHY 470 WR	37.7	1130	49	1.04	29.8	83.0	41-1	5
16	PhytoGen	PHY 370 WR	39.3	1126	53	1.06	31.1	83.2	31-2	4
17	Stonveville	ST 4892BR	40.0	1122	55	1.06	30.1	82.9	22-2	4
18	Delta and Pine Land	DP 449 BG/RR	37.7	1115	51	1.08	32.0	82.4	31-4	3
19	Delta and Pine Land	PM 1218 BG/RR	39.2	1111	54	1.02	30.4	80.6	22-2	3
20	Delta and Pine Land	DP 494 RR	39.4	1097	50	1.09	31.1	81.4	31-2	3
21	FiberMax	FM 960RR	38.1	1093	47	1.09	34.4	81.8	31-2	4
22	FiberMax	FM 966LL	37.4	1058	46	1.08	33.7	81.2	21-2	4
23	FiberMax	FM 960B2R	37.4	1044	53	1.09	33.0	81.0	31-1	4
24	Delta and Pine Land	DP 488 BG/RR	37.3	1016	49	1.11	33.2	81.4	31-3	4
25	PhytoGen	PHY 410 R	37.7	1015	49	1.06	30.7	82.1	31-4	4
26	PhytoGen	PHY 480 WR	35.8	1015	50	1.11	31.5	82.8	31-2	5
27	Delta and Pine Land	DP 555 BG/RR	37.8	1007	49	1.10	30.8	82.2	31-2	4
28	Delta and Pine Land	DP 432 RR	37.0	998	50	1.06	28.9	83.3	31-4	4
29	Delta and Pine Land	DP 424 BGII/RR	34.2	993	49	1.08	28.9	83.0	21-2	3
30	Delta and Pine Land	DP 543 BGII/RR	35.6	952	52	1.12	31.7	81.9	31-1	3
		Mean:	38.2	1127	50	1.07	31.0	82.1	31-3	3.7
		CV (%)		11.9						
		LSD (0.05)		188						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 11. Gin turnout, lint yield and fiber quality of 30 cotton varieties in the 2005 Tennessee Official Cotton Variety Trial, **West Tennessee Research and Education Center, Jackson, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf
			%	lb./a	units	in.	g/tex	%		
1	Stoneville	ST 4892BR	40.1	1594	42	1.07	29.5	81.9	31-2	4
2	PhytoGen	PHY 370 WR	39.1	1563	42	1.06	30.6	81.9	41-1	4
3	Stoneville	ST 5242BR	39.3	1539	39	1.05	27.6	80.7	31-1	4
4	PhytoGen	PHY 310 R	39.5	1517	40	1.08	30.2	81.1	31-2	4
5	Stoneville	ST 5599BR	39.4	1476	38	1.09	30.1	80.7	31-2	4
6	Delta and Pine Land	DP 455 BG/RR	42.4	1467	38	1.10	31.0	79.9	31-3	4
7	Delta and Pine Land	DP 444 BG/RR	39.5	1462	36	1.06	34.2	81.0	31-2	4
8	Delta and Pine Land	DP 451 B/RR	36.2	1415	41	1.12	29.2	82.0	31-2	4
9	Stoneville	ST 4575BR	38.7	1407	42	1.06	29.2	81.2	41-1	4
10	Delta and Pine Land	DP 432 RR	38.0	1395	39	1.08	29.2	82.2	31-2	4
11	Delta and Pine Land	DP 393	38.0	1380	42	1.11	30.7	81.4	31-2	4
12	Stoneville	ST 4686R	39.3	1377	46	1.08	29.0	82.8	41-1	4
13	Delta and Pine Land	PM 1218 BG/RR	38.3	1369	42	1.05	29.8	80.8	31-2	3
14	PhytoGen	PHY 410 R	37.2	1348	40	1.08	28.0	80.8	41-1	5
15	Delta and Pine Land	DP 449 BG/RR	36.6	1348	40	1.09	31.9	81.3	31-1	3
16	Delta and Pine Land	DP 555 BG/RR	38.0	1341	39	1.12	32.1	79.4	31-2	4
17	PhytoGen	PHY 470 WR	36.9	1338	42	1.08	29.6	81.1	41-1	4
18	PhytoGen	PHY 480 WR	36.2	1324	39	1.12	29.1	82.8	41-1	4
19	FiberMax	FM 960RR	40.4	1310	37	1.10	33.4	80.8	31-1	4
20	Delta and Pine Land	DP 494 RR	37.6	1307	41	1.12	32.8	81.0	31-2	4
21	Delta and Pine Land	DP 445 BG/RR	38.9	1301	39	1.12	30.0	80.8	31-2	4
22	Delta and Pine Land	DP 434 RR	39.7	1283	38	1.13	28.0	80.9	31-2	3
23	FiberMax	FM 960BR	36.0	1264	37	1.05	29.2	77.6	31-2	4
24	Delta and Pine Land	DP 454 BG/RR	39.9	1262	35	1.06	29.6	80.1	41-1	4
25	Delta and Pine Land	DP 488 BG/RR	37.6	1260	37	1.05	32.1	80.0	31-2	4
26	Delta and Pine Land	DP 424 BGII/RR	35.5	1250	41	1.07	27.5	81.3	31-2	3
27	FiberMax	FM 960B2R	37.2	1243	38	1.10	33.1	79.6	31-2	4
28	FiberMax	FM 966LL	36.4	1217	38	1.08	33.4	80.6	31-2	3
29	FiberMax	FM 958LL	36.8	1160	37	1.06	30.0	80.8	31-2	4
30	Delta and Pine Land	DP 543 BGII/RR	35.6	1150	40	1.06	29.6	80.4	31-2	3
		Mean:	38.1	1356	40	1.08	30.3	80.9	31-2	3.8
		CV (%)		8.6						
		LSD (0.05)		164						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 12. Net loan value of 30 cotton varieties in the Tennessee Official Variety Trial, listed alphabetically, 2005.

Company	Variety	Memphis	Ames	Fullen	Milan	Jackson	Avg.
				¢/lb.†			
Delta and Pine Land	DP 393	56.15	55.25	54.35	52.10	55.95	54.76
Delta and Pine Land	DP 424 BGII/RR	52.85	55.50	53.30	57.40	55.00	54.81
Delta and Pine Land	DP 432 RR	52.35	54.20	53.90	50.70	55.00	53.23
Delta and Pine Land	DP 434 RR	52.05	55.20	55.10	54.65	57.70	54.94
Delta and Pine Land	DP 444 BG/RR	51.15	53.60	54.85	53.50	54.00	53.42
Delta and Pine Land	DP 445 BG/RR	55.90	55.25	54.40	57.50	55.75	55.76
Delta and Pine Land	DP 449 BG/RR	56.25	57.50	57.05	54.20	57.50	56.50
Delta and Pine Land	DP 451 B/RR	53.35	55.50	54.60	54.60	55.50	54.71
Delta and Pine Land	DP 454 BG/RR	49.90	52.00	51.05	49.95	52.75	51.13
Delta and Pine Land	DP 455 BG/RR	53.80	58.15	51.55	53.90	55.45	54.57
Delta and Pine Land	DP 488 BG/RR	54.95	54.90	55.55	55.75	54.20	55.07
Delta and Pine Land	DP 494 RR	52.30	55.25	55.55	54.20	56.00	54.66
Delta and Pine Land	DP 543 BGII/RR	58.15	57.30	53.55	54.85	55.25	55.82
Delta and Pine Land	DP 555 BG/RR	56.15	58.15	54.90	55.20	55.55	55.99
Delta and Pine Land	PM 1218 BG/RR	51.85	55.00	48.20	47.65	55.25	51.59
FiberMax	FM 958LL	49.90	56.10	55.60	55.90	54.00	54.30
FiberMax	FM 960B2R	55.90	58.40	55.60	51.35	55.50	55.35
FiberMax	FM 960BR	51.90	55.45	53.75	50.95	53.25	53.06
FiberMax	FM 960RR	52.30	53.30	54.40	55.25	55.50	54.15
FiberMax	FM 966LL	54.40	53.75	54.40	55.65	57.55	55.15
PhytoGen	PHY 310 R	55.15	55.45	53.30	49.85	55.25	53.80
PhytoGen	PHY 370 WR	53.50	53.75	53.30	50.30	53.20	52.81
PhytoGen	PHY 410 R	54.60	52.25	52.75	53.95	51.55	53.02
PhytoGen	PHY 470 WR	52.25	54.00	52.75	49.95	54.40	52.67
PhytoGen	PHY 480 WR	55.15	55.40	54.35	50.45	54.95	54.06
Stoneville	ST 4575BR	56.20	57.55	53.30	49.40	52.75	53.84
Stoneville	ST 4686R	55.70	55.50	52.50	50.35	54.15	53.64
Stoneville	ST 4892BR	52.00	54.00	53.55	49.15	54.00	52.54
Stoneville	ST 5242BR	55.20	56.00	54.75	51.70	53.75	54.28
Stoneville	ST 5599BR	55.15	54.20	50.80	52.25	55.25	53.53
	Mean	53.88	55.26	53.77	52.75	54.86	54.11

†Base price of 52.50 cents/lb lint adjusted for color, leaf, staple, micronaire, strength, and uniformity. Calculated by the 2005 Cotton Incorporated Cotton Loan Valuation Program, based on the 2005 upland cotton warehouse loan rates. Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 13. Selected growth characteristics of 30 cotton varieties in the Tennessee Official Cotton Variety Trial, 2005.

Company	Variety	Final Plant Height	Total Nodes	Height to Node Ratio	Days to NAWF5	NACB
		inches	no.	inches	no.	no.
Delta and Pine Land	DP 393	39.2	16.9	2.3	80.2	4.0
Delta and Pine Land	DP 424 BGII/RR	39.0	17.6	2.2	80.5	4.0
Delta and Pine Land	DP 432 RR	39.7	17.4	2.3	79.3	3.5
Delta and Pine Land	DP 434 RR	41.6	17.1	2.4	81.4	3.2
Delta and Pine Land	DP 444 BG/RR	42.4	17.2	2.5	79.2	3.6
Delta and Pine Land	DP 445 BG/RR	39.1	16.8	2.3	79.6	4.1
Delta and Pine Land	DP 449 BG/RR	40.4	17.6	2.3	80.9	4.2
Delta and Pine Land	DP 451 B/RR	41.6	18.0	2.3	78.9	4.0
Delta and Pine Land	DP 454 BG/RR	43.0	17.9	2.4	81.3	3.9
Delta and Pine Land	DP 455 BG/RR	40.0	17.9	2.2	79.9	3.8
Delta and Pine Land	DP 488 BG/RR	39.4	17.9	2.2	80.7	3.9
Delta and Pine Land	DP 494 RR	40.6	18.4	2.2	80.3	4.0
Delta and Pine Land	DP 543 BGII/RR	41.8	19.1	2.2	82.1	4.5
Delta and Pine Land	DP 555 BG/RR	39.9	17.8	2.2	80.7	4.4
Delta and Pine Land	PM 1218 BG/RR	40.7	17.5	2.3	78.4	3.6
FiberMax	FM 958LL	36.9	18.3	2.0	79.4	4.0
FiberMax	FM 960B2R	37.0	17.5	2.1	78.6	4.2
FiberMax	FM 960BR	37.3	16.9	2.2	79.2	3.8
FiberMax	FM 960RR	36.6	17.1	2.1	79.0	4.2
FiberMax	FM 966LL	38.5	17.8	2.2	79.8	4.4
PhytoGen	PHY 310 R	41.9	18.1	2.3	80.9	4.0
PhytoGen	PHY 370 WR	42.2	17.4	2.4	80.6	4.1
PhytoGen	PHY 410 R	42.1	18.2	2.3	79.1	3.9
PhytoGen	PHY 470 WR	39.3	16.8	2.3	80.4	3.9
PhytoGen	PHY 480 WR	43.1	17.9	2.4	80.2	3.6
Stoneville	ST 4575BR	41.3	17.8	2.3	80.0	4.1
Stoneville	ST 4686R	40.2	17.5	2.3	79.7	4.0
Stoneville	ST 4892BR	44.5	18.5	2.4	80.6	3.8
Stoneville	ST 5242BR	41.9	17.4	2.4	78.5	3.9
Stoneville	ST 5599BR	43.5	18.0	2.4	81.3	5.2
	Mean	**40.5**	**17.7**	**2.3**	**80.0**	**4.0**
	CV (%)	**4.4**	**4.4**	**4.3**	**1.4**	**10.8**
	LSD (0.05)	**2.9**	**1.3**	**0**	**1.6**	**0.7**

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 14. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **5 Location Average**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Delta and Pine Land	DP 432 RR	38.4	1462	41	1.08	30.6	82.4	41-1	4.2
2	Stoneville	ST 5599BR	37.8	1378	41	1.08	31.1	80.3	31-2	4.4
3	Stoneville	ST 4575BR	37.7	1378	40	1.09	29.5	81.9	31-2	4.0
4	Stoneville	ST 5242BR	37.7	1367	40	1.09	29.2	81.3	31-2	3.2
5	Stoneville	ST 4554B2RF	35.9	1342	42	1.11	31.3	81.7	41-1	4.0
6	Stoneville	ST 4686R	37.3	1329	41	1.10	30.8	82.2	31-2	4.0
7	Delta and Pine Land	DP 444 BG/RR	38.1	1317	37	1.10	29.9	81.5	31-2	3.6
8	Stoneville	ST 4664RF	36.4	1265	40	1.09	30.9	81.4	41-1	4.8
9	Beltwide Cotton Genetics	BW-4630B2F	35.8	1246	39	1.13	28.3	81.1	31-1	3.4
10	Stoneville	STX416B2R	34.9	1237	42	1.08	30.2	81.7	41-1	5.2
11	PhytoGen	PHY 410 R	35.8	1220	43	1.08	30.8	82.2	41-1	4.6
12	Delta and Pine Land	DP 555 BG/RR	38.7	1212	42	1.08	29.8	79.4	31-2	3.6
13	Stoneville	ST 4357B2RF	36.2	1201	39	1.14	29.4	81.2	31-1	3.4
14	Royster-Clark Vigoro	CX 621B2F	35.9	1196	39	1.13	28.7	81.5	31-1	3.4
15	Phytogen	PHY 415 RF	36.3	1196	42	1.07	30.4	81.4	41-1	4.4
16	Beltwide Cotton Genetics	BW-9124B2F	35.9	1191	39	1.13	29.3	80.8	31-1	3.4
17	Delta and Pine Land	DP 108 RF	36.4	1189	36	1.09	31.0	80.8	41-1	4.6
18	Delta and Pine Land	DP 110 RF	36.4	1186	39	1.11	32.8	82.3	41-1	5.4
19	Delta and Pine Land	PM 1218 BG/RR	36.9	1175	44	1.07	28.7	81.3	31-1	3.2
20	FiberMax	FM 960BR	36.4	1174	39	1.08	33.8	80.8	31-1	3.4
21	Croplan Genetics	CG 4020B2RF	34.7	1161	39	1.13	28.5	81.0	31-1	3.6
22	Beltwide Cotton Genetics	BW-3255B2F	34.6	1160	37	1.08	28.1	81.7	31-2	3.4
23	PhytoGen	PHY 485 WRF	35.4	1146	43	1.11	30.8	82.1	41-1	5.0
24	Croplan Genetics	CG 3020B2RF	34.2	1132	37	1.09	28.0	81.2	31-2	3.4
25	UAP-Dynagro	DG 2520 B2RF	35.4	1129	39	1.13	29.7	81.2	31-2	3.4
26	Royster-Clark Vigoro	CX 601B2F	33.6	1124	37	1.09	28.1	81.5	31-2	3.4
27	Delta and Pine Land	DP 117 B2RF	36.6	1124	39	1.12	32.6	81.8	41-1	5.4
28	Royster-Clark Vigoro	CX 612B2F	35.8	1120	37	1.12	29.6	81.5	41-1	4.6
29	PhytoGen	PHY 425 RF	34.9	1118	42	1.09	31.2	82.2	41-1	4.8
30	PhytoGen	PHY 475 WRF	36.6	1098	41	1.08	30.9	82.4	41-1	4.8
31	UAP-Dynagro	DG 2242 B2RF	34.4	1089	38	1.12	29.1	81.3	31-2	4.2
32	UAP-Dynagro	DG 2100 B2RF	34.1	1087	37	1.08	28.5	81.5	31-1	3.4
33	Beltwide Cotton Genetics	BW-4153B2F	34.2	1087	36	1.10	27.9	80.9	31-2	3.4
34	Croplan Genetics	CG 3520B2RF	34.2	1083	38	1.12	28.6	81.2	31-2	4.4
35	UAP-Dynagro	DG 2215 B2RF	34.3	1077	36	1.09	28.1	80.4	31-2	3.6
36	Beltwide Cotton Genetics	BW-1004B2F	35.5	1077	38	1.12	29.3	81.8	41-1	4.0
37	Delta and Pine Land	DP 113 B2RF	35.6	1054	35	1.10	32.0	80.4	41-1	5.2
38	Royster-Clark Vigoro	CX 611B2F	33.7	1041	35	1.09	29.0	80.8	31-1	3.4
39	Stoneville	ST 5007B2RF	32.6	1039	38	1.15	29.8	81.6	41-1	4.0
40	Stoneville	STX5885B2RF	32.7	968	41	1.13	31.9	80.7	31-2	3.0
		Mean:	35.7	1179	39	1.10	30.0	81.4	41-1	4.0
		CV (%)	2.9	7.7	3.8	1.9	4.2	0.9		12.5
		LSD (0.05)	1.3	113	1.9	0.03	1.6	0.9		0.6

