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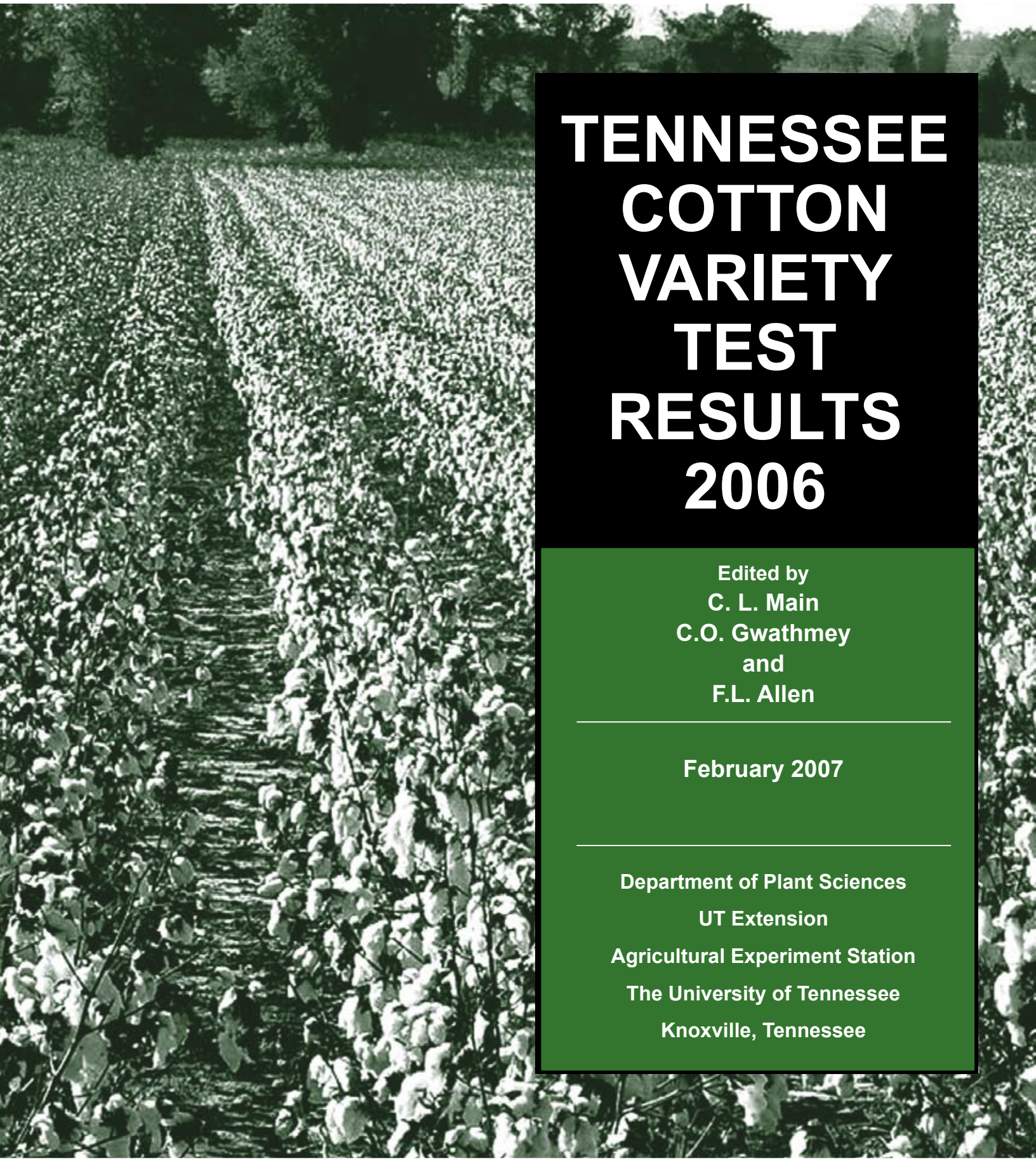

TENNESSEE COTTON VARIETY TEST RESULTS 2006

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February 2007

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THE UNIVERSITY of TENNESSEE

This report is also available online at:
http://www.UTcrops.com

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INTRODUCTION

The University of Tennessee cotton variety testing program provides an unbiased evaluation of new varieties for commercial cotton production in Tennessee. 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, produce high quality fiber, and 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 field environments in Tennessee.

Information contained within this report covers the major components of the 2006 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 Trials (OVT) and Stage IV Advanced Strains Testing. In addition to experiment station testing, the results from county standard test (CST) demonstrations of cotton varieties in 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, and Fullen Farms while no-tillage methods were used at the West Tennessee Research and Education Center, Milan 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. Supplemental irrigation was applied only at the West Tennessee Research and Education Center at Jackson. At all locations, seedcotton harvested from each plot was weighed at picking. Subsamples of seedcotton were collected from each plot, weighed, and air-dried, bulked by varietal entry for OVT testing. Gin turnout was determined for each sample 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. Two subsamples of lint of each entry were analyzed by HVI procedures at the International Textile Center in Lubbock, TX.

County Standard Test demonstrations were conducted in 2006 to evaluate commercial cultivar performance in multiple large plot environments. County standard testing included Roundup Ready and Roundup Ready Flex cultivars. County standard tests of early/mid-season Roundup Ready cultivars were planted in 12 locations with each location containing 9 cultivars. County standard tests of early-season Roundup Ready Flex cultivars were planted in 13 locations with each location containing 10 cultivars. County standard tests of medium/full-season Roundup Ready Flex cultivars were planted in 10 locations with each location containing 5 cultivars. Each cultivar was planted in only one plot at each location and was maintained using the individual grower's production practices. Seed cotton harvested from each plot was weighed and sampled at picking. Samples were weighed, air dried, and ginned at the West Tennessee Research and Education Center as described above. A sub sample of lint of each entry was analyzed by HVI and hand-classing procedures at the USDA Cotton Classing Office in Memphis, TN. Statistical analysis was not possible for each location but overall yield and fiber quality data were analyzed using Proc MIXED using locations as replications.

ACKNOWLEDGMENTS

The authors appreciate the technical and financial support provided by the seed companies listed below. Their contributions to the University of Tennessee gift fund for cotton research helped defray some costs of conducting this research in 2006: Bayer CropScience; Beltwide Cotton Genetics; CropLan Genetics, Delta and Pine Land Co.; PhytoGen Seed Co.; Stoneville Pedigreed Seed Co.; UAP/Dyna-Gro.

We gratefully acknowledge donations of agricultural chemicals used in conducting this research from Bayer CropScience, BASF Corp., Crompton-Uniroyal Chemical Co., Dow AgroSciences, DuPont, FMC Corp., Monsanto, Syngenta Crop Protection, Inc., and Valent USA Corp.

We appreciate logistical support and cooperation provided by the following Branch Station administrators:

- 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 2006.

We thank Steve, Parker, Michael, Jimmy and Scott Fullen for their cooperation and support in conducting cotton variety testing on their farm in 2006.

Extension and applied research on cotton varieties was supported in part by Cotton Incorporated State Support Project No. 06-772TN.

Research at Ames Plantation was partially funded by the Hobart Ames Foundation under terms of the will of the late Julia Colony Ames.

We appreciate the cooperation of county Extension agents and producers who conducted the county variety demonstrations in 2006. We also appreciate the technical cooperation of the International Textile Center in Lubbock, TX, and 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 2006 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
- Stoneville Pedigreed Seed Co., 6625 Lenox Park Drive, Suite 117, Memphis TN 38115
- United Agri-Products, 57 Germantown Court, Suite 200, Cordova, TN 38018

OFFICIAL VARIETY TRIALS

C. O. Gwathmey, T. D. Bush and C. E. Michaud
West Tennessee Research & Education Center
The University of Tennessee
Jackson, TN

Two types of Official Variety Trials (OVTs) of cotton were conducted in Tennessee in 2006. Conventional varieties, and varieties with Liberty-Link (LL) or Roundup-Ready (RR) genes, were tested in **OVT-A** at four locations, and varieties containing Roundup-Ready Flex (RF) genes were tested in **OVT-B** at five locations. There were 28 entries from four seed companies in **OVT-A** and 36 entries from eight companies in **OVT-B**, including six popular check cultivars in all the OVTs. Entries in **OVT-A** included 21 varieties with RR genes, 13 Bollgard (B or BG) varieties, six Liberty-Link (LL) varieties, four varieties with Bollgard II (B2) genes, and two Widestrike (W) varieties. In **OVT-B**, there were 30 varieties with Roundup-Ready Flex (F or RF) gene technology, 21 varieties with B2 genes, and two Widestrike varieties in addition to the six checks. All OVTs were planted between 8 May and 18 May 2006 in 2-row plots arranged in a RCB design with four replications at each location. The row spacing was 38 inches at all locations except at Milan, where row spacing was 40 inches. Planting dates, soil types, tillage and other details are footnoted in each of the yield tables.