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 15. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **Agricenter International, Memphis, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Delta and Pine Land	DP 432 RR	37.1	1515	33	1.11	30.9	81.7	31-2	5
2	Delta and Pine Land	DP 444 BG/RR	38.7	1469	30	1.10	28.3	80.6	31-1	4
3	Stoneville	ST 5242BR	35.7	1434	32	1.07	27.0	81.3	31-1	3
4	Stoneville	ST 5599BR	37.5	1408	34	1.11	29.5	80.1	31-2	5
5	Delta and Pine Land	DP 555 BG/RR	38.9	1381	38	1.10	30.8	78.5	31-1	4
6	Stoneville	STX416B2R	34.3	1346	38	1.12	30.0	82.0	41-1	6
7	Stoneville	ST 4664RF	35.6	1338	33	1.13	30.9	81.6	31-1	5
8	Stoneville	ST 4357B2RF	35.8	1335	33	1.15	27.7	80.5	31-1	4
9	Stoneville	ST 4575BR	36.5	1315	31	1.11	30.1	81.4	31-2	4
10	Delta and Pine Land	PM 1218 BG/RR	35.9	1314	35	1.08	27.0	81.2	21-2	3
11	Stoneville	ST 4686R	36.1	1303	34	1.11	30.9	81.4	31-1	4
12	Stoneville	ST 4554B2RF	35.0	1295	36	1.10	31.5	80.0	31-1	4
13	Beltwide Cotton Genetics	BW-4630B2F	34.6	1259	33	1.13	26.4	80.8	31-1	4
14	PhytoGen	PHY 425 RF	35.6	1259	34	1.12	31.8	82.3	31-2	6
15	PhytoGen	PHY 410 R	34.8	1244	36	1.11	31.3	81.8	31-2	5
16	PhytoGen	PHY 415 RF	34.7	1234	35	1.08	29.3	81.4	41-1	5
17	Royster-Clark Vigoro	CX 612B2F	35.0	1218	31	1.16	27.8	81.6	41-1	5
18	UAP-Dynagro	DG 2520 B2RF	35.4	1201	33	1.16	28.2	80.4	31-1	3
19	Beltwide Cotton Genetics	BW-9124B2F	36.0	1200	31	1.16	28.8	80.5	31-2	4
20	PhytoGen	PHY 485 WRF	34.4	1198	35	1.11	31.0	81.8	41-1	5
21	Royster-Clark Vigoro	CX 621B2F	34.4	1178	34	1.14	28.0	80.3	31-1	3
22	Croplan Genetics	CG 3020B2RF	33.5	1177	31	1.11	27.4	80.5	31-1	3
23	Croplan Genetics	CG 4020B2RF	34.6	1170	30	1.14	26.8	79.7	31-2	3
24	Stoneville	ST 5007B2RF	32.2	1149	33	1.19	30.1	81.0	31-2	5
25	Croplan Genetics	CG 3520B2RF	34.8	1148	33	1.16	28.6	81.5	31-2	4
26	Beltwide Cotton Genetics	BW-1004B2F	35.1	1148	32	1.13	34.0	83.5	31-1	4
27	Royster-Clark Vigoro	CX 601B2F	33.3	1147	30	1.10	28.5	81.3	31-1	3
28	Beltwide Cotton Genetics	BW-3255B2F	33.2	1135	29	1.10	28.7	81.5	31-1	4
29	FiberMax	FM 960BR	34.4	1135	29	1.10	34.4	80.9	31-1	4
30	UAP-Dynagro	DG 2242 B2RF	35.2	1126	31	1.14	28.3	81.0	31-2	4
31	Delta and Pine Land	DP 110 RF	37.3	1113	32	1.06	33.4	81.7	41-1	6
32	UAP-Dynagro	DG 2215 B2RF	33.5	1099	30	1.12	28.4	80.1	31-1	4
33	Delta and Pine Land	DP 108 RF	35.0	1095	29	1.10	29.6	80.5	41-1	5
34	Delta and Pine Land	DP 117 B2RF	36.3	1082	32	1.12	30.8	80.3	41-1	6
35	Beltwide Cotton Genetics	BW-4153B2F	32.4	1080	30	1.12	26.7	81.5	21-2	3
36	PhytoGen	PHY 475 WRF	34.9	1069	34	1.09	30.6	83.1	41-1	5
37	Royster-Clark Vigoro	CX 611B2F	32.5	1057	27	1.12	29.0	79.5	31-1	4
38	UAP-Dynagro	DG 2100 B2RF	32.8	1043	31	1.10	27.8	81.6	31-1	4
39	Delta and Pine Land	DP 113 B2RF	34.6	1040	28	1.10	31.6	79.1	31-2	5
40	Stoneville	STX5885B2RF	31.6	917	33	1.14	32.6	80.6	31-1	3
		Mean:	35.0	1209	32	1.12	29.6	81.0	31-1	4.3
		CV (%)		6.9						
		LSD (0.05)		117						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 16. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **Ames Plantation, Grand Junction, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Delta and Pine Land	DP 432 RR	40.2	1406	38	1.07	30.2	81.7	31-4	4
2	Stoneville	ST 4575BR	39.1	1366	40	1.09	29.6	81.8	31-2	4
3	Stoneville	ST 5242BR	39.8	1362	37	1.07	29.1	80.7	31-1	3
4	Stoneville	ST 5599BR	39.3	1327	40	1.05	30.5	80.3	31-2	4
5	Stoneville	ST 4664RF	38.6	1325	40	1.08	31.2	82.1	31-3	4
6	Stoneville	STX416B2R	37.2	1290	40	1.08	30.1	80.7	31-1	4
7	PhytoGen	PHY 410 R	38.9	1282	40	1.10	31.5	82.3	41-1	4
8	Delta and Pine Land	DP 444 BG/RR	40.7	1281	36	1.08	30.2	81.8	31-1	3
9	Stoneville	ST 4686R	38.6	1247	38	1.10	31.7	81.7	31-2	4
10	PhytoGen	PHY 475 WRF	39.3	1244	40	1.08	31.3	82.1	31-4	4
11	Stoneville	ST 4554B2RF	36.9	1240	41	1.12	31.8	81.7	31-4	3
12	PhytoGen	PHY 415 RF	38.0	1235	40	1.09	28.4	82.4	31-2	4
13	Delta and Pine Land	PM 1218 BG/RR	38.3	1221	41	1.03	27.8	81.5	31-1	3
14	PhytoGen	PHY 485 WRF	36.6	1216	44	1.10	31.2	82.1	41-3	5
15	Delta and Pine Land	DP 110 RF	38.1	1215	37	1.11	33.2	82.1	41-1	5
16	FiberMax	FM 960BR	37.3	1208	35	1.05	31.9	81.0	31-1	3
17	Beltwide Cotton Genetics	BW-4630B2F	35.0	1202	37	1.14	28.1	81.3	31-1	3
18	Delta and Pine Land	DP 108 RF	37.7	1194	32	1.10	32.1	80.6	31-1	4
19	PhytoGen	PHY 425 RF	37.1	1184	38	1.09	31.3	82.2	31-2	4
20	Delta and Pine Land	DP 555 BG/RR	40.0	1174	40	1.06	29.6	78.5	31-1	3
21	Croplan Genetics	CG 3020B2RF	35.8	1152	34	1.09	26.9	81.6	31-1	3
22	Stoneville	ST 4357B2RF	36.7	1141	39	1.16	28.2	80.5	31-1	3
23	Beltwide Cotton Genetics	BW-9124B2F	37.4	1132	37	1.13	28.4	80.8	31-1	3
24	UAP-Dynagro	DG 2520 B2RF	37.0	1131	39	1.16	28.7	79.1	31-2	3
25	Beltwide Cotton Genetics	BW-1004B2RF	35.9	1118	35	1.14	27.2	80.7	31-1	4
26	Delta and Pine Land	DP 117 B2RF	37.8	1117	38	1.13	31.5	80.6	41-1	6
27	Croplan Genetics	CG 4020B2RF	35.5	1112	38	1.13	29.0	81.0	31-1	4
28	Beltwide Cotton Genetics	BW-3255B2F	35.0	1099	36	1.08	28.0	81.5	31-1	3
29	Delta and Pine Land	DP 113 B2RF	38.5	1066	35	1.11	31.5	80.2	31-4	5
30	Beltwide Cotton Genetics	BW-4153B2F	34.0	1064	36	1.10	28.8	80.2	31-1	3
31	Stoneville	ST 5007B2RF	33.9	1060	36	1.18	29.5	82.0	31-2	3
32	UAP-Dynagro	DG 2100 B2RF	35.6	1060	36	1.09	27.3	81.1	31-1	3
33	Royster-Clark Vigoro	CX 621B2F	36.8	1056	38	1.13	28.1	80.5	31-1	3
34	Croplan Genetics	CG 3520B2RF	35.3	1043	34	1.11	27.8	79.6	31-2	4
35	UAP-Dynagro	DG 2242 B2RF	35.6	1039	39	1.14	28.3	80.9	31-2	4
36	Royster-Clark Vigoro	CX 601B2F	35.2	1028	36	1.08	27.6	80.4	31-1	3
37	Stoneville	STX5885B2RF	33.8	944	37	1.15	31.8	80.6	31-1	3
38	Royster-Clark Vigoro	CX 612B2F	36.1	932	36	1.15	28.4	81.7	31-1	3
39	Royster-Clark Vigoro	CX 611B2F	35.1	930	34	1.11	27.7	80.5	31-1	3
40	UAP-Dynagro	DG 2215 B2RF	34.2	903	33	1.10	26.8	79.8	31-1	3
		Mean:	37.1	1159	38	1.10	29.6	81.0	31-2	3.6
		CV (%)		10.5						
		LSD (0.05)		171						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 17. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **Fullen Farms, Ashport, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Delta and Pine Land	DP 432 RR	38.1	1474	43	1.07	31.6	82.6	41-1	4
2	Stoneville	ST 5599BR	36.8	1267	44	1.07	30.5	80.5	31-4	4
3	Stoneville	ST 4554B2RF	32.9	1242	41	1.10	30.5	80.9	41-3	5
4	Stoneville	ST 4575BR	35.8	1151	41	1.08	30.0	82.0	41-3	4
5	Beltwide Cotton Genetics	BW-4630B2F	37.5	1144	39	1.10	28.4	80.0	41-1	3
6	Stoneville	ST 4686R	36.2	1143	44	1.08	30.1	82.8	32-1	3
7	Delta and Pine Land	DP 110 RF	33.8	1137	43	1.12	34.7	82.1	41-1	4
8	Beltwide Cotton Genetics	BW-9124B2F	34.8	1078	43	1.11	30.1	80.6	31-2	3
9	Royster-Clark Vigoro	CX 621B2F	35.6	1054	38	1.10	29.3	82.1	41-1	3
10	Stoneville	ST 5242BR	36.7	1036	44	1.07	31.8	81.5	31-2	3
11	PhytoGen	PHY 410 R	33.6	1022	47	1.02	29.4	80.5	41-4	4
12	Delta and Pine Land	DP 444 BG/RR	33.5	994	37	1.11	29.6	81.1	41-1	3
13	Royster-Clark Vigoro	CX 601B2F	31.2	978	40	1.07	26.9	81.2	41-1	3
14	Stoneville	STX416B2R	32.7	971	43	1.06	29.0	80.9	41-1	4
15	Delta and Pine Land	DP 108 RF	34.7	971	39	1.06	30.2	79.6	41-1	4
16	Croplan Genetics	CG 4020B2RF	31.0	948	41	1.10	29.5	81.1	41-1	3
17	UAP-Dynagro	DG 2215 B2RF	34.7	937	38	1.07	28.7	78.8	41-1	3
18	Stoneville	ST 4664RF	32.8	917	43	1.06	30.4	80.8	41-3	4
19	Croplan Genetics	CG 3020B2RF	32.4	904	40	1.06	28.3	80.0	41-1	3
20	Delta and Pine Land	DP 117 B2RF	35.1	894	42	1.10	33.5	82.5	41-3	5
21	Beltwide Cotton Genetics	BW-3255B2F	32.8	884	38	1.06	27.9	81.2	41-1	3
22	Delta and Pine Land	DP 113 B2RF	34.2	880	37	1.08	31.6	80.3	41-1	4
23	FiberMax	FM 960BR	36.7	877	47	1.08	35.0	80.6	31-2	3
24	Stoneville	ST 4357B2RF	33.6	860	41	1.09	30.5	81.2	41-1	3
25	UAP-Dynagro	DG 2100 B2RF	32.3	860	38	1.05	29.0	80.2	41-1	3
26	Stoneville	STX5885B2RF	32.4	826	45	1.11	32.5	79.6	31-2	3
27	Delta and Pine Land	DP 555 BG/RR	36.0	819	43	1.09	26.6	79.2	41-1	3
28	Royster-Clark Vigoro	CX 611B2F	32.4	817	39	1.02	30.7	80.8	41-1	3
29	UAP-Dynagro	DG 2242 B2RF	31.5	815	39	1.07	29.2	81.3	41-1	4
30	Beltwide Cotton Genetics	BW-1004B2F	34.3	814	41	1.09	28.3	81.2	41-1	4
31	Royster-Clark Vigoro	CX 612B2F	35.7	787	39	1.08	27.6	80.4	41-3	4
32	PhytoGen	PHY 415 RF	33.3	786	43	1.05	30.0	80.4	41-3	4
33	PhytoGen	PHY 475 WRF	35.6	778	45	1.07	29.9	81.3	41-1	4
34	PhytoGen	PHY 485 WRF	33.9	767	47	1.08	31.5	82.1	41-3	4
35	Stoneville	ST 5007B2RF	32.1	753	42	1.11	30.6	82.3	41-1	3
36	UAP-Dynagro	DG 2520 B2RF	31.6	724	40	1.08	29.1	80.2	41-1	3
37	Croplan Genetics	CG 3520B2RF	30.2	716	38	1.07	28.6	79.7	41-1	4
38	Delta and Pine Land	PM 1218 BG/RR	34.0	709	50	1.12	29.9	81.0	31-4	3
39	Beltwide Cotton Genetics	BW-4153B2F	33.0	677	37	1.04	27.6	79.9	41-1	3
40	PhytoGen	PHY 425 RF	30.7	618	46	1.05	30.1	81.0	42-1	4
		Mean:	33.9	926	42	1.08	30.0	80.9	41-1	3.5
		CV (%)		17.5						
		LSD (0.05)		264						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 18. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **Milan Research and Education Center, Milan, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Stoneville	ST 4575BR	37.8	1400	49	1.07	30.5	82.5	32-2	4
2	Delta and Pine Land	DP 432 RR	37.4	1331	50	1.07	29.5	83.2	31-4	4
3	Stoneville	ST 4686R	37.0	1329	48	1.08	29.4	83.5	32-2	4
4	Stoneville	ST 5599BR	37.0	1326	47	1.11	33.6	81.5	32-2	5
5	Stoneville	ST 5242BR	36.9	1307	47	1.08	29.0	82.0	31-3	3
6	Stoneville	ST 4664RF	37.7	1302	47	1.08	30.3	81.6	41-3	5
7	Delta and Pine Land	DP 444 BG/RR	37.8	1300	44	1.09	31.9	82.1	31-2	4
8	PhytoGen	PHY 415 RF	38.4	1295	51	1.05	30.1	81.9	42-1	4
9	Stoneville	ST 4554B2RF	36.2	1284	49	1.12	31.1	82.3	31-4	4
10	Royster-Clark Vigoro	CX 612B2F	36.3	1269	45	1.13	29.7	81.9	41-1	5
11	Delta and Pine Land	DP 108 RF	38.0	1266	45	1.08	31.4	81.5	41-1	5
12	Royster-Clark Vigoro	CX 621B2F	36.2	1266	46	1.14	29.4	82.9	31-1	4
13	Stoneville	ST 4357B2RF	38.1	1256	44	1.12	30.3	82.1	31-2	4
14	Beltwide Cotton Genetics	BW-3255B2F	36.4	1251	45	1.05	27.9	81.8	31-1	3
15	Beltwide Cotton Genetics	BW-4153B2F	36.6	1232	43	1.08	27.9	82.3	41-1	4
16	Beltwide Cotton Genetics	BW-4630B2F	35.8	1226	47	1.12	29.0	81.6	31-1	3
17	Beltwide Cotton Genetics	BW-9124B2F	35.3	1223	46	1.11	29.8	81.2	31-3	4
18	Delta and Pine Land	DP 117 B2RF	36.7	1222	46	1.11	34.3	82.4	41-1	5
19	FiberMax	FM 960BR	37.2	1215	49	1.08	33.3	81.5	31-3	3
20	UAP Dynagro	DG 2520 B2RF	36.6	1212	45	1.16	30.7	82.2	31-2	4
21	UAP Dynagro	DG 2242 B2RF	34.5	1205	45	1.13	30.0	82.3	31-1	4
22	Delta and Pine Land	PM 1218 BG/RR	38.0	1169	50	1.06	29.9	81.7	32-2	4
23	Croplan Genetics	CG 3520B2RF	35.7	1169	46	1.11	29.3	82.4	31-2	5
24	PhytoGen	PHY 485 WRF	36.0	1163	51	1.08	31.6	82.9	41-3	6
25	Dynagro	DG 2100 B2RF	35.1	1141	46	1.05	27.8	81.9	31-1	3
26	Stoneville	STX416B2R	35.0	1135	50	1.07	31.4	82.7	41-3	6
27	Royster-Clark Vigoro	CX 601B2F	34.0	1134	45	1.08	28.1	82.9	31-1	4
28	PhytoGen	PHY 425 RF	35.5	1119	51	1.09	30.9	82.9	41-3	6
29	Delta and Pine Land	DP 113 B2RF	35.3	1119	43	1.11	31.6	82.2	41-3	6
30	Delta and Pine Land	DP 110 RF	36.3	1118	47	1.09	33.8	82.5	41-4	6
31	Croplan Genetics	CG 4020B2RF	35.7	1108	47	1.14	28.7	81.2	31-1	4
32	PhytoGen	PHY 410 R	35.3	1094	51	1.08	30.9	83.1	41-3	4
33	Beltwide Cotton Genetics	BW-1004B2F	36.8	1085	47	1.10	28.7	82.2	41-3	4
34	Delta and Pine Land	DP 555 BG/RR	39.1	1077	48	1.07	32.0	81.2	31-1	4
35	Royster-Clark Vigoro	CX 611B2F	33.8	1077	43	1.10	28.4	82.2	21-1	3
36	Croplan Genetics	CG 3020B2RF	34.0	1057	43	1.09	28.5	82.8	31-3	4
37	PhytoGen	PHY 475 WRF	36.2	1049	48	1.08	31.8	83.1	32-2	5
38	UAP Dynagro	DG 2215 B2RF	33.5	1040	42	1.07	27.8	81.3	31-2	4
39	Stoneville	STX5885B2RF	32.4	986	48	1.12	31.3	81.4	31-3	3
40	Stoneville	ST 5007B2RF	31.9	919	45	1.13	29.2	82.3	31-2	4
		Mean:	36.1	1187	47	1.09	30.3	82.2	41-1	4.3
		CV (%)		8.9						
		LSD (0.05)		149						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 19. Gin turnout, lint yield and fiber quality of 40 cotton varieties in the 2005 Tennessee Official Roundup Ready Flex Variety Trial, **West Tennessee Research and Education Center, Jackson, TN**.