Between 112 and 134 days after planting (DAP), nodes above cracked boll (NACB) to the highest harvestable boll were counted in each plot. Relative maturity of the entries was estimated by assuming 50 DD60s (degree-days, base 60 F) per main-stem node to open successive first-position bolls, up to the highest harvestable boll. Plots were spindle-picked between 134 and 150 DAP. Seedcotton from each plot was weighed, and two grab samples of each variety were ginned to calculate gin turnout. Two lint samples of each variety from each location were analyzed by HVI at the International Textile Center in Lubbock, TX.

Table 1 presents average yield and gin turnout data for 23 entries tested in **OVT-A** across four locations in 2005 and 2006. The highest yielding entry was PHY310R, but its yield was statistically equivalent to three other entries, including two check cultivars.

Table 2 shows the average yield, gin turnout and fiber properties of 28 entries tested in **OVT-A** across four locations in 2006. The highest yielding entry was a check cultivar, ST5599BR, but the top 10 yielding varieties were statistically equivalent in yield. Most entries in this top-10 group had satisfactory fiber quality, but ST5599BR and PHY310R had high micronaire, DP454BG/RR and PHY310R had short staple length, and lint of DP454BG/RR had relatively high trash content.

Tables 3 – 6 present lint yield, gin turnout, and fiber data from the four different **OVT-A** locations.

Table 7 shows final plant height, and **Table 8** shows the relative maturity of the 28 **OVT-A** entries. Maturity data indicate that PM1218BG/RR was the earliest of the **OVT-A** entries along with eight others, including three check cultivars (DP432RR, DP444BG/RR and ST5242BR). The latest maturing **OVT-A** entry was DP555BG/RR.

Table 9 presents average yields and gin turnouts for 19 entries tested in **OVT-B** across five locations in 2005 and 2006. The highest yielding entry was the check, ST5599BR, and two other check varieties had statistically equivalent yields. The highest yielding B2RF entry, ST4554B2RF, had a lower mean yield than the top three entries but it was statistically equivalent in yield to two other checks, DP444BG/RR and FM960BR. In general, lower yields of entries with B2RF genes were associated with lower gin turnouts.

Table 10 shows the average yield, gin turnout and fiber properties of 36 entries tested in **OVT-B** across five locations in 2006. The highest yielding entry was a check cultivar, ST5599BR, and two other check varieties had statistically equivalent yields. The highest yielding B2RF entry, ST4427B2RF, was statistically equivalent in yield to two other checks, FM960BR and DP444BG/RR. Lower yields of some entries with B2RF genes were associated with lower gin turnouts. Most entries in the top-10 yielding group had satisfactory fiber quality, but ST4427B2RF and PHY425RF had relatively high trash content in the lint.

Tables 11 – 15 present lint yield, gin turnout, and fiber data from the five different **OVT-B** locations.

Table 16 shows final plant height, and **Table 17** shows the relative maturity of the 36 **OVT-B** entries. Maturity data indicate that CG3520B2RF was the earliest of the **OVT-B** entries along with 16 others, including two check cultivars, FM960BR and DP444BG/RR. The latest maturing **OVT-B** entry was the check cultivar, ST5599BR.

Table 1. Lint yield and gin turnout of 23 entries in the 2005 and 2006 Tennessee Official Variety Trial "A" averaged across two years and four locations, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout
			lb/ac	%
1	PHY 310 R		1385	40.6
2	ST 5599BR	✔	1371	39.5
3	ST 5242BR	✔	1367	39.5
4	PHY 370 WR		1346	39.6
5	ST 4575BR		1313	39.4
6	DP 444 BG/RR	✔	1301	40.0
7	ST 4686R		1282	39.5
8	DP 432 RR	✔	1279	38.4
9	DP 455 BG/RR		1273	41.0
10	FM 960 BR	✔	1268	38.2
11	DP 454 BG/RR		1267	39.8
12	DP 555 BG/RR		1262	39.2
13	DP 488 BG/RR		1255	38.0
14	DP 393		1254	38.9
15	DP 494 RR		1250	38.9
16	DP 449 BG/RR		1237	37.9
17	PM 1218 BG/RR		1216	39.1
18	DP 445 BG/RR		1206	39.3
19	PHY 470 WR		1199	38.3
20	FM 966 LL		1181	37.5
21	DP 434 RR		1160	40.4
22	FM 960 B2R		1153	37.8
23	FM 958 LL		1150	37.9
	Mean		1260	39.1
	LSD (0.05)		65.1	0.7
	CV (%)		10.5	1.9