Yield Rank	Company	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf Grade
			%	lb./a	units	in.	g/tex	%		
1	Stoneville	ST 5242BR	39.4	1696	38	1.14	29.1	81.0	31-2	4
2	Stoneville	ST 4575BR	39.2	1657	40	1.10	27.5	81.8	31-2	4
3	Stoneville	ST 4554B2RF	38.8	1651	41	1.12	31.7	83.4	31-2	4
4	Stoneville	ST 4686R	38.6	1625	40	1.11	31.7	81.8	31-2	5
5	Delta and Pine Land	DP 555 BG/RR	39.6	1606	41	1.08	30.2	79.4	31-2	4
6	Delta and Pine Land	DP 432 RR	39.2	1583	40	1.10	30.9	82.7	41-1	4
7	Stoneville	ST 5599BR	38.6	1561	41	1.07	31.2	79.3	41-1	4
8	Delta and Pine Land	DP 444 BG/RR	39.5	1544	36	1.11	29.7	81.9	41-1	4
9	Croplan Genetics	CG 4020B2RF	36.6	1468	38	1.14	28.6	81.9	31-2	4
10	Delta and Pine Land	PM 1218 BG/RR	38.2	1463	43	1.06	29.1	80.9	31-2	3
11	PhytoGen	PHY 410 R	36.3	1459	42	1.09	30.9	83.1	41-1	6
12	Stoneville	STX416B2R	35.5	1446	41	1.09	30.6	82.2	41-1	6
13	Stoneville	ST 4664RF	37.3	1444	38	1.11	31.5	80.9	41-1	6
14	FiberMax	FM 960BR	36.6	1434	36	1.09	34.6	80.1	31-2	4
15	Beltwide Cotton Genetics	BW-3255B2F	35.6	1429	36	1.11	27.9	82.5	31-2	4
16	Phytogen	PHY 415 RF	37.2	1428	39	1.09	34.4	81.0	41-1	5
17	Royster-Clark Vigoro	CX 621B2F	36.4	1425	38	1.14	28.9	81.5	31-2	4
18	Delta and Pine Land	DP 108 RF	36.7	1418	34	1.10	31.9	81.6	41-1	5
19	Stoneville	ST 4357B2RF	36.8	1414	39	1.16	30.2	81.8	31-1	3
20	PhytoGen	PHY 425 RF	35.8	1409	40	1.11	31.8	82.4	41-1	4
21	UAP-Dynagro	DG 2215 B2RF	35.3	1406	36	1.09	28.8	81.8	31-2	4
22	Beltwide Cotton Genetics	BW-4630B2F	36.1	1398	39	1.18	29.6	81.7	31-2	4
23	Royster-Clark Vigoro	CX 612B2F	35.7	1397	36	1.07	34.7	81.7	41-1	6
24	PhytoGen	PHY 485 WRF	36.3	1387	40	1.16	28.7	81.8	41-1	5
25	Beltwide Cotton Genetics	BW-4153B2F	34.9	1383	35	1.14	28.7	80.6	31-2	4
26	UAP-Dynagro	DG 2520 B2RF	36.4	1376	38	1.08	31.8	83.9	31-1	4
27	Croplan Genetics	CG 3020B2RF	35.4	1371	36	1.08	28.7	81.1	31-2	4
28	PhytoGen	PHY 475 WRF	36.9	1351	40	1.10	31.0	82.6	41-1	6
29	Delta and Pine Land	DP 110 RF	36.7	1346	36	1.16	29.1	83.1	41-1	6
30	Croplan Genetics	CG 3520B2RF	35.2	1338	37	1.15	28.8	83.0	31-2	5
31	Royster-Clark Vigoro	CX 601B2F	34.5	1334	36	1.11	29.5	81.9	31-2	4
32	UAP-Dynagro	DG 2100 B2RF	34.8	1333	35	1.10	30.5	82.6	31-2	4
33	Royster-Clark Vigoro	CX 611B2F	34.7	1321	34	1.10	29.4	80.9	41-1	4
34	Beltwide Cotton Genetics	BW-9124B2F	36.1	1319	37	1.13	29.6	80.7	31-1	3
35	Stoneville	ST 5007B2RF	32.8	1315	36	1.14	29.4	80.6	31-2	5
36	Delta and Pine Land	DP 117 B2RF	37.1	1304	38	1.12	32.8	83.0	41-1	5
37	UAP-Dynagro	DG 2242 B2RF	35.1	1257	36	1.14	29.5	81.1	41-1	5
38	Beltwide Cotton Genetics	BW-1004B2F	35.2	1217	35	1.13	28.2	81.5	41-1	4
39	Delta and Pine Land	DP 113 B2RF	35.3	1167	34	1.10	33.9	80.1	41-2	6
40	Stoneville	STX5885B2RF	33.3	1166	41	1.15	31.3	81.4	31-2	3
		Mean:	36.5	1416	38	1.11	30.4	81.7		4.5
		CV (%)		7.3						
		LSD (0.05)		144						

Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 20. Net loan value of 40 cotton varieties in the Tennessee Official Roundup Ready Flex Variety Trial, listed alphabetically, 2005.

Company	Variety	Memphis	Ames	Fullen	Milan	Jackson	Avg.
				¢/lb.†			
Beltwide Cotton Genetics	BW-1004B2F	52.50	55.40	54.15	53.90	54.45	54.08
Beltwide Cotton Genetics	BW-3255B2F	48.25	56.80	53.55	54.75	55.50	53.77
Beltwide Cotton Genetics	BW-4153B2F	54.45	56.80	51.50	53.90	55.40	54.41
Beltwide Cotton Genetics	BW-4630B2F	53.35	57.90	54.85	57.45	55.90	55.89
Beltwide Cotton Genetics	BW-9124B2F	51.80	57.70	57.70	55.50	57.95	56.13
Croplan Genetics	CG 3020B2RF	53.85	54.90	53.55	55.00	54.75	54.41
Croplan Genetics	CG 3520B2RF	53.50	53.35	52.75	52.80	53.50	53.18
Croplan Genetics	CG 4020B2RF	54.05	55.50	55.10	55.40	55.65	55.14
Royster Clark-Vigoro	CX 601B2F	53.20	56.80	53.55	55.00	55.50	54.81
Royster Clark-Vigoro	CX 611B2F	48.75	55.55	51.95	57.15	52.00	53.08
Royster Clark-Vigoro	CX 612B2F	47.95	57.65	54.15	51.80	48.75	52.06
Royster Clark-Vigoro	CX 621B2F	55.75	57.70	54.85	55.65	55.65	55.92
UAP-Dynagro	DG 2100 B2RF	51.15	56.80	53.55	54.75	55.45	54.34
UAP-Dynagro	DG 2215 B2RF	51.65	54.90	53.15	53.75	54.75	53.64
UAP-Dynagro	DG 2242 B2RF	51.80	55.65	52.75	55.50	51.80	53.50
UAP-Dynagro	DG 2520 B2RF	55.75	57.50	54.85	55.85	55.80	55.95
Delta and Pine Land	DP 108 RF	45.05	51.60	53.00	51.75	49.85	50.25
Delta and Pine Land	DP 110 RF	45.15	52.30	54.95	49.45	49.10	50.19
Delta and Pine Land	DP 113 B2RF	46.10	53.25	54.60	49.30	47.30	50.11
Delta and Pine Land	DP 117 B2RF	45.70	49.55	52.30	52.05	52.55	50.43
Delta and Pine Land	DP 432 RR	51.35	54.00	53.20	50.95	54.85	52.87
Delta and Pine Land	DP 444 BG/RR	51.15	57.05	55.60	55.20	54.70	54.74
Delta and Pine Land	DP 555 BG/RR	55.05	54.85	54.20	53.95	54.85	54.58
Delta and Pine Land	PM 1218 BG/RR	57.15	52.70	54.65	48.80	54.75	53.61
FiberMax	FM 960 BR	48.75	55.20	57.30	57.30	55.25	54.76
PhytoGen	PHY 410 R	53.25	54.60	50.80	51.55	49.65	51.97
PhytoGen	PHY 415 RF	51.30	55.00	52.75	47.30	52.05	51.68
PhytoGen	PHY 425 RF	48.40	55.45	50.35	46.35	55.15	51.14
PhytoGen	PHY 475 WRF	50.10	55.45	52.75	50.60	49.65	51.71
PhytoGen	PHY 485 WRF	52.00	51.75	54.35	46.35	51.80	51.25
Stoneville	ST 4357B2RF	53.50	57.90	55.30	55.50	58.15	56.07
Stoneville	ST 4554B2RF	55.20	58.15	52.00	55.70	56.20	55.45
Stoneville	ST 4575BR	51.90	55.25	54.40	52.30	55.00	53.77
Stoneville	ST 4664RF	51.35	55.45	52.75	51.55	49.55	52.13
Stoneville	ST 4686R	53.80	55.45	54.15	53.10	53.50	54.00
Stoneville	ST 5007B2RF	51.35	57.90	55.80	55.25	53.00	54.66
Stoneville	ST 5242BR	51.15	55.00	55.20	56.80	55.65	54.76
Stoneville	ST 5599BR	51.15	54.20	53.95	50.55	52.80	52.53
Stoneville	STX416B2R	49.35	55.25	52.50	45.90	49.40	50.48
Stoneville	STX5885B2RF	56.25	58.35	57.95	57.90	58.35	57.76
Mean		51.58	55.41	53.92	53.09	53.65	53.53

†Base price of 52.50 cents/lb lint adjusted for color, leaf, staple, micronaire, strength, and uniformity. Calculated by the 2005 Cotton Incorporated Cotton Loan Valuation Program, based on the 2005 upland cotton warehouse loan rates. Tennessee Agricultural Experiment Station data of Craig et al. (2005)

Table 21. Selected growth characteristics of 40 cotton varieties in the Tennessee Official Roundup Ready Flex Variety Trial, listed alphabetically, 2005.

Company	Variety	Final Plant Height	Total Nodes	Height to Node Ratio	Days to NAWF5	NACB
		inches	no.	inches	no.	no.
Beltwide Cotton Genetics	BW-1004 B2RF	38.1	17.8	2.2	79.0	2.8
Beltwide Cotton Genetics	BW-3255 B2RF	38.7	16.9	2.3	79.2	3.1
Beltwide Cotton Genetics	BW-4153 B2RF	37.5	17.8	2.1	79.7	3.6
Beltwide Cotton Genetics	BW-4630 B2RF	40.1	17.2	2.3	80.8	3.5
Beltwide Cotton Genetics	BW-9124 B2RF	39.9	17.7	2.3	80.4	3.2
Croplan Genetics	CG 3020B2RF	39.9	17.3	2.3	80.1	3.2
Croplan Genetics	CG 3520B2RF	40.6	17.7	2.3	79.8	3.5
Croplan Genetics	CG 4020B2RF	40.7	17.9	2.3	80.3	3.6
Royster Clark-Vigoro	CX 601B2F	40.6	17.5	2.3	79.8	3.5
Royster Clark-Vigoro	CX 611B2F	38.6	17.3	2.2	79.3	3.2
Royster Clark-Vigoro	CX 612B2F	37.5	17.1	2.2	79.3	3.4
Royster Clark-Vigoro	CX 621B2F	40.3	18.0	2.2	80.0	3.8
UAP-Dynagro	DG 2100 B2RF	40.4	18.1	2.2	79.8	3.3
UAP-Dynagro	DG 2215 B2RF	37.9	17.1	2.2	79.2	3.6
UAP-Dynagro	DG 2242 B2RF	40.0	18.0	2.2	78.7	2.8
UAP-Dynagro	DG 2520 B2RF	39.7	17.6	2.3	79.5	3.4
Delta and Pine Land	DP 108 RF	45.2	19.4	2.3	80.1	3.3
Delta and Pine Land	DP 110 RF	45.9	18.1	2.5	81.5	3.6
Delta and Pine Land	DP 113 B2RF	41.2	18.1	2.3	78.6	2.6
Delta and Pine Land	DP 117 B2RF	42.0	18.2	2.3	81.3	3.7
Delta and Pine Land	DP 432 RR	42.3	17.7	2.4	78.1	3.5
Delta and Pine Land	DP 444 BG/RR	42.9	16.8	2.6	78.6	3.4
Delta and Pine Land	DP 555 BG/RR	44.3	19.8	2.2	82.9	5.0
Delta and Pine Land	PM 1218 BG/RR	40.2	17.9	2.2	79.3	3.9
FiberMax	FM 960 BR	39.8	17.8	2.2	79.2	3.8
PhytoGen	PHY 410 R	44.3	18.0	2.5	80.2	3.8
PhytoGen	PHY 415 RF	45.3	18.7	2.4	80.6	3.6
PhytoGen	PHY 425 RF	44.2	18.4	2.4	81.8	4.0
PhytoGen	PHY 475 WRF	43.9	19.1	2.3	82.4	4.1
PhytoGen	PHY 485 WRF	42.8	18.3	2.3	82.4	3.5
Stoneville	ST 4357B2RF	40.4	17.7	2.3	79.9	3.4
Stoneville	ST 4554B2RF	38.9	17.9	2.2	79.6	4.5
Stoneville	ST 4575BR	40.5	18.3	2.2	80.5	4.4
Stoneville	ST 4664RF	40.3	18.1	2.2	80.0	3.9
Stoneville	ST 4686R	40.7	18.3	2.2	80.9	4.3
Stoneville	ST 5007B2RF	40.5	18.1	2.2	79.0	3.7
Stoneville	ST 5242BR	42.5	17.3	2.5	78.9	4.2
Stoneville	ST 5599BR	43.1	17.4	2.5	80.8	4.8
Stoneville	STX416B2R	41.3	17.6	2.3	81.1	4.5
Stoneville	STX5885B2RF	37.8	17.9	2.1	80.6	3.7
	Mean	41.5	18.0	2.3	80.2	3.8
	CV (%)	3.7	3.4	3.8	1.3	12.0
	LSD (0.05)	2.5	1.0	0.1	1.4	0.7

PRELIMINARY VARIETY TRIALS

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Thirty-eight new varieties and experimental strains were tested in a Preliminary Variety Trial (PVT) at the WTREC in Jackson, TN. Six popular cultivars were added as checks. Entries included 22 varieties with Roundup Flex (RF) gene technology, 11 Roundup Ready (R or RR) varieties, and 5 Liberty Link (LL) varieties. Entries also included 18 varieties with Bollgard II (B2) genes, 7 Bollgard (B or BG) varieties, and 3 Widestrike (W) varieties. All entries were planted on 5 May 2005 in 2-row plots arranged in a RCB design. All plots received conventional weed and insect pest management. Soil was an irrigated, no-tilled Loring-Calloway silt loam fertilized with 80-30-90 lb/ac N-P_2O_5-K_2O.

A subset of 33 entries, those containing Roundup-Flex (RF) or Roundup Ready (RR) genes, were also tested in a PVT at the Research & Education Center at Milan, TN. They were planted on 10 May 2005 in 2-row plots arranged in a RCB design. All plots in this test received Roundup Ready weed management. Soil was an irrigated, no-tilled Grenada-Henry silt loam fertilized with 76-40-80 lb/ac N-P_2O_5-K_2O.

Irrigation was initiated 18 days after planting (DAP) at Jackson, and 14 DAP at Milan. Totals of 3.0 and 4.4 inches were applied during the season at Jackson and Milan, respectively. Tropical storms Dennis and Katrina brought beneficial rainfall in mid-season. However, wind and rain from TS Rita increased the occurrence of lodging and boll rot in some varieties in late September. Weather was highly favorable for harvesting in October.

Plant stands averaged 46,000/ac at both locations. Mepiquat-type PGR products were applied in total amounts of 44 and 29 oz/ac at Jackson and Milan, respectively. Defoliants were applied at 130 and 135 DAP at Jackson and Milan, respectively, but no boll opener was applied to allow varieties to express differences in maturity.

Plots were spindle-picked at 140 and 155 DAP at Jackson, and at 146 and 160 DAP at Milan. Seedcotton from each plot was weighed, and a grab sample of each variety was ginned at the WTREC to calculate gin turnout. A lint sample of each variety was analyzed by HVI at the USDA-AMS Classing Office in Memphis, TN.

Table 3-1 presents yield, earliness, and gin turnout data from the 2005 PVT at Jackson. The highest yielding entry was DP 454 BG/RR, but its yield was statistically equivalent to the highest yielding check, DP 444 BG/RR. Total lint yields of these two varieties were higher than the highest yielding Bollgard II/Roundup Flex entry, BCG-4575 B2RF. Of the 18 entries with B2 genes, gin turnouts of 14 entries were below average and lint yields of 13 entries were also below average. All entries had relatively high percent first harvest, due to high temperatures between defoliation and harvest. The earliest maturing entries were in a group of 22 varieties with >90% first harvest, led by DP 444 BG/RR, PHY 425 RF, and PHY 415 RF.

Table 3-2 contains fiber quality data on lint samples from the 44 entries in the 2005 PVT at Jackson. No entry had a micronaire, UHM length, strength, or uniformity value that was likely to incur a price discount. Trash content was relatively high in lint of some varieties due to incomplete defoliation. However, nearly half the entries (21) had micronaire, UHM, strength, and uniformity values eligible for price premiums. This group included entries from all seed companies, and represented all gene technologies tested.

Table 3-3 presents yield, earliness, and gin turnout data from the 2005 PVT at Milan. The highest yielding group contained 19 entries, led by four Stoneville varieties. The top yielding group contained 6 B2RF entries. Most B2RF entries with below average yields also had low gin turnouts. All entries had relatively high percent first harvest, due to high temperatures between defoliation and harvest. The earliest maturing entries were in a group of 20 varieties with >85% first harvest.

Table 3-4 contains fiber quality data on lint samples from the 33 entries in the 2005 PVT at Milan. Micronaire was in the high discount range for 5 entries. However, 11 entries had micronaire, UHM, strength, and uniformity values eligible for price premiums. This group included entries containing all gene technologies tested. Trash content was relatively high in lint of some varieties due to incomplete defoliation.

Table 3-1. Lint yield, earliness, and gin turnout of 44 cotton varieties in the 2005 Preliminary Variety Trial (PVT) at Jackson TN, listed by yield rank.

Yield Rank	Variety †	Check	Lint Yield, Total	Lint Yield, 1st Hvst.	First Harvest	Gin Turnout
			lb/A	lb/A	%	%
1	DP 454 BG/RR		1603	1443	90.0	39.0
2	DP 444 BG/RR	✓	1541	1430	92.8	38.9
3	FM 960 BR	✓	1465	1269	86.6	35.6
4	PHY 370 WR		1430	1304	91.3	36.9
5	ST 5599 BR	✓	1424	1258	88.4	38.3
6	DPLX04Y170BR		1402	1198	85.4	35.1
7	BCG-4575 B2RF		1400	1287	91.9	35.2
8	FM 958 LL		1390	1230	88.6	38.4
9	PHY 415 RF		1387	1285	92.7	36.2
10	AM 1532 RF/B2		1384	1236	89.3	35.6
11	ST 4664RF		1381	1249	90.4	36.2
12	DX 25105N		1379	1248	90.6	37.7
13	DX 241203-16		1357	1233	90.9	36.4
14	DX 241203-9		1355	1199	88.5	35.3
15	DP 555 BG/RR	✓	1354	1206	89.1	37.4
16	DP 108 RF		1348	1218	90.3	37.9
17	DP 117 B2RF		1348	1206	89.4	37.5
18	ST 4554B2RF		1330	1162	87.5	35.6
19	AM 1504 RF/B2		1325	1188	89.7	35.6
20	PHY 410 R	✓	1311	1181	89.9	37.4
21	BCG-4630 B2RF		1308	1183	90.5	37.0
22	AM 1664 RF/B2		1308	1208	92.4	36.9
23	DX 24706		1307	1198	91.7	35.8
24	FMX0222 B2LL		1303	1168	89.6	35.9
25	FM 966 LL		1297	1143	88.2	36.1
26	DPLX03X179R		1293	1036	80.2	38.6
27	DX 24101-20		1284	1168	90.9	35.3
28	BCG-8391 B2RF		1275	1179	92.5	33.9
29	PHY 475 WRF		1275	1148	90.2	37.3
30	PHY 425 RF		1272	1181	92.8	35.0
31	xBCG-1504		1271	1156	91.1	34.5
32	DP 113 B2RF		1266	1162	91.8	37.4
33	STX5885B2RF		1260	1083	85.9	32.8
34	PM 1218 BG/RR	✓	1260	1100	87.4	34.7
35	FMX9166 B2LL		1255	1066	85.1	35.4
36	DP 110 RF		1254	1107	88.2	37.6
37	ST 5007B2RF		1245	1142	91.8	33.5
38	ST 4357B2RF		1233	1120	90.9	35.6
39	FMX0052 B2LL		1231	1080	87.8	35.0

Table 3-1, continued

Yield Rank	Variety †	Check	Lint Yield, Total	Lint Yield, 1st Hvst.	First Harvest	Gin Turnout
			lb/A	lb/A	%	%
40	STX416B2R		1231	1106	89.8	34.0
41	AM 1521 RF/B2		1200	1086	90.5	33.1
42	PHY 485 WRF		1198	1092	91.2	34.5
43	AM 1622 RF/B2		1163	1059	91.1	33.0
44	xBCG-1505 RF		1017	928	91.2	34.4
		Mean:	1316	1180	89.7	36.0
		CV (%)	7.0	7.2	2.2	
		LSD (0.05)	129	118	2.7	

Planted 5 May 2005. Defoliant applied 12 Sept 2005. Harvested 22 Sept and 7 Oct 2005.

Irrigated, no-tilled Calloway Silt Loam. Trial Manager: Carl Michaud.

† Experimental designations: DP108RF= DPLX04Z602F, DP110RF= DPLX04Z603F, DP113B2RF= DPLX04Z503DF, DP117B2RF= DPLX04Z600RF, ST4357B2RF= STX0509B2F, ST5007B2RF= STX0510B2F.

Tennessee Agricultural Experiment Station data of Gwathmey and Michaud (2005).

Table 3-2. HVI fiber properties of 44 cotton varieties tested in the 2005 PVT at Jackson TN, listed alphabetically.

Variety †	✓	Micro-naire	UHM Length	Fiber Strength	Uni-formity	HVI Trash	HVI Color	Color Rd	Color +b
			in.	in.	%	%		%	
AM 1504 RF/B2		39	1.11	29.5	82.8	0.6	31-1	78.1	8.2
AM 1521 RF/B2		37	1.13	29.3	82.3	0.8	31-2	78.6	7.4
AM 1532 RF/B2		40	1.17	31.7	84.1	0.7	31-2	77.8	7.7
AM 1622 RF/B2		40	1.19	30.5	83.7	1.2	41-1	77.6	7.1
AM 1664 RF/B2		40	1.17	28.7	83.0	1.1	41-1	76.7	7.3
xBCG-1504		39	1.16	33.3	82.8	0.4	31-1	78.6	8.0
xBCG-1505 RF		35	1.16	33.5	83.1	0.5	31-1	79.2	7.8
BCG-4575 B2RF		40	1.09	29.3	83.3	0.7	31-1	77.8	7.9
BCG-4630 B2RF		41	1.15	29.5	82.1	0.4	31-2	78.1	7.7
BCG-8391 B2RF		41	1.18	30.4	84.2	1.0	41-1	78.1	7.1
DP 108 RF		42	1.13	30.8	82.9	1.7	41-1	75.8	7.7
DP 110 RF		42	1.13	34.0	82.9	2.0	41-1	73.9	7.7
DP 113 B2RF		39	1.12	33.6	82.8	2.1	41-2	73.0	7.3
DP 117 B2RF		40	1.13	31.9	82.1	2.3	41-2	73.6	7.2
DP 444 BG/RR	✓	37	1.11	29.7	84.4	0.9	41-1	76.4	7.8
DP 454 BG/RR		39	1.08	31.2	83.0	1.7	41-1	75.6	7.1
DP 555 BG/RR	✓	42	1.17	32.1	82.8	1.1	31-2	77.1	7.9
DPLX03X179R		46	1.15	33.6	83.2	0.3	31-1	77.9	8.1
DPLX04Y170BR		42	1.13	31.4	82.5	0.9	31-2	77.9	7.6
DX 24101-20		38	1.13	30.3	82.4	1.1	41-1	74.9	7.1
DX 241203-16		43	1.19	34.5	82.6	0.6	31-1	78.6	7.8
DX 241203-9		42	1.20	34.6	84.0	0.9	31-2	78.2	7.8
DX 24706		42	1.09	30.4	82.8	0.7	31-1	77.6	8.1
DX 25105N		41	1.16	30.3	82.7	1.8	41-1	76.4	7.9
FM 958 LL		43	1.16	32.8	82.3	0.6	51-1	72.3	7.2
FM 960 BR	✓	41	1.11	35.6	83.1	0.9	31-2	78.3	7.7
FM 966 LL		42	1.10	33.4	81.7	0.8	31-2	79.2	7.3
FMX0052 B2LL		48	1.13	32.3	82.6	0.8	31-2	78.8	7.4
FMX0222 B2LL		43	1.13	32.3	82.3	1.0	41-1	76.4	7.4
FMX9166 B2LL		48	1.11	32.8	81.3	0.3	31-2	79.4	7.4
PHY 370 WR		44	1.09	31.3	81.8	1.3	31-2	77.3	7.8
PHY 410 R	✓	42	1.10	31.0	83.1	1.0	41-1	75.6	7.7
PHY 415 RF		42	1.10	32.1	82.2	2.4	41-1	73.8	7.6
PHY 425 RF		43	1.13	32.9	82.2	1.6	41-1	74.5	7.8
PHY 475 WRF		43	1.11	31.8	82.7	2.3	41-2	73.2	7.7
PHY 485 WRF		42	1.12	31.9	83.5	2.2	51-1	71.2	7.7
PM1218 BG/RR	✓	45	1.07	29.4	82.2	0.8	31-1	76.9	8.7
ST 4357B2RF		42	1.17	29.8	83.3	0.8	31-1	78.9	7.7

Table 3-2, continued

Variety †		Micro-naire	UHM Length	Fiber Strength	Uni-formity	HVI Trash	HVI Color	Color Rd	Color +b
			in.	in.	%	%		%	
ST 4554B2RF		45	1.13	31.8	83.5	1.5	41-1	76.1	7.8
ST 4664RF		42	1.10	30.6	82.7	1.5	41-1	75.4	7.7
ST 5007B2RF		40	1.19	30.1	83.9	0.9	41-1	77.1	7.0
ST 5599BR	✓	43	1.10	31.0	81.9	1.3	31-2	76.2	8.2
STX416B2R		43	1.12	31.5	82.8	1.9	41-2	74.3	6.8
STX5885B2RF		43	1.16	33.1	83.4	0.4	51-1	71.5	7.4
	Mean:	42	1.13	31.6	82.8	1.1	41-1	76.5	7.6

HVI data furnished by the USDA Cotton Classing Office in Memphis TN, based on lint samples from the WTREC gin.
† Experimental designations: DP108RF= DPLX04Z602F, DP110RF= DPLX04Z603F, DP113B2RF= DPLX04Z503DF, DP117B2RF= DPLX04Z600RF, ST4357B2RF= STX0509B2F, ST5007B2RF= STX0510B2F.
Tennessee Agricultural Experiment Station data of Gwathmey and Michaud (2005).

Table 3-3. Lint yield, earliness, and gin turnout of 33 cotton varieties in the 2005 Preliminary Variety Trial (PVT) at Milan TN, listed by yield rank.

Yield Rank	Variety †	Check	Lint Yield, Total	Lint Yield, 1st Hvst.	First Harvest	Gin Turnout
			lb/A	lb/A	%	%
1	ST 4554B2RF		1071	919	85.9	37.9
2	ST 4892BR	✓	1067	883	82.9	38.6
3	STX0416B2R		1052	904	85.9	34.9
4	ST 5599BR	✓	1048	864	82.5	37.7
5	DP 454 BG/RR		1041	895	85.9	37.9
6	PHY 370 WR		1029	890	86.3	37.2
7	DP 555 BG/RR	✓	1016	849	83.4	38.0
8	FM 960 BR	✓	1016	830	81.6	37.6
9	DPLX03X179R		1011	799	79.1	40.0
10	DPLX04Y170BR		1002	835	82.9	37.5
11	ST 4664RF		997	857	85.9	37.8
12	PHY 485 WRF		967	842	86.7	36.2
13	PHY 475 WRF		965	807	83.1	37.0
14	BCG-4630 B2RF		958	850	88.7	37.2
15	DP 108 RF		945	788	83.5	38.3
16	AM 1504 RF/B2		941	834	88.7	35.4
17	AM 1664 RF/B2		933	832	89.1	37.3
18	DP117 B2RF		926	767	83.1	37.5
19	BCG-4575 B2RF		926	817	88.1	34.6
20	DP 444 BG/RR	✓	887	773	87.3	39.1
21	AM 1521 RF/B2		874	766	87.5	34.6
22	PHY 425 RF		869	770	88.6	35.7
23	AM 1532 RF/B2		869	731	83.8	35.2
24	STX5885B2RF		866	694	80.2	32.5
25	ST 4357B2RF		863	740	85.7	35.6
26	DP 113 B2RF		854	732	85.1	38.9
27	PM 1218 BG/RR	✓	844	683	80.8	35.3
28	ST 5007B2RF		834	744	89.1	33.3
29	PHY 415 RF		832	732	87.9	36.5
30	xBCG-1505 RF		829	708	85.3	35.1
31	BCG-8391 B2RF		818	722	88.2	33.7
32	AM 1622 RF/B2		792	712	89.9	34.7
33	DP 110 RF		780	660	84.3	37.6
		Mean:	931	795	85.3	36.6
		CV (%)	11.7	13.4	3.5	
		LSD (0.05)	177	173	4.9	

Planted 10 May 2005. Defoliant applied 22 Sept 2005. Harvested 3 Oct and 17 Oct 2005.
Irrigated, no-tilled Grenada-Henry Silt Loam. Trial Manager: Darol Copley.
† Experimental designations: DP108RF= DPLX04Z602F, DP110RF= DPLX04Z603F, DP113B2RF= DPLX04Z503DF, DP117B2RF= DPLX04Z600RF, ST4357B2RF= STX0509B2F, ST5007B2RF= STX0510B2F.
Tennessee Agricultural Experiment Station data of Gwathmey and Michaud (2005).

Table 3-4. HVI fiber properties of 33 cotton varieties tested in the 2005 PVT at Milan TN, listed alphabetically.

Variety †	✓	Micro-naire	UHM Length	Fiber Strength	Uni-formity	HVI Trash	HVI Color	Color Rd	Color +b
			in.	g/tex	%	%		%	
AM 1504 RF/B2		41	1.08	30.9	83.6	0.6	31-2	76.1	8.1
AM 1521 RF/B2		38	1.12	29.3	83.0	0.8	31-2	77.6	7.5
AM 1532 RF/B2		43	1.15	29.6	83.2	0.7	31-2	77.0	8.1
AM 1622 RF/B2		42	1.19	30.6	84.8	0.6	31-2	76.7	7.7
AM 1664 RF/B2		44	1.14	29.3	84.0	1.3	41-1	74.3	7.6
xBCG-1505 RF		39	1.17	33.3	83.6	0.7	31-2	77.1	8.1
BCG-4575 B2RF		41	1.08	30.3	83.3	0.6	31-2	76.3	8.3
BCG-4630 B2RF		44	1.15	28.8	84.0	0.6	41-1	76.3	8.0
BCG-8391 B2RF		42	1.17	30.8	84.4	0.9	31-2	77.0	7.7
DP 108 RF		43	1.10	33.5	83.6	1.0	41-1	73.2	8.2
DP 110 RF		45	1.10	35.0	83.3	1.6	41-3	72.7	8.3
DP 113 B2RF		43	1.12	32.0	83.0	1.5	41-1	73.5	8.0
DP 117 B2RF		43	1.16	34.4	82.6	2.0	41-2	73.0	7.6
DP 444 BG/RR	✓	43	1.09	32.2	84.0	0.9	41-1	74.3	8.3
DP 454 BG/RR		41	1.09	32.7	83.8	1.9	41-1	74.8	7.4
DP 555 BG/RR	✓	55	1.17	30.9	83.1	0.5	41-3	73.9	8.6
DPLX03X179R		50	1.17	34.4	85.2	0.5	31-1	77.5	8.1
DPLX04Y170BR		49	1.09	32.5	82.2	0.7	31-2	76.9	8.2
FM 960 BR	✓	45	1.07	34.2	83.5	0.6	31-2	76.8	8.1
PHY 370 WR		50	1.08	32.2	83.3	0.9	41-1	74.7	8.5
PHY 415 RF		48	1.08	28.4	83.9	1.6	41-1	72.6	8.2
PHY 425 RF		48	1.10	31.2	84.1	1.2	41-1	73.3	8.2
PHY 475 WRF		44	1.11	31.5	83.6	1.3	41-2	73.0	7.8
PHY 485 WRF		47	1.10	32.0	83.6	1.9	41-3	71.9	8.5
PM1218 BG/RR	✓	49	1.05	29.1	82.8	0.6	31-4	74.9	8.9
ST 4357B2RF		44	1.16	29.9	84.1	0.9	31-2	76.7	7.9
ST 4554B2RF		50	1.10	30.8	83.3	0.6	31-2	75.8	8.5
ST 4664RF		48	1.10	30.1	83.5	0.9	41-3	74.3	8.5
ST 4892BR	✓	50	1.04	28.9	83.7	0.9	41-1	74.6	8.3
ST 5007B2RF		41	1.19	30.5	84.6	1.6	41-1	74.5	7.7
ST 5599BR	✓	48	1.14	32.8	83.4	1.0	41-3	73.7	8.8
STX416B2R		48	1.11	32.6	82.7	1.7	41-1	72.8	8.0
STX5885B2RF		45	1.13	31.8	82.9	0.5	31-2	76.4	8.6
Mean:		45	1.12	31.4	83.6	1.0	41-1	75.0	8.1

HVI data furnished by the USDA Cotton Classing Office in Memphis TN, based on lint samples from the WTES gin.
† Experimental designations: DP108RF= DPLX04Z602F, DP110RF= DPLX04Z603F, DP113B2RF= DPLX04Z503DF, DP117B2RF= DPLX04Z600RF, ST4357B2RF= STX0509B2F, ST5007B2RF= STX0510B2F.
Tennessee Agricultural Experiment Station data of Gwathmey and Michaud (2005).