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

Table 2. Lint yield, gin turnout, and fiber quality of 28 entries in the 2006 Tennessee Official Variety Trial "A" averaged across four test locations, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	ST 5599BR	✔	1383	40.1	5.0	1.07	30.3	82.3	0.8	41
2	DP 488 BG/RR		1381	39.3	4.8	1.13	31.2	83.0	0.5	31
3	ST 5242BR	✔	1371	40.4	4.9	1.06	28.2	83.5	0.6	31
4	DP 454 BG/RR		1364	41.3	4.5	1.03	29.6	82.7	1.5	41
5	PHY 310 R		1356	41.6	5.0	1.04	29.5	83.2	0.7	31
6	DP 515 BG/RR		1354	40.9	4.9	1.07	29.6	82.3	0.5	31
7	FM 960 BR	✔	1326	39.3	4.8	1.08	33.3	82.7	0.7	31
8	DP 555 BG/RR		1325	41.2	4.7	1.06	29.7	81.4	0.5	31
9	DP 494 RR		1303	39.5	4.9	1.11	31.8	83.2	0.7	31
10	ST 4575BR		1300	39.8	4.8	1.06	30.2	83.2	0.9	31
11	PHY 370 WR	✔	1286	40.2	4.9	1.04	29.9	83.3	0.7	31
12	DP 432 RR	✔	1283	39.4	4.9	1.07	30.2	83.9	0.9	31
13	ST 4686R		1274	39.4	4.6	1.07	30.4	83.5	0.8	31
14	DP 455 BG/RR		1264	41.1	4.5	1.08	30.8	82.1	0.7	31
15	DP 449 BG/RR		1257	38.7	4.6	1.07	32.0	82.9	0.6	31
16	FM 1600LL		1254	39.9	4.7	1.09	32.7	83.1	0.5	31
17	DP 393		1253	39.6	4.7	1.11	31.3	83.8	0.7	31
18	DP 444 BG/RR	✔	1249	40.5	4.4	1.06	29.4	82.9	0.7	31
19	PM 1218 BG/RR		1230	40.1	5.1	1.03	28.0	83.4	0.6	31
20	FM 966 LL		1198	38.5	4.8	1.08	34.1	83.1	0.8	31
21	FMX06451LLB2		1181	37.8	4.9	1.10	30.8	83.2	1.0	41
22	PHY 470 WR		1179	39.3	4.9	1.08	30.3	83.8	0.8	41
23	FM 960 B2R		1178	38.9	4.5	1.12	33.3	82.4	0.6	31
24	DP 445 BG/RR		1153	39.6	4.6	1.09	31.2	83.7	0.8	31
25	FM 958 LL		1152	39.0	4.8	1.12	32.5	82.3	0.7	31
26	FM 955 LLB2		1151	37.5	4.8	1.15	31.6	83.6	0.7	31
27	DP 434 RR		1136	41.3	4.6	1.11	29.1	82.8	0.6	31
28	FM 965 LLB2		1112	37.1	4.5	1.12	33.4	83.1	0.7	31
	Mean		1259	39.7	4.7	1.08	30.9	83.0	0.7	31
	LSD (0.05)		90.4	0.9	0.1	0.01	0.9	0.5	0.2	
	CV (%)		10.3	2.3	3.2	1.2	3.0	0.6	29.8	

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data furnished by ITC, Lubbock TX.