EARLY EVALUATION OF NEW VARIETIES IN 2005

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Objectives of this research are to evaluate the growth and development traits of newly introduced transgenic varieties and strains, relative to several popular cultivars grown in Tennessee. Twenty-seven new transgenic varieties from five seed companies were evaluated in 2005, along with six popular commercial cultivars. Entries included 13 varieties with Bollgard II (B2) genes, 7 traditional Bollgard (B or BG) varieties, and 3 with Widestrike (W) gene technology. Entries also included 17 Roundup Flex (RF) varieties, 11 Roundup Ready (RR) varieties, and 5 Liberty Link (LL) varieties.

The 2005 Early Evaluation study was embedded into the Preliminary Variety Trial (PVT) at Jackson as a subset of the 44 PVT entries. An overview of soil type, crop management, and test procedures is provided in Chapter III. Varieties were planted in replicated plots on May 5, 2005. Conventional UT-recommended weed- and pest-control measures were uniformly applied to all plots. A total of 44 oz/acre of a mepiquat PGR product was applied at cutout to control growth. Application was delayed, relative to product label and UT recommendations, to allow varieties to express their growth potential.

Seedling vigor was rated at 34 days after planting (DAP), and plant stands were counted at 40 DAP. At 76 DAP, data were collected for plant height, fruiting branches, nodes above white flower (NAWF), and height-to-node ratio (HNR). At 126 DAP, data were collected for plant height, branch number, fruiting zone, nodes above cracked boll (NACB) and boll retention. Plot notes were also taken during the season on the incidence of lodged plants, boll rot, broken peduncles, and other abnormalities. Plot notes are reported for abnormalities observed in at least three of four replications during "blind" evaluation.

The 2005 growing season had favorable heat-unit and rainfall distribution, and pest pressure was relatively light at Jackson. A total of 2,547 DD60s accumulated between planting on May 5 and second harvest on October 7. However, wind and rain from tropical storm Rita increased the occurrence of broken peduncles, lodging, and boll rot in some varieties in September. Warm, dry weather was favorable for harvesting in October.

Table 4-1 presents early season seedling vigor, plant stand, and mid-season plant growth data. All entries produced adequate stands, ranging from 2.7 to 4.2 plants/ft row. Seedling vigor was satisfactory for nearly all entries, led by DP 444 BG/RR. Vegetative growth was also vigorous in most varieties, as reflected in the plant height and node numbers. Internodes were generally more compact in the FM entries than in most others. Entries differed in such earliness predictors as node of first fruiting branch and NAWF. At 76 DAP, NAWF ranged from 6.2 for BCG-8391 B2RF to 8.4 for DPLX04Y170BR. Varieties with more nodes above white flower tended to produce a smaller proportion of total yield at first harvest (Table 3-1), and vice versa.

Table 4-2 presents late season plant mapping data for the 33 entries. Final plant height ranged from 38.5 inches for BCG-1505RF to 46.9 inches for DPLX04Y170BR and PHY 370 WR. At 126 DAP, NACB ranged from 3.3 for BCG-1505RF, to 5.9 for DPLX 04Y170BR. Varieties with fewer nodes above cracked boll tended to produce a greater proportion of total yield at first harvest, indicating earliness of maturity. In contrast, later maturity was associated with the last harvestable boll set relatively high on the plant, as in STX5885B2RF.

Table 4-2 also contains plot notes on various abnormalities, some of which were associated with storm damage from tropical storm Rita. Broken peduncles led to incomplete boll opening, and boll rot led to "hard lock" in some varieties, possibly reducing yields. Not all plants in the affected plots had the conditions noted in Table 4-2.

Acknowledgments

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Table 4-1. Seedling vigor, plant stand, and mid-season plant growth data from the 2005 Early Evaluation of new varieties at Jackson TN, listed alphabetically.

Variety	Seedling Vigor (1=best) 8-Jun	Plant Stand 14-Jun	Plant Height 20-Jul	First Fruiting Branch 20-Jul	Terminal 20-Jul	NAWF 20-Jul	Height: Node Ratio 20-Jul
	scale 1-5	plants/ft.	in.	node	node	nodes	in./node
xBCG-1505 RF	2.1	3.5	35.4	5.2	15.7	6.9	2.2
BCG-4575 B2RF	1.6	3.2	40.0	5.0	15.3	7.1	2.5
BCG-4630 B2RF	1.6	3.5	38.9	5.6	15.0	7.1	2.5
BCG-8391 B2RF	1.6	3.4	36.7	5.9	14.7	6.2	2.4
DP 108 RF	1.7	3.6	41.1	5.8	15.8	7.2	2.5
DP 110 RF	2.4	3.8	40.0	5.9	15.6	8.0	2.5
DP 113 B2RF	2.1	3.4	40.0	5.8	15.6	7.1	2.5
DP 117 B2RF	2.2	3.3	40.2	5.6	16.3	8.1	2.4
DP 444 BG/RR	1.2	3.6	42.4	5.4	15.4	7.0	2.7
DP 454 BG/RR	2.0	3.5	44.1	5.2	16.6	8.3	2.6
DP 555 BG/RR	2.3	3.0	38.2	5.7	16.0	7.8	2.3
DPLX03X179R	2.4	2.9	40.3	5.5	15.8	7.8	2.4
DPLX04Y170BR	1.9	3.8	42.0	5.8	16.9	8.4	2.4
FM 958 LL	1.8	3.0	36.7	6.3	16.5	7.3	2.1
FM 960 BR	1.9	3.3	40.9	6.5	16.7	7.8	2.4
FM 966 LL	1.8	3.5	37.4	5.9	15.8	7.1	2.3
FMX0052B2LL	1.9	3.1	37.1	5.9	15.8	7.2	2.3
FMX0222B2LL	1.9	3.2	36.9	6.3	16.3	7.1	2.2
FMX9166B2LL	1.9	3.4	38.1	6.0	16.2	7.5	2.3
PHY 370 WR	2.0	3.2	41.9	6.0	15.9	7.9	2.5
PHY 410 R	1.9	3.3	40.2	5.5	15.4	7.2	2.5
PHY 415 RF	1.6	3.5	41.8	5.7	15.2	7.3	2.6
PHY 425 RF	1.9	3.4	41.7	5.9	16.1	8.0	2.5
PHY 475 WRF	2.4	3.0	40.9	6.1	16.0	8.3	2.5
PHY 485 WRF	1.9	3.5	40.0	6.2	15.8	7.8	2.4
PM 1218 BG/RR	1.6	3.2	41.3	5.3	15.9	7.0	2.5
ST 4357B2RF	1.7	3.4	39.4	5.7	15.2	6.8	2.5
ST 4554B2RF	2.1	3.6	37.7	5.5	15.4	7.5	2.3
ST 4664RF	1.6	4.2	38.8	5.6	15.1	6.9	2.5
ST 5007B2RF	1.7	3.3	37.2	5.7	15.2	7.0	2.3
ST 5599BR	1.3	3.4	41.8	5.7	15.8	7.6	2.5
STX0416B2R	2.2	2.7	40.1	5.7	15.8	7.9	2.4
STX5885B2RF	2.4	3.3	39.1	5.6	16.9	8.1	2.2
Mean:	1.9	3.4	39.6	5.7	15.8	7.4	2.4
CV (%)	22.3	10.0	4.2	6.3	3.7	6.2	3.8
LSD (0.05)	0.6	0.5	2.3	0.5	0.8	0.6	0.1

Tennessee Agricultural Experiment Station data of Gwathmey and Michaud (2005).

Table 4-2. Late season plant growth data and plot notes from the 2005 Early Evaluation of new varieties at Jackson TN, listed alphabetically.

Variety	Fruiting Branches 7-Sep	Plant Height 7-Sep	Highest Harv'able P1† Boll 7-Sep	Vertical Fruiting Zone 7-Sep	NACB 7-Sep	P1† Boll Retention 7-Sep	Plot Notes‡
	no.	in.	fr. br. no.	nodes	nodes	%	
xBCG-1505 RF	13.6	38.5	10.0	9.7	3.3	53.2	l, p
BCG-4575 B2RF	13.4	42.6	9.6	9.4	4.2	49.2	b, r
BCG-4630 B2RF	13.3	43.4	9.2	8.4	4.2	49.5	
BCG-8391 B2RF	13.3	41.5	9.0	8.3	3.5	46.3	r
DP 108 RF	13.4	46.2	9.1	8.3	4.4	50.4	h, r
DP 110 RF	13.2	44.5	9.0	8.7	4.0	53.4	b, h, r
DP 113 B2RF	13.3	44.7	8.8	8.5	3.9	52.5	h, r, s
DP 117 B2RF	13.7	44.5	9.0	8.8	5.0	52.8	b, h
DP 444 BG/RR	13.5	45.1	9.6	9.0	3.8	53.0	f
DP 454 BG/RR	14.0	46.7	10.0	9.4	5.4	52.1	h
DP 555 BG/RR	13.8	42.7	9.3	8.9	4.9	54.0	
DPLX03X179R	13.4	43.3	10.0	8.5	5.5	49.6	b
DPLX04Y170BR	14.5	46.9	10.4	9.2	5.9	50.2	
FM 958 LL	13.5	40.9	9.2	8.6	4.0	45.7	b, k
FM 960 BR	13.4	44.2	10.0	8.9	5.6	55.5	b
FM 966 LL	13.1	41.5	9.3	8.6	4.2	49.0	r
FMX0052B2LL	13.0	41.0	8.7	8.2	4.5	45.2	k
FMX0222B2LL	12.6	39.3	8.8	8.3	4.3	51.6	k
FMX9166B2LL	13.4	41.4	9.4	8.6	5.7	44.0	
PHY 370 WR	13.8	46.9	9.6	9.0	5.6	49.9	
PHY 410 R	13.2	44.5	9.5	8.0	4.6	45.7	b, c
PHY 415 RF	13.3	45.1	9.2	8.9	4.8	55.8	r
PHY 425 RF	12.8	45.5	9.0	8.7	4.5	57.2	b
PHY 475 WRF	14.2	45.8	9.8	9.1	4.6	53.3	b, c
PHY 485 WRF	13.0	45.0	8.7	8.2	4.3	53.3	c
PM 1218 BG/RR	14.0	44.0	10.5	10.3	4.6	49.7	r
ST 4357B2RF	13.2	43.2	9.0	7.8	4.3	42.1	
ST 4554B2RF	13.6	42.0	9.1	8.4	5.6	46.9	
ST 4664RF	13.1	42.8	9.4	9.0	5.1	49.6	
ST 5007B2RF	13.4	43.1	9.7	8.7	4.4	51.8	r
ST 5599BR	13.4	45.7	9.0	8.2	5.3	41.2	
STX0416B2R	13.7	44.5	9.7	9.1	4.8	54.9	l
STX5885B2RF	15.0	43.3	10.7	9.5	5.7	53.0	
Mean:	13.5	43.6	9.4	8.8	4.7	50.4	
CV (%)	4.9	4.0	7.3	8.4	18.0	9.6	
LSD (0.05)	0.9	2.4	1.0	1.0	1.2	6.8	

†P1= first postion bolls only. ‡Plot notes: b= broken peduncles; c= cavitation scars; f= forked main stems; h= hairy leaves; k= okra-leaf off-types; l= lodged plants; p= premature leaf senescence; r= boll rot.
Plot notes collected by Owen Gwathmey.

STAGE 4 ADVANCED STRAINS TEST

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Seventeen experimental cotton strains were tested in a Stage 4 Advanced Strains Test at the West Tennessee Research & Education Center in Jackson, TN. The test also included seven popular cultivars as checks. Seed of the experimental strains were furnished by Delta and Pine Land Co. Entries included 10 strains with Roundup Flex (RF) gene technology and 14 Roundup Ready (R or RR) varieties. Entries also included 6 strains with Bollgard II (B2) genes and 9 Bollgard (B or BG) varieties.

All entries were planted on 5 May 2005 in 2-row plots arranged in a RCB design. A systemic insecticide and fungicide were applied in-furrow at planting. All plots received Roundup Ready weed management and conventional insect pest control. Soil was an irrigated, no-tilled Loring-Calloway silt loam fertilized with 80-30-90 lb/ac N-P_2O_5-K_2O.

Plant population density averaged 49,000/ac. Irrigation was initiated 18 days after planting (DAP) and a total of 3 inches of irrigation was applied during the season. A total of 44 oz/ac of mepiquat-type PGR product was applied in two applications, 78 and 88 DAP. A defoliant and boll opener were applied at 130 DAP in preparation for a once-over harvest. A total of 2372 DD60s accumulated between planting on 5 May and harvest on 22 September.

Plots were spindle-picked and weighed. The entire seedcotton harvest from each plot was shipped to D&PL for ginning and analysis of fiber quality. Statistical analysis was performed on lint yield, gin turnout and fiber data furnished by D&PL for each plot. In keeping with the research agreement, results are reported here for 11 experimental strains that were advanced by D&PL, as well as the 7 check varieties.

Table 5-1 presents lint yield, gin turnout, and fiber data. The highest yielding entry was the cultivar, DP 432 RR, but its yield was statistically equivalent to two other checks, DP 444 BG/RR and DP 455 BG/RR. The highest yielding Roundup Flex and Bollgard II/ Roundup Flex entries were DP 167 RF and DP 143 B2RF, both of which yielded significantly less than DP 432 RR. Lint yields of B2RF strains were constrained to some extent by relatively low gin turnouts.

While significant differences in fiber properties were detected, no entries in this test were likely to incur price discounts for micronaire, staple length, strength, or uniformity. Several strains had highly satisfactory fiber profiles. The micronaire, staple length, strength, and uniformity of DP 444 BG/RR and DP 167 RF were in ranges eligible for price premiums, according the CCC loan chart. Most color grades were strict low middling.

Table 5-1. Lint yield, gin turnout, and fiber properties of 18 varieties tested in the 2005 Stage 4 advanced strains test at Jackson TN, listed by yield rank[†].

Yield Rank	Entry [‡]	Check	Lint Yield	Gin Turnout	Micro-naire	Staple Length	Fiber Strength	Uni-formity	Color Grade
			lb/ac	%		32nd in.	g/tex	%	
1	DP 432 RR	✔	1463	36.8	4.4	36.5	31.4	82.8	41
2	DP 444 BG/RR	✔	1341	38.0	3.9	36.1	30.2	83.3	41
3	DP 455 BG/RR	✔	1324	39.1	4.1	36.0	30.2	82.1	31
4	DP 454 BG/RR		1321	37.7	3.9	36.0	30.4	81.6	41
5	DP 167 RF		1251	35.9	4.1	37.3	31.2	83.1	41
6	ST 5599BR	✔	1244	35.8	4.3	35.7	30.8	83.0	41
7	DP 147 RF		1226	37.8	4.2	36.3	28.8	81.5	41
8	DP 143 B2RF		1218	35.8	4.1	36.6	29.1	81.2	41
9	DP 494 RR	✔	1210	36.3	4.4	36.7	30.8	82.4	41
10	DP 555 BG/RR	✔	1209	38.7	4.3	35.8	28.7	81.5	41
11	DP 117 B2RF		1200	36.6	4.2	36.4	31.3	82.3	41
12	FM 960 BR	✔	1173	34.1	4.1	35.9	30.4	81.8	41
13	DP 152 RF		1166	37.1	4.2	36.3	29.8	82.0	31
14	DP 113 B2RF		1148	37.0	4.2	36.0	30.5	82.0	41
15	DP 164 B2RF		1147	35.3	4.3	38.2	30.8	83.1	31
16	DP 156 B2RF		1138	35.9	4.1	37.1	29.6	82.0	41
17	DP 108 RF		1107	36.5	3.9	36.2	30.4	81.6	41
18	DP 110 RF		1087	37.4	4.1	36.8	33.3	82.3	41
		Mean	1221	36.8	4.1	36.4	30.4	82.2	41
		CV (%)	8.0	3.5	5.6	2.3	5.1	1.0	
		LSD (0.05)	139	1.8	0.3	1.2	2.2	1.2	

Planted 5 May 2005. Defoliant and boll opener applied 12 Sept 2005. Harvested 22 Sept. 2005.

Irrigated, no-tilled Calloway Silt Loam. Trial manager: Carl Michaud. Investigator: C.O. Gwathmey.

[†] Raw data furnished by Delta and Pine Land Co. Statistical analysis by Tennessee Agricultural Experiment Station.

[‡] Experimental designations: DP108RF= DPLX04Z602F, DP110RF= DPLX04Z603F, DP113B2RF= DPLX04Z503DF, DP117B2RF= DPLX04Z600DF, DP143B2RF= DPLX04X419DF, DP147RF= DPLX04X462F, DP152RF= DPLX04X495F, DP156B2RF= DPLX04X436DF, DP164B2RF = DPLX04T126DF.

COUNTY STANDARD TEST DEMONSTRATIONS

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County Standard Test demonstrations conducted in 2005 included both early and medium/full-season transgenic cultivars. County standard tests of early-season transgenic cultivars were planted in 17 locations with each location containing 11 cultivars (5 Bollgard/Roundup Ready (BR), 1 Bollgard II/Roundup Ready (B2R), 1 Widestrike/Roundup Ready (WR) and 4 Roundup Ready (RR)). County standard tests of medium/full-season transgenic cultivars were planted in 11 locations with each location containing 7 cultivars (5 Bollgard/Roundup Ready (BR) and 2 Roundup Ready (RR)). Each variety was planted only once at each location and was maintained using the individual grower's production practices. Cultivars were defoliated for a once-over harvest and harvested once using spindle pickers. Seedcotton weights were determined using wheel scales or a boll buggy equipped with load cells. Seedcotton samples were ginned and classed similarly to small-plot samples, as described previously. County standard test data were analyzed using Proc GLM with locations as replications. Unlike 2004, significant differences were seen in yields and fiber quality from the locations in 2005. Rainfall distribution was less evenly distributed in 2005, resulting in lower overall yields. Although the excellent harvest conditions resulted in outstanding color grades, some fiber quality discounts from high micronaire and short staple were observed.

Table 1. Results of the early-season, transgenic cotton variety test, Carroll County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	37.0	1676	49	1.11	27.2	82.7	31-1	4	55.50
2	ST 4575 BR	37.4	1650	47	1.11	28.1	82.6	31-1	4	55.50
3	DP 444 BG/RR	37.6	1618	43	1.09	28.8	82.2	31-1	3	56.80
4	DP 445 BG/RR	38.2	1587	48	1.12	28.5	83.7	31-1	3	57.80
5	ST 5242 BR	37.0	1556	48	1.09	27.1	82.2	31-1	3	56.80
6	FM 960 RR	38.1	1496	41	1.11	30.8	80.7	31-1	4	55.95
7	DP 434 RR	38.7	1488	44	1.14	29.1	81.4	31-1	3	57.65
8	FM 960 B2R	35.7	1473	48	1.16	31.5	80.5	31-1	4	55.85
9	FM 960 BR	35.6	1458	44	1.09	31.0	81.7	31-1	4	55.20
10	PHY 410 R	36.9	1377	48	1.10	28.3	83.4	31-2	4	55.00
11	PHY 470 WR	35.2	1301	46	1.09	27.6	82.8	31-1	4	55.00
	Mean	37.0	1516	46	1.11	28.9	82.2		3.6	56.10

Agent	Steve Burgess	Soil Type	Grenada silt loam
Producer	David Renfro	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	9/30/2005	Fertilizer	110-100-80
Harvest Date	10/21/2005	Row Spacing	30" solid

Table 2. Results of the early-season, transgenic cotton variety test, Chester County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	38.9	1605	44	1.09	28.9	82.1	31-1	4	54.75
2	DP 445 BG/RR	40.2	1568	42	1.11	31.4	82.4	31-1	4	55.95
3	ST 4575 BR	40.0	1513	42	1.08	29.0	81.8	31-1	4	55.00
4	FM 960 BR	38.3	1512	40	1.07	33.1	80.7	21-2	3	56.00
5	FM 960 RR	38.6	1497	37	1.05	29.7	80.7	31-1	4	54.00
6	DP 444 BG/RR	38.3	1438	36	1.08	29.3	81.5	31-1	3	56.80
7	ST 5242 BR	37.8	1424	43	1.05	28.7	81.1	21-2	3	55.25
8	PHY 410 R	36.9	1368	43	1.07	28.9	81.4	31-1	5	50.95
9	DP 434 RR	38.6	1317	36	1.10	28.1	80.7	21-2	4	55.15
10	PHY 470 WR	35.8	1313	42	1.08	28.6	82.1	41-1	5	51.55
11	FM 960 B2R	33.6	1254	44	1.08	31.1	81.2	31-1	3	57.25
	Mean	37.9	1437	41	1.08	29.7	81.4		3.8	54.79

Agent	Brian Signaigo	Soil Type	Deanburg silt loam
Producer	Tim and Tommy Colbert	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
Defoliation Date	10/1/2005	Fertilizer	90-60-90
Harvest Date	10/14/2005	Row Spacing	38" solid

Table 3. Results of the early-season, transgenic cotton variety test, Crockett County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	FM 960 RR	39.2	1062	42	1.08	30.9	80.4	31-2	4	55.45
2	DP 432 RR	37.7	1042	47	1.07	28.8	81.7	41-3	4	52.50
3	DP 434 RR	38.7	1040	42	1.11	27.8	81.3	31-2	4	55.50
4	DP 445 BG/RR	40.0	1014	48	1.07	31.5	81.6	41-3	4	52.95
5	DP 444 BG/RR	38.3	938	45	1.05	28.0	82.8	41-3	4	52.75
6	ST 5242 BR	39.6	930	48	1.01	27.2	80.7	41-3	4	49.60
7	ST 4575 BR	39.9	927	49	1.04	29.4	81.3	42-1	4	49.25
8	FM 960 BR	38.5	843	46	1.03	32.5	80.1	41-3	4	51.30
9	PHY 410 R	36.6	839	47	1.06	31.6	82.9	41-3	5	51.00
10	FM 960 B2R	37.8	794	47	1.06	31.4	79.3	42-1	4	50.15
11	PHY 470 WR	36.5	712	46	1.03	30.6	82.0	42-1	4	49.70
	Mean	38.4	922	46	1.06	30.0	81.3		4.1	51.83

Agent	Richard Buntin	Soil Type	Grenada silt loam
Producer	Dwayne Dove	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	9/26/2005	Fertilizer	90-46-100
Harvest Date	10/4/2005	Row Spacing	38" solid

Table 4. Results of the full-season, transgenic cotton variety test, Crockett County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5599 BR	37.1	1300	46	1.09	31.8	81.6	31-2	5	53.00
2	ST 4686 R	40.6	1285	48	1.10	31.6	82.4	31-1	4	55.20
3	DP 455 BG/RR	40.8	1278	44	1.10	31.1	81.5	31-1	4	55.20
4	DP 449 BG/RR	38.2	1269	46	1.08	30.6	81.6	31-1	4	55.20
5	DP 488 BG/RR	37.1	1244	45	1.11	32.3	80.8	31-1	4	55.70
6	DP 555 BG/RR	39.4	1196	47	1.07	31.8	81.1	31-1	4	53.95
7	DP 494 RR	36.3	1185	47	1.11	33.3	82.1	31-2	4	55.75
	Mean	38.5	1251	46	1.09	31.8	81.6		4.1	54.86

Agent	Richard Buntin	Soil Type	Adler silt loam
Producer	Kevin Earnhart	Tillage	No-Till
Planting Date	5/11/2005	Previous Crop	Cotton
Defoliation Date	10/7/2005	Fertilizer	35-25-60, 50N SD
Harvest Date	10/17/2005	Row Spacing	38" solid

Table 5. Results of the early-season, transgenic cotton variety test, Dyer County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 4575 BR	38.7	1827	48	1.11	29.4	82.9	31-2	4	55.50
2	FM 960 RR	39.9	1733	44	1.10	29.9	81.6	31-2	5	52.80
3	DP 434 RR	38.8	1704	40	1.16	28.5	80.8	31-1	4	55.65
4	DP 432 RR	37.2	1652	47	1.09	29.1	82.4	41-1	5	51.30
5	ST 5242 BR	37.6	1607	45	1.07	27.8	82.0	31-1	3	54.75
6	DP 445 BG/RR	38.9	1575	45	1.12	30.1	82.2	31-2	4	55.50
7	FM 960 BR	36.4	1502	41	1.10	33.8	81.8	31-2	4	55.50
8	DP 444 BG/RR	39.2	1470	41	1.05	27.6	80.3	41-1	4	52.75
9	FM 960 B2R	35.9	1468	46	1.10	32.7	79.5	31-2	3	57.30
10	PHY 470 WR	37.5	1416	47	1.11	29.2	82.6	31-2	5	53.05
11	PHY 410 R	34.5	1341	46	1.11	29.0	83.2	41-1	6	49.10
	Mean	37.7	1572	45	1.10	29.7	81.8		4.3	53.93

Agent	Tim Campbell	Soil Type	Falaya silt loam
Producer	Davis Brothers	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	9/22/2005	Fertilizer	125-37-92-10S-1B
Harvest Date	10/15/2005	Row Spacing	38" solid

Table 6. Results of the full-season, transgenic cotton variety test, Dyer County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	36.6	1643	47	1.08	32.2	81.8	31-1	3	57.25
2	ST 5599 BR	35.8	1581	44	1.08	30.7	80.8	31-1	4	55.20
3	DP 455 BG/RR	39.0	1574	42	1.11	31.6	81.3	31-1	4	55.95
4	ST 4686 R	38.1	1567	45	1.08	30.3	82.2	31-2	4	55.00
5	DP 488 BG/RR	36.1	1498	42	1.16	32.1	81.4	31-3	5	53.70
6	DP 555 BG/RR	38.5	1430	43	1.11	31.5	81.6	31-2	4	55.70
7	DP 494 RR	35.5	1382	42	1.15	31.8	81.6	31-2	5	53.70
	Mean	37.1	1525	44	1.11	31.5	81.5		4.1	55.21

Agent	Tim Campbell	Soil Type	Falaya silt loam
Producer	Davis Brothers	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	9/22/2005	Fertilizer	125-37-92-10S-1B
Harvest Date	10/15/2005	Row Spacing	38" solid

Table 7. Results of the early-season, transgenic ultra narrow row cotton variety test, Fayette County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 445 BG/RR	39.7	1111	38	1.05	27.5	80.9	31-3	5	51.20
2	**ST 4575 BR**	37.6	1058	39	1.05	26.0	79.2	31-4	5	**48.80**
3	ST 5242 BR	35.6	1008	39	1.05	25.9	81.1	31-3	5	51.20
4	FM 960 B2R	36.4	959	34	1.06	29.4	81.8	31-2	5	49.05
5	**DP 434 RR**	32.8	899	37	1.05	28.4	78.8	31-4	5	**48.80**
6	DP 444 BG/RR	36.5	891	36	1.03	26.1	82.0	31-2	5	49.95
7	DP 432 RR	35.4	877	34	1.05	27.5	80.3	31-2	6	47.00
8	**FM 960 RR**	32.9	876	39	1.03	27.1	79.1	41-3	6	**45.90**
9	FM 960 BR	34.0	847	35	1.05	27.2	79.8	31-1	5	50.95
10	PHY 410 R	30.2	840	38	1.06	27.6	80.0	31-4	6	49.15
11	PHY 470 WR	34.2	815	35	1.04	26.9	80.7	31-1	5	49.95
	Mean	35.0	926	37	1.05	27.2	80.3		5.3	49.27

Agent	Jeff Via	Soil Type	Memphis silt loam
Producer	Mark and Joseph McNabb	Tillage	Conventional till
Planting Date	5/5/2005	Previous Crop	Cotton
Defoliation Date	9/1, 9/9/05	Fertilizer	80-60-110-1B
Harvest Date	9/14/2005	Row Spacing	10" UNR

Bolded varieties received a discount for bark.

Table 8. Results of the full-season, transgenic ultra narrow row cotton variety test, Fayette County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	**ST 4686 R**	35.6	1226	38	1.04	26.2	78.5	41-3	6	**45.90**
2	**DP 488 BG/RR**	36.5	1132	35	1.02	28.0	80.0	31-2	5	**47.95**
3	**DP 494 RR**	34.9	997	36	1.05	27.4	80.4	41-1	5	**48.30**
4	DP 449 BG/RR	32.5	996	38	1.07	29.1	80.6	31-1	5	51.20
5	**DP 455 BG/RR**	34.7	992	39	1.06	27.3	81.1	31-4	5	**49.20**
6	**DP 555 BG/RR**	33.4	916	44	1.06	28.2	81.6	31-2	4	**51.50**
7	**ST 5599 BR**	36.9	911	37	1.05	27.8	80.7	31-1	5	**49.20**
	Mean	34.9	1024	38	1.05	27.7	80.4		5.0	49.04

Agent	Jeff Via	Soil Type	Memphis silt loam
Producer	Mark and Joseph McNabb	Tillage	Conventional till
Planting Date	5/5/2005	Previous Crop	Cotton
Defoliation Date	9/1, 9/9/05	Fertilizer	80-60-110-1B
Harvest Date	9/14/2005	Row Spacing	10" UNR

Bolded varieties received a discount for bark.

Table 9. Results of the early-season, transgenic cotton variety test, Fayette County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 4575 BR	39.5	983	44	1.11	30.9	82.0	31-3	4	55.70
2	DP 445 BG/RR	39.1	886	41	1.12	30.8	82.8	31-4	4	56.20
3	FM 960 B2R	38.5	877	42	1.10	29.9	80.7	31-1	3	57.30
4	**DP 432 RR**	36.0	873	37	1.11	30.8	82.9	41-3	5	**50.50**
5	DP 434 RR	38.1	862	37	1.04	27.4	81.7	31-2	5	50.20
6	ST 5242 BR	40.3	860	41	1.09	30.8	80.9	31-3	4	55.45
7	FM 960 BR	36.8	839	39	1.09	34.5	83.1	31-2	4	53.75
8	PHY 410 R	36.1	799	43	1.10	30.3	82.6	31-4	4	55.25
9	PHY 470 WR	36.7	794	41	1.11	29.6	82.1	41-3	5	52.05
10	FM 960 RR	36.1	792	34	1.14	30.9	81.3	31-1	5	51.55
11	DP 444 BG/RR	39.1	691	38	1.10	28.7	82.7	31-1	4	55.25
	Mean	37.8	842	40	1.10	30.4	82.1		4.3	53.93

Agent	Jeff Via	Soil Type	Memphis silt loam
Producer	Conrad Powers	Tillage	Minimum Till
Planting Date	4/19/2005	Previous Crop	Cotton
Defoliation Date	9/2/2005	Fertilizer	30-50-110-10S-0.5B, 50N SD
Harvest Date	9/19/2005	Row Spacing	38" Solid

Bolded varieties received a discount for bark.

Table 10. Results of the full-season, transgenic cotton variety test, Fayette County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	39.4	942	47	1.03	28.7	79.9	31-1	3	52.45
2	ST 5599 BR	40.4	813	50	0.98	28.6	78.8	31-1	3	47.30
3	DP 455 BG/RR	41.0	783	44	1.03	28.5	79.2	21-2	3	52.40
4	DP 555 BG/RR	41.9	728	48	0.99	28.3	77.1	31-1	3	50.05
5	ST 4686 R	41.5	704	48	0.98	28.3	79.9	31-4	4	50.00
6	DP 494 RR	38.9	683	46	1.05	31.4	80.1	31-2	4	53.95
7	DP 488 BG/RR	36.0	655	44	1.04	28.3	79.4	31-2	4	51.15
	Mean	39.9	759	47	1.01	28.9	79.2		3.4	51.04

Agent	Jeff Via	Soil Type	Memphis silt loam
Producer	Sammy Rhea	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	10/20/2005	Fertilizer	80-60-110-9S-1B
Harvest Date	10/31/2005	Row Spacing	38" Solid

Table 11. Results of the early-season, transgenic cotton variety test, Gibson County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	38.8	1103	50	1.09	30.1	81.8	31-2	4	51.95
2	DP 445 BG/RR	40.7	951	49	1.08	31.3	82.7	31-2	3	57.50
3	DP 434 RR	40.2	923	47	1.13	28.8	80.6	21-1	3	58.05
4	ST 5242 BR	39.0	908	48	1.06	29.0	80.0	31-1	3	54.75
5	FM 960 RR	38.0	879	45	1.10	32.4	81.1	31-1	3	57.25
6	ST 4575 BR	40.1	840	51	1.10	30.6	82.5	31-2	4	52.40
7	DP 444 BG/RR	39.1	834	44	1.07	28.5	81.0	31-2	3	54.75
8	FM 960 BR	38.5	815	46	1.07	32.6	80.2	31-1	4	54.00
9	FM 960 B2R	38.1	767	48	1.10	33.4	81.3	31-2	4	55.25
10	PHY 470 WR	37.2	703	50	1.08	29.9	81.7	41-1	4	51.10
11	PHY 410 R	36.5	665	49	1.09	29.6	83.1	41-1	4	54.40
	Mean	38.8	853	48	1.09	30.6	81.5		3.5	54.67

Agent	Philip Shelby	Soil Type	Grenada silt loam
Producer	Tommy and Brent Griggs	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	10/4/2005	Fertilizer	85-0-120
Harvest Date	10/21/2005	Row Spacing	38" solid

Table 12. Results of the full-season, transgenic cotton variety test, Gibson County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	37.2	1337	50	1.07	31.9	80.6	21-2	3	52.65
2	DP 455 BG/RR	39.3	1295	47	1.05	30.3	79.8	21-2	3	55.50
3	DP 555 BG/RR	41.2	1290	50	1.06	30.1	80.5	31-1	3	51.95
4	DP 488 BG/RR	38.1	1246	50	1.14	31.7	81.1	31-1	3	55.05
5	ST 5599 BR	38.0	1162	50	1.10	32.2	81.9	31-1	4	52.15
6	ST 4686 R	38.5	1142	50	1.09	30.6	83.6	31-1	3	54.55
7	DP 494 RR	38.9	1125	51	1.11	32.2	81.7	31-1	3	54.85
	Mean	38.8	1228	50	1.09	31.3	81.3		3.1	53.81

Agent	Philip Shelby	Soil Type	Grenada silt loam
Producer	Rege Luckey and Sons	Tillage	No-Till
Planting Date	5/3/2005	Previous Crop	Cotton
Defoliation Date	10/8/2005	Fertilizer	80-30-90
Harvest Date	10/27/2005	Row Spacing	38" solid

Table 13. Results of the early-season, transgenic cotton variety test, Giles County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5242 BR	39.9	1045	42	1.04	26.9	80.7	31-1	3	52.70
2	ST 4575 BR	40.2	1023	38	1.03	27.6	81.3	31-2	5	50.20
3	DP 445 BG/RR	40.4	1005	37	1.07	29.6	81.0	31-1	4	54.00
4	DP 444 BG/RR	39.3	997	36	1.08	28.5	81.8	31-1	3	56.80
5	DP 434 RR	39.3	994	38	1.14	29.7	81.2	31-1	3	58.15
6	DP 432 RR	38.3	970	40	1.06	27.7	81.0	31-1	3	55.00
7	PHY 410 R	36.5	922	39	1.11	29.1	82.2	41-1	5	51.80
8	PHY 470 WR	37.4	913	40	1.06	28.3	81.6	31-2	4	53.75
9	FM 960 BR	37.0	908	39	1.05	32.0	80.6	31-1	4	54.20
10	FM 960 B2R	36.8	895	40	1.10	29.7	80.3	31-2	4	55.25
11	FM 960 RR	38.4	885	37	1.05	30.2	79.5	31-1	4	54.00
	Mean	38.5	960	39	1.07	29.0	81.0		3.8	54.17

Agent	Kevin Rose	Soil Type	Maury-Armour silt loam
Producer	Paul Allen	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
Defoliation Date	10/10/2005	Fertilizer	21-0-60-24S-1B, 40N SD
Harvest Date	10/15/2005	Row Spacing	38" solid

Table 14. Results of the early-season, transgenic cotton variety test, Hardeman County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 444 BG/RR	39.7	1500	41	1.08	30.0	82.0	31-2	4	55.25
2	DP 432 RR	39.5	1459	47	1.10	28.5	82.7	41-1	5	51.55
3	ST 5242 BR	39.1	1452	46	1.07	29.1	82.1	31-1	4	53.50
4	DP 445 BG/RR	40.1	1411	44	1.10	29.3	82.2	31-2	4	50.35
5	ST 4575 BR	37.0	1349	43	1.10	29.7	82.6	31-2	4	55.25
6	FM 960 RR	39.6	1319	42	1.10	31.7	82.0	31-1	4	55.45
7	DP 434 RR	39.4	1299	44	1.13	28.7	82.4	31-1	4	55.25
8	FM 960 B2R	36.3	1230	47	1.12	32.3	82.5	31-1	4	55.95
9	PHY 410 R	36.6	1160	47	1.08	29.4	82.5	41-1	4	54.15
10	PHY 470 WR	35.7	1145	45	1.13	29.3	82.9	41-1	5	49.80
11	FM 960 BR	36.0	1061	44	1.10	31.4	81.9	31-2	4	55.20
	Mean	38.1	1308	45	1.10	29.9	82.3		4.2	53.79

Agent	Bob Vickers	Soil Type	Lexington silt loam
Producer	Gem Mitchell	Tillage	No-Till
Planting Date	5/12/2005	Previous Crop	Cotton
Defoliation Date	10/5/2005	Fertilizer	30-40-80-11Zn, 60N SD
Harvest Date	10/20/2005	Row Spacing	38" solid

Table 15. Results of the full-season, transgenic cotton variety test, Hardeman County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 4686 R	40.1	1401	50	1.05	29.3	82.1	31-1	4	50.45
2	DP 494 RR	40.1	1378	48	1.13	29.8	81.9	31-2	4	55.50
3	ST 5599 BR	41.4	1366	48	1.08	30.7	82.0	31-1	4	55.20
4	DP 449 BG/RR	37.0	1366	44	1.11	31.3	82.4	31-1	4	55.70
5	DP 488 BG/RR	39.4	1364	47	1.12	32.0	81.6	31-2	4	55.70
6	DP 455 BG/RR	39.9	1355	43	1.09	30.5	82.4	31-2	4	55.20
7	DP 555 BG/RR	37.9	1348	48	1.10	27.9	81.2	21-2	3	57.15
	Mean	39.4	1368	47	1.10	30.2	81.9		3.9	54.99

Agent	Bob Vickers	Soil Type	Lexington silt loam
Producer	Gem Mitchell	Tillage	No-Till
Planting Date	5/12/2005	Previous Crop	Cotton
Defoliation Date	10/5/2005	Fertilizer	30-40-80-11Zn, 60N SD
Harvest Date	10/20/2005	Row Spacing	38" solid

Table 16. Results of the early-season, transgenic cotton variety test, Haywood County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 444 BG/RR	39.3	1129	42	1.09	30.2	80.8	21-2	5	53.30
2	ST 5242 BR	37.2	1063	45	1.05	29.0	81.6	31-2	4	53.50
3	DP 445 BG/RR	37.2	1051	41	1.08	30.3	80.6	31-1	4	55.25
4	ST 4575 BR	38.3	1013	47	1.02	30.5	80.0	31-1	4	52.00
5	FM 960 BR	36.3	853	46	1.02	31.0	80.7	31-1	4	52.00
6	DP 432 RR	37.1	852	46	1.03	28.7	80.5	31-2	5	49.95
7	FM 960 B2R	35.6	792	46	1.07	32.0	80.4	31-2	4	53.95
8	PHY 410 R	37.1	755	47	1.00	29.6	81.2	41-1	5	48.60
9	DP 434 RR	37.0	732	44	1.06	28.3	78.2	21-1	4	53.15
10	FM 960 RR	37.4	709	45	1.03	33.0	80.3	31-2	4	52.05
11	PHY 470 WR	32.4	613	46	1.02	29.8	82.5	41-1	5	49.95
	Mean	36.8	869	45	1.04	30.2	80.6		4.4	52.15

Agent	Tracey Sullivan	Soil Type	Loring silt loam
Producer	John Willis	Tillage	No-Till
Planting Date	5/16/2005	Previous Crop	Cotton
Defoliation Date	10/2/2005	Fertilizer	90-40-120
Harvest Date	10/26/2005	Row Spacing	38" solid

Table 17. Results of the full-season, transgenic cotton variety test, Haywood County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	36.6	762	48	1.03	31.8	80.2	21-2	4	52.30
2	ST 4686 R	37.5	735	47	1.03	30.0	81.9	31-2	4	51.80
3	DP 455 BG/RR	37.4	676	45	1.01	30.1	79.6	31-1	4	50.35
4	ST 5599 BR	37.6	664	48	1.01	30.5	78.7	31-1	5	48.85
5	DP 494 RR	37.1	631	49	1.05	32.3	81.2	31-2	5	51.40
6	DP 488 BG/RR	35.2	584	49	1.04	31.7	80.2	31-1	4	52.00
7	DP 555 BG/RR	36.9	514	48	1.00	29.6	79.1	31-1	4	49.95
	Mean	36.9	652	48	1.02	30.9	80.1		4.3	50.95

Agent	Tracey Sullivan	Soil Type	Loring silt loam
Producer	John Willis	Tillage	No-Till
Planting Date	5/16/2005	Previous Crop	Cotton
Defoliation Date	10/2/2005	Fertilizer	90-40-120
Harvest Date	10/26/2005	Row Spacing	38" solid

Table 18. Results of the early-season, transgenic cotton variety test, Lake County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5242 BR	37.8	1048	48	1.07	27.4	81.8	31-1	3	54.75
2	DP 444 BG/RR	37.6	972	44	1.10	29.6	81.0	41-1	3	54.85
3	ST 4575 BR	37.0	970	47	1.07	29.6	81.4	31-2	4	53.75
4	DP 445 BG/RR	37.1	942	46	1.10	29.1	82.3	31-2	3	56.80
5	FM 960 BR	36.3	862	48	1.07	31.5	80.6	31-1	3	55.20
6	DP 434 RR	38.9	837	44	1.11	28.4	79.3	31-2	3	57.05
7	FM 960 B2R	36.4	822	50	1.12	33.8	81.7	31-1	3	54.90
8	DP 432 RR	36.4	760	47	1.08	29.3	81.5	31-2	4	54.75
9	PHY 470 WR	35.4	718	47	1.08	29.5	82.6	31-2	5	53.05
10	FM 960 RR	36.9	661	44	1.06	30.1	81.0	31-2	3	55.00
11	PHY 410 R	34.2	645	46	1.06	29.4	82.3	41-1	4	52.50
	Mean	36.7	840	46	1.08	29.8	81.4		3.5	54.78

Agent	Greg Allen	Soil Type	Tiptonville silt loam
Producer	Tony Bargery	Tillage	No-Till
Planting Date	5/16/2005	Previous Crop	Cotton
Defoliation Date	9/30/2005	Fertilizer	100-0-150
Harvest Date	10/21/2005	Row Spacing	38" solid

Table 19. Results of the early-season, transgenic cotton variety test, Lauderdale County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	38.7	1384	45	1.13	29.8	79.4	32-2	4	52.95
2	DP 434 RR	38.8	1287	41	1.14	27.1	80.3	31-2	4	55.65
3	ST 4575 BR	39.7	1269	46	1.10	29.8	81.8	41-3	4	54.40
4	DP 445 BG/RR	37.5	1240	44	1.12	30.8	82.9	41-3	4	55.15
5	PHY 470 WR	38.3	1165	44	1.10	28.8	82.8	41-3	4	54.95
6	ST 5242 BR	36.3	1162	41	1.09	29.1	82.1	31-4	4	52.00
7	FM 960 BR	37.3	1154	41	1.08	31.9	81.1	41-1	5	54.65
8	PHY 410 R	37.2	1145	46	1.11	30.3	83.2	41-3	5	52.05
9	FM 960 RR	37.2	1136	37	1.08	34.0	80.3	41-1	4	54.15
10	DP 444 BG/RR	37.2	1129	41	1.09	30.1	82.2	41-1	4	54.15
11	FM 960 B2R	37.2	1113	43	1.14	32.9	80.2	41-1	4	55.00
	Mean	37.8	1199	43	1.11	30.4	81.5		4.2	54.10

Agent	Jerry Parker	Soil Type	Robinsonville sandy loam
Producer	Leslie Crook	Tillage	Conventional Till
Planting Date	5/3/2005	Previous Crop	Cotton
Defoliation Date	9/9/2005	Fertilizer	90-0-120
Harvest Date	9/29/2005	Row Spacing	38" solid

Table 20. Results of the full-season, transgenic cotton variety test, Lauderdale County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 555 BG/RR	42.9	1254	46	1.07	28.6	80.6	31-2	3	54.75
2	DP 455 BG/RR	40.4	1167	40	1.09	31.1	79.6	32-1	4	53.45
3	ST 5599 BR	38.2	1167	40	1.09	31.3	81.4	31-4	5	53.25
4	DP 449 BG/RR	37.0	1045	43	1.09	30.7	81.6	31-4	4	50.80
5	ST 4686 R	39.0	900	40	1.08	29.8	82.5	41-3	3	55.35
6	DP 488 BG/RR	35.8	857	39	1.14	32.6	80.3	41-1	4	55.20
7	DP 494 RR	37.4	805	42	1.08	29.9	82.4	41-3	4	54.40
	Mean	38.7	1028	41	1.09	30.6	81.2		3.9	53.89

Agent	Jerry Parker	Soil Type	Robinsonville sandy loam
Producer	Leslie Crook	Tillage	Conventional Till
Planting Date	5/3/2005	Previous Crop	Cotton
Defoliation Date	9/9/2005	Fertilizer	90-0-120
Harvest Date	9/30/2005	Row Spacing	38" solid

Table 21. Results of the early-season, transgenic cotton variety test, Lincoln County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5242 BR	39.2	1371	45	1.06	27.5	81.7	31-1	3	54.75
2	DP 444 BG/RR	39.7	1292	41	1.05	28.2	81.3	31-1	4	53.75
3	DP 445 BG/RR	38.7	1249	42	1.09	30.0	81.9	31-1	4	55.25
4	ST 4575 BR	39.5	1209	44	1.07	28.2	81.4	31-2	4	53.50
5	DP 432 RR	37.5	1199	46	1.06	28.3	82.3	31-2	5	50.95
6	FM 960 B2R	36.9	1188	45	1.07	30.3	80.7	31-2	4	53.75
7	FM 960 BR	37.5	1155	43	1.05	32.2	81.7	31-1	4	53.95
8	FM 960 RR	37.1	1118	41	1.09	31.5	80.7	41-1	4	54.60
9	PHY 410 R	36.2	1115	45	1.10	29.1	82.9	41-1	5	51.55
10	PHY 470 WR	34.0	1036	42	1.07	28.8	81.1	41-1	5	50.55
11	DP 434 RR	38.8	699	44	1.10	28.6	81.0	31-1	4	54.75
	Mean	37.7	1148	43	1.07	29.3	81.5		4.2	53.40

Agent	David Qualls	Soil Type	Armour silt loam
Producer	JBH Farms	Tillage	No-Till
Planting Date	4/28/2005	Previous Crop	Cotton
Defoliation Date	10/10/2005	Fertilizer	119-50-90-39S-11Mg
Harvest Date	10/27/2005	Row Spacing	38" solid

Table 22. Results of the early-season, transgenic cotton variety test, Madison County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	37.8	1248	46	1.06	28.7	81.9	41-1	4	52.50
2	DP 445 BG/RR	36.7	1219	46	1.13	31.0	82.3	31-1	3	57.90
3	ST 5242 BR	38.5	1204	46	1.06	29.5	82.4	31-2	3	55.00
4	ST 4575 BR	38.0	1197	43	1.10	30.4	82.2	31-2	4	55.00
5	FM 960 RR	38.7	1156	41	1.12	33.0	81.0	31-1	3	58.20
6	DP 444 BG/RR	39.0	1154	43	1.10	29.7	82.7	31-2	4	55.25
7	FM 960 BR	36.9	1142	42	1.07	32.6	81.2	31-2	3	55.50
8	FM 960 B2R	36.2	1138	47	1.13	33.3	82.5	31-1	3	58.20
9	DP 434 RR	38.2	1102	43	1.17	28.9	82.5	31-2	3	57.90
10	PHY 410 R	35.1	992	47	1.12	30.8	83.1	41-1	4	55.15
11	PHY 470 WR	35.9	964	48	1.09	29.4	83.0	41-1	4	54.15
	Mean	37.4	1138	45	1.10	30.7	82.3		3.5	55.89

Agent	Bill Wyatt	Soil Type	Memphis silt loam
Producer	Mark Smith	Tillage	No-Till
Planting Date	5/3/2005	Previous Crop	Cotton
Defoliation Date	10/4/2005	Fertilizer	75-60-90
Harvest Date	10/24/2005	Row Spacing	38" solid

Table 23. Results of the full-season, transgenic cotton variety test, Madison County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 488 BG/RR	37.3	1203	46	1.14	26.5	81.4	31-2	4	55.40
2	ST 4686 R	36.7	1200	46	1.14	30.8	82.8	31-2	4	56.10
3	ST 5599 BR	38.2	1184	48	1.12	31.1	82.4	31-2	4	55.70
4	DP 449 BG/RR	36.5	1172	44	1.08	31.5	81.6	31-1	3	57.25
5	DP 555 BG/RR	40.0	1161	46	1.09	31.3	80.1	31-2	3	57.25
6	DP 494 RR	38.0	1151	46	1.14	32.9	82.0	31-2	4	55.90
7	DP 455 BG/RR	39.0	1123	44	1.11	31.8	81.6	31-1	3	57.90
	Mean	38.0	1170	46	1.12	30.8	81.7		3.6	56.50

Agent	Bill Wyatt	Soil Type	Memphis silt loam
Producer	Mark Smith	Tillage	No-Till
Planting Date	5/3/2005	Previous Crop	Cotton
Defoliation Date	10/4/2005	Fertilizer	75-60-90
Harvest Date	10/24/2005	Row Spacing	38" solid

Table 24. Results of the early-season, transgenic cotton variety test, Obion County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 444 BG/RR	39.2	1421	49	1.08	29.6	81.9	21-1	3	57.40
2	DP 445 BG/RR	40.6	1391	52	1.11	31.3	83.0	11-1	3	55.70
3	DP 432 RR	39.4	1351	55	1.08	30.7	81.9	31-1	4	51.30
4	FM 960 BR	38.9	1343	52	1.05	32.5	81.2	21-2	3	52.70
5	ST 4575 BR	40.6	1240	54	1.09	30.6	81.5	21-2	3	53.70
6	ST 5242 BR	38.9	1235	50	1.07	29.3	82.0	21-1	3	52.20
7	PHY 470 WR	38.1	1210	52	1.06	30.1	82.2	31-1	3	51.95
8	FM 960 RR	40.0	1207	50	1.06	31.8	81.4	21-1	3	52.65
9	DP 434 RR	42.3	1083	50	1.07	28.6	80.5	21-2	3	52.20
10	PHY 410 R	37.2	1078	53	1.07	29.8	82.6	31-2	3	51.35
11	FM 960 B2R	39.7	1020	53	1.11	31.8	81.2	21-2	3	54.60
	Mean	39.5	1234	52	1.08	30.6	81.8		3.1	53.25

Agent	Tim Smith	Soil Type	Grenada silt loam
Producer	Rance Barnes	Tillage	No-Till
Planting Date	5/6/2005	Previous Crop	Cotton
Defoliation Date	10/6/2005	Fertilizer	50-25-115-11S-1B, 50N SD
Harvest Date	10/28/2005	Row Spacing	30" solid

Table 25. Results of the early-season, transgenic 15-inch cotton variety test, Shelby County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5242 BR	37.9	655	45	1.06	26.0	80.6	31-4	3	54.75
2	DP 445 BG/RR	40.9	629	46	1.08	27.2	81.8	31-2	3	56.80
3	DP 434 RR	40.7	596	42	1.06	25.1	79.2	31-2	3	53.50
4	DP 432 RR	36.1	593	41	1.10	26.7	81.0	42-1	4	51.10
5	FM 960 BR	38.0	570	46	1.01	27.7	79.6	31-2	3	50.65
6	DP 444 BG/RR	39.9	569	43	1.06	31.9	80.7	41-1	3	53.75
7	ST 4575 BR	37.8	562	45	1.08	28.6	80.9	42-1	4	50.85
8	FM 960 B2R	34.9	486	42	1.07	29.5	78.3	31-4	3	54.75
9	PHY 410 R	36.0	471	44	1.05	28.9	80.3	42-1	4	50.10
10	PHY 470 WR	37.5	462	44	1.03	29.1	79.6	32-2	3	50.80
11	FM 960 RR	38.0	435	40	1.05	27.1	80.0	31-1	3	55.00
	Mean	38.0	548	43	1.06	28.0	80.2		3.3	52.91

Agent	Becky Muller	Soil Type	Memphis silt loam
Producer	Sneed Bros. Farms	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
			0-30-80-1B, 80 N SD, 10#
Defoliation Date	9/12/2005	Fertilizer	Hydra Hume
Harvest Date	9/19/2005	Row Spacing	15" solid

Table 26. Results of the full-season, transgenic 15-inch cotton variety test, Shelby County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	39.6	752	49	1.08	28.5	80.9	41-3	3	54.60
2	DP 455 BG/RR	39.8	646	42	1.04	28.6	77.8	32-1	3	50.55
3	ST 5599 BR	39.0	635	48	1.03	25.1	78.8	32-1	3	49.30
4	ST 4686 R	39.3	593	48	1.10	30.9	79.8	41-3	3	55.05
5	DP 488 BG/RR	37.7	586	47	1.06	26.8	78.3	41-3	3	52.80
6	DP 555 BG/RR	38.1	527	44	1.04	27.0	78.5	41-1	3	50.85
7	DP 494 RR	38.6	498	47	1.08	28.6	79.0	41-3	4	53.50
	Mean	38.9	605	46	1.06	27.9	79.0		3.1	52.38

Agent	Becky Muller	Soil Type	Memphis silt loam
Producer	Sneed Bros. Farms	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
			0-30-80-1B, 80 N SD, 10#
Defoliation Date	9/12/2005	Fertilizer	Hydra Hume
Harvest Date	9/19/2005	Row Spacing	15" solid

Table 27. Results of the early-season, transgenic 30-inch cotton variety test, Shelby County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 432 RR	40.9	672	42	1.11	27.1	80.7	41-3	4	54.70
2	FM 960 BR	38.5	669	45	1.05	29.6	81.3	31-2	3	55.00
3	ST 5242 BR	40.8	659	45	1.05	26.0	81.7	31-1	3	54.75
4	DP 445 BG/RR	38.8	642	45	1.09	29.8	81.5	31-1	3	57.05
5	ST 4575 BR	40.5	605	46	1.06	28.4	80.7	41-3	3	53.30
6	DP 434 RR	41.8	595	43	1.09	25.6	79.1	31-3	3	56.40
7	DP 444 BG/RR	40.6	569	43	1.07	27.2	80.7	41-1	3	53.30
8	FM 960 RR	39.0	562	40	1.08	28.2	79.7	31-2	3	57.05
9	FM 960 B2R	37.9	550	45	1.09	29.1	79.2	31-1	3	56.40
10	PHY 470 WR	39.1	515	43	1.07	28.1	81.4	41-3	3	53.30
11	PHY 410 R	37.0	486	46	1.08	28.4	81.1	42-1	4	50.85
	Mean	39.5	593	44	1.08	28.0	80.6		3.2	54.74

Agent	Becky Muller	Soil Type	Memphis silt loam
Producer	Sneed Bros. Farms	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
			0-30-80-1B, 80 N SD, 10#
Defoliation Date	9/12/2005	Fertilizer	Hydra Hume
Harvest Date	9/19/2005	Row Spacing	30" solid

Table 28. Results of the full-season, transgenic 30-inch cotton variety test, Shelby County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 455 BG/RR	39.3	617	45	1.08	28.2	80.7	31-3	3	56.80
2	DP 449 BG/RR	38.8	600	49	1.05	27.2	81.3	31-1	3	54.75
3	ST 5599 BR	38.5	598	46	1.05	29.0	80.8	31-3	3	54.75
4	ST 4686 R	39.4	583	46	1.05	28.3	80.2	31-3	3	54.75
5	DP 494 RR	39.2	564	47	1.11	25.3	79.4	31-4	3	55.95
6	DP 488 BG/RR	36.0	547	47	1.09	31.1	80.6	31-3	3	57.25
7	DP 555 BG/RR	42.6	511	47	1.01	28.6	78.2	31-2	3	50.15
	Mean	39.1	574	47	1.06	28.2	80.2		3.0	54.91

Agent	Becky Muller	Soil Type	Memphis silt loam
Producer	Sneed Bros. Farms	Tillage	No-Till
Planting Date	5/4/2005	Previous Crop	Cotton
			0-30-80-1B, 80 N SD, 10#
Defoliation Date	9/12/2005	Fertilizer	Hydra Hume
Harvest Date	9/19/2005	Row Spacing	30" solid

Table 29. Results of the early-season, transgenic cotton variety test, Tipton County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 4575 BR	39.0	1282	48	1.04	28.8	82.0	41-3	4	50.80
2	DP 445 BG/RR	40.0	1275	46	1.06	30.2	82.1	41-3	4	52.75
3	FM 960 B2R	42.1	1243	46	1.08	32.3	80.9	31-2	4	55.20
4	DP 444 BG/RR	40.1	1224	44	1.09	30.9	82.5	41-1	4	54.60
5	FM 960 BR	37.6	1206	43	1.06	32.3	81.2	41-1	4	52.95
6	DP 432 RR	38.5	1157	47	1.05	28.8	80.5	42-1	4	50.10
7	DP 434 RR	39.0	1100	44	1.11	27.9	81.1	31-2	4	55.25
8	PHY 470 WR	36.1	1090	46	1.07	30.8	82.6	41-3	6	48.95
9	ST 5242 BR	38.4	1068	49	1.05	28.7	81.4	42-1	3	50.60
10	FM 960 RR	37.2	1043	41	1.07	30.9	81.3	41-1	5	51.00
11	PHY 410 R	36.9	1011	49	1.06	30.5	82.1	41-3	4	52.95
	Mean	38.6	1154	46	1.07	30.2	81.6		4.2	52.29

Agent	Michelle Rankin	Soil Type	Adler silt loam
Producer	Templeton Farms	Tillage	No-Till
Planting Date	5/9/2005	Previous Crop	Cotton
Defoliation Date	9/21/2005	Fertilizer	40-30-110, 55N SD
Harvest Date	10/6/2005	Row Spacing	38" solid

Table 30. Results of the full-season, transgenic cotton variety test, Tipton County, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	ST 5599 BR	39.5	1250	46	1.05	30.0	79.7	41-1	5	50.55
2	DP 449 BG/RR	38.1	1213	48	1.05	31.1	80.8	31-1	3	55.20
3	ST 4686 R	37.4	1198	49	1.07	29.4	82.2	31-2	5	50.95
4	DP 455 BG/RR	40.0	1187	41	1.08	30.8	79.0	31-2	4	55.05
5	DP 494 RR	38.2	1176	47	1.11	32.2	81.7	31-2	4	55.70
6	DP 488 BG/RR	39.9	1151	46	1.12	30.6	80.4	41-1	4	54.90
7	DP 555 BG/RR	42.1	1092	45	1.01	28.5	77.4	31-2	3	50.05
	Mean	39.3	1181	46	1.07	30.4	80.2		4.0	53.20

Agent	Michelle Rankin	Soil Type	Adler silt loam
Producer	Troy Hopkins and Sons	Tillage	No-Till
Planting Date	5/5/2005	Previous Crop	Cotton
Defoliation Date	10/24/2005	Fertilizer	90-0-120-12S-1B
Harvest Date	11/3/2005	Row Spacing	38" solid

Table 31. Results of the early-season, transgenic cotton variety test, WTREC, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 445 BG/RR	39.2	1494	39	1.13	30.0	82.1	31-2	4	55.75
2	ST 5242 BR	38.2	1488	37	1.08	29.1	80.8	31-2	4	55.00
3	DP 432 RR	38.3	1443	39	1.11	29.9	81.8	41-1	4	54.95
4	ST 4575 BR	38.7	1441	40	1.10	28.6	81.5	31-1	4	55.00
5	DP 444 BG/RR	38.6	1328	36	1.10	28.5	81.4	41-1	4	53.90
6	FM 960 BR	37.1	1322	35	1.08	34.5	80.7	31-1	4	55.25
7	PHY 410 R	37.3	1268	40	1.09	28.4	82.3	41-1	5	51.55
8	FM 960 B2R	36.6	1258	41	1.09	32.7	79.0	31-1	4	55.10
9	DP 434 RR	38.8	1253	36	1.16	28.3	81.3	31-1	3	57.65
10	PHY 470 WR	35.9	1219	39	1.07	29.5	81.8	31-2	4	54.00
11	FM 960 RR	36.9	1192	32	1.10	30.8	79.5	31-1	4	51.60
	Mean	37.8	1337	38	1.10	30.0	81.1		4.0	54.52

Agent	Chism Craig	Soil Type	Collins silt loam
Producer	WTREC	Tillage	No-Till
Planting Date	5/12/2005	Previous Crop	Cotton
Defoliation Date	9/18/2005	Fertilizer	80-60-90
Harvest Date	10/5/2005	Row Spacing	38" solid

Table 32. Results of the full-season, transgenic cotton variety test, WTREC, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 555 BG/RR	39.4	1452	40	1.11	30.4	81.4	31-1	3	57.95
2	DP 449 BG/RR	37.2	1448	38	1.11	30.5	81.7	31-1	3	58.15
3	ST 5599 BR	39.3	1431	41	1.10	30.8	80.9	31-1	4	55.45
4	DP 455 BG/RR	40.1	1347	35	1.12	31.7	80.2	31-1	3	57.90
5	ST 4686 R	38.9	1289	40	1.10	29.7	82.0	31-1	4	55.25
6	DP 494 RR	38.3	1269	40	1.16	33.5	81.7	31-2	4	56.15
7	DP 488 BG/RR	38.0	1229	41	1.13	31.4	81.5	31-1	3	58.15
	Mean	38.7	1352	39	1.12	31.1	81.3		3.4	57.00

Agent	Chism Craig	Soil Type	Collins silt loam
Producer	WTREC	Tillage	No-Till
Planting Date	5/12/2005	Previous Crop	Cotton
Defoliation Date	9/22, 9/27/2005	Fertilizer	80-60-90
Harvest Date	10/5/2005	Row Spacing	38" solid

Table 33. Results of the early-season, transgenic cotton variety test, all locations, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 445 BG/RR	39.2	1170	44	1.10	30.0	82.1	31-1	3.7	55.26
2	ST 4575 BR	38.9	1156	45	1.08	29.2	81.6	31-2	4.0	53.14
3	DP 432 RR	37.9	1153	45	1.08	28.8	81.5	31-2	4.3	52.28
4	ST 5242 BR	38.4	1144	45	1.06	28.1	81.4	31-1	3.4	53.91
5	DP 444 BG/RR	38.9	1114	41	1.08	29.0	81.7	31-2	3.7	54.51
6	FM 960 BR	37.1	1056	43	1.06	31.8	81.0	31-1	3.8	53.75
7	DP 434 RR	38.9	1043	42	1.11	28.1	80.6	31-1	3.6	55.15
8	FM 960 RR	37.9	1040	41	1.08	30.7	80.6	31-1	3.9	53.90
9	FM 960 B2R	37.0	1017	45	1.10	31.5	80.6	31-1	3.6	55.01
10	PHY 410 R	36.0	962	45	1.08	29.4	82.2	41-1	4.5	51.97
11	PHY 470 WR	36.3	953	44	1.07	29.2	82.0	31-2	4.4	51.94
	Mean	37.8	1073	43.7	1.08	29.6	81.4		3.9	53.71
	CV (%)	3.0	8.2	3.7	1.8	3.4	0.9		11.6	2.9
	LSD (0.05)	0.7	56	1	0.01	0.6	0.4		0.3	1.00

Table 34. Results of the full-season, transgenic cotton variety test, all locations, 2005.

Yield Rank	Variety	Gin Turnout	Lint Yield	Mike	Fiber Length	Fiber Strength	Uni-formity	HVI Color	Leaf	Loan Value
1	DP 449 BG/RR	37.3	1119	45	1.07	30.4	81.2	31-1	3.5	54.42
2	ST 5599 BR	38.4	1082	46	1.06	30.0	80.7	31-1	4.2	52.30
3	DP 455 BG/RR	39.3	1080	42	1.07	30.1	80.3	31-1	3.6	54.27
4	ST 4686 R	38.7	1063	46	1.07	29.6	81.5	31-2	3.9	53.10
5	DP 555 BG/RR	39.6	1032	46	1.06	29.4	79.9	31-2	3.3	53.17
6	DP 488 BG/RR	37.2	1023	44	1.10	30.4	80.5	31-2	3.8	54.23
7	DP 494 RR	37.8	988	45	1.10	30.8	81.2	31-2	4.1	54.23
	Mean	**38.3**	**1055**	**45**	**1.08**	**30.1**	**80.7**		**3.8**	**53.68**
	CV(%)	3.4	7.5	3.8	1.90	4.2	1.0		11.6	3.1
	LSD (0.05)	1.0	62	1.4	0.02	1.0	0.7		0.3	1.30

GLOSSARY OF TERMS

Bronze wilt: A disorder of cotton plants in which upper canopy leaves turn a bronze color, have a higher leaf temperature, and wilt more than normal under drought stress. Plants with this disorder may redden and shed more fruit than others, and some may die prematurely. The cause of bronze wilt is not yet proven, but it occurs more often in some varieties than others.

Bt cotton: A variety containing genes from the bacterium, *Bacillus thuringiensis,* that confer resistance to certain lepidopterous insect pests such as tobacco budworm. Sometimes abbreviated ***B*** or ***BG*** in a variety name. **BII** or **B2** indicates that the variety carries a second *Bt* gene.

BXN: A designation in a variety name that indicates resistance to bromoxynil herbicide.

CCC: Commodity Credit Corporation, an entity administered by the Farm Services Agency of the USDA.

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.

CV: Coefficient of variation. It is 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.

DAP: Days after planting.

Earliness: A measure of how rapidly a cotton crop reaches maturity. Relative earliness of varieties is measured by the percentage of total cotton yield that is picked at first harvest. Earliness is under genetic control but is strongly influenced by crop management.

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

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

HVI: High Volume Instrument measurement of fiber length, strength, Micronaire, length uniformity, trash, and color.

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.

HNR: Height-to-node ratio of the main stem, a measure of 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.

Upland Length Conversion Chart			
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.

LL: Designation in a variety name that indicates resistance to glufosinate herbicide.

LSD: Least significant difference. It is a 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 ***Mike*** or ***Mic.***

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)

NACB: 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.

NAWF: 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.

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.

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

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).

RCB: Randomized complete block. An experimental design in which all treatments (varieties) are randomly assigned to plots in separate blocks (replications) in the field.

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 variety containing genes that confer resistance to glyphosate herbicide that may be sprayed topically until the fifth true leaf reaches the size of a quarter. Subsequent glyphosate applications must be directed towards the base of the plant. Usually abbreviated ***R*** or ***RR*** in a variety name.

Roundup Ready Flex®: A variety containing genes that confer resistance to glyphosate herbicide that may be sprayed topically beyond the fifth true leaf stage. Usually abbreviated ***RF*** in a variety name.

Seedcotton: Lint plus seed, trash and excess moisture.

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:

Classer's leaf grade	HVI Trash Measurement	
	4-year avg[1]	1996 crop[2]
	%	reading
1	0.12	01
2	0.20	02
3	0.33	03
4	0.50	05
5	0.68	06
6	0.92	08
7	1.21	10
8	--	13

Sources: [1] (USDA, 1999). [2] (USDA, 1997).

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)

Verticillium Wilt: A disease of cotton and numerous other plant species in which the *Verticillium dahliae* fungus causes plugging of the water-conducting tissues and produces toxic substances which result in mottling of leaves, wilting, defoliation, and possibly death of infected plants. Second growth frequently occurs in plants that are defoliated but not killed.

Widestrike: A variety containing genes from the bacterium, *Bacillus thuringiensis,* that confer resistance to certain lepidopterous insect pests such as tobacco budworm. Sometimes abbreviated ***W*** in a variety name.

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