Table 3. Lint yield, gin turnout, and fiber quality of 28 entries in the 2006 Tennessee Official Variety Trial "A" at Agricenter International, Memphis TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	ST 5599BR	✔	1019	39.9	5.4	0.99	28.1	81.1	0.7	42
2	ST 5242BR	✔	982	39.3	5.3	1.00	26.6	83.0	0.4	41
3	DP 488 BG/RR		956	38.7	5.2	1.06	30.0	82.4	0.4	41
4	PM 1218 BG/RR		914	39.2	5.5	0.98	27.8	82.1	0.4	31
5	DP 515 BG/RR		881	40.0	5.3	1.01	27.2	81.6	0.4	31
6	DP 494 RR		873	39.5	5.2	1.05	31.4	82.7	0.4	41
7	DP 393		856	38.7	4.9	1.05	31.2	82.6	0.6	31
8	DP 454 BG/RR		852	39.7	4.7	0.96	29.1	81.5	1.2	41
9	FM 960 BR	✔	840	38.7	5.0	1.03	31.3	82.1	0.8	31
10	FM 1600LL		823	39.2	4.8	1.05	32.0	82.2	0.5	41
11	DP 445 BG/RR		816	38.2	5.0	1.04	30.1	82.9	0.5	41
12	DP 432 RR	✔	812	37.8	5.3	0.99	29.2	82.2	0.8	31
13	DP 449 BG/RR		807	37.2	4.8	1.02	31.0	81.6	0.5	31
14	ST 4686R		805	37.5	4.9	1.00	29.9	82.5	0.6	41
15	FM 966 LL		793	38.0	4.9	1.03	33.0	82.4	0.8	31
16	PHY 310 R		792	39.2	5.2	0.98	29.1	82.8	0.6	41
17	ST 4575BR		790	39.0	5.1	1.00	29.7	82.0	0.6	41
18	PHY 370 WR	✔	788	39.5	5.2	0.99	29.1	82.6	0.5	31
19	FM 955 LLB2		787	37.9	5.2	1.07	29.6	82.5	0.8	31
20	DP 444 BG/RR	✔	786	39.1	4.8	1.00	26.1	81.9	0.5	41
21	DP 555 BG/RR		783	40.8	4.7	1.00	28.9	80.8	0.5	31
22	DP 455 BG/RR		766	39.9	4.9	1.00	28.7	80.9	0.6	31
23	PHY 470 WR		750	38.9	5.2	1.04	31.5	83.9	0.8	41
24	FMX06451LLB2		750	36.5	4.8	1.05	29.6	82.8	1.0	41
25	DP 434 RR		727	41.3	5.0	1.06	27.5	82.0	0.6	31
26	FM 960 B2R		713	38.4	4.9	1.05	30.8	81.4	0.7	31
27	FM 958 LL		705	37.3	4.9	1.08	31.6	81.1	0.7	31
28	FM 965 LLB2		638	36.7	4.8	1.05	32.3	81.3	0.8	31
	Mean		814	38.8	5.0	1.02	29.7	82.1	0.6	41
	LSD (0.05)		133.0							
	CV (%)		11.6							

Planted 17 May 2006. Harvest-aids applied 9 Sept and 20 Sept 2006. Harvested 28 Sept 2006. 100-60-90 lb/ac N-P_2O_5-K_2O. Conventional, non-irrigated Falaya silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 4. Lint yield, gin turnout, and fiber quality of 28 entries in the 2006 Tennessee Official Variety Trial "A" at Ames Plantation, Grand Junction TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	DP 488 BG/RR		1334	40.0	4.5	1.15	31.4	82.5	0.5	31
2	DP 555 BG/RR		1285	40.8	4.4	1.09	30.3	82.3	0.7	31
3	DP 515 BG/RR		1262	42.7	4.9	1.07	30.8	82.2	0.6	31
4	ST 5599BR	✔	1255	40.1	4.8	1.09	29.8	82.3	0.9	31
5	DP 454 BG/RR		1252	43.0	4.6	1.03	29.5	82.4	1.0	41
6	ST 5242BR	✔	1230	41.7	4.7	1.07	28.7	83.1	0.6	31
7	FM 960 BR	✔	1228	40.4	4.7	1.08	33.7	83.0	0.5	31
8	PHY 470 WR		1180	40.3	4.7	1.10	30.3	83.6	0.8	31
9	DP 449 BG/RR		1155	39.0	4.5	1.08	31.4	82.9	0.4	31
10	PHY 310 R		1153	42.1	5.0	1.04	29.5	83.5	0.6	31
11	ST 4686R		1147	40.0	4.6	1.09	31.2	83.8	0.6	31
12	ST 4575BR		1143	40.2	4.6	1.07	30.4	83.1	0.8	31
13	FM 1600LL		1135	41.2	4.7	1.11	32.9	83.4	0.5	31
14	DP 432 RR	✔	1124	39.3	4.9	1.07	30.6	84.5	0.6	41
15	DP 494 RR		1120	38.9	4.9	1.11	31.0	83.4	0.7	31
16	FM 960 B2R		1107	39.5	4.3	1.14	33.4	82.8	0.8	31
17	FM 955 LLB2		1107	37.6	4.5	1.19	32.3	84.2	0.4	31
18	DP 444 BG/RR	✔	1104	40.7	4.2	1.06	30.6	82.5	0.6	31
19	FM 966 LL		1104	39.7	4.9	1.08	34.8	83.2	0.9	31
20	FM 958 LL		1102	39.9	4.8	1.14	33.0	82.5	0.5	31
21	PM 1218 BG/RR		1077	40.4	4.8	1.05	28.7	83.8	0.5	31
22	DP 393		1064	40.2	4.7	1.12	31.0	83.5	0.6	31
23	DP 455 BG/RR		1056	41.5	4.3	1.08	31.2	82.1	0.8	31
24	DP 434 RR		1045	41.7	4.4	1.11	29.2	82.8	0.6	31
25	FM 965 LLB2		1026	38.9	4.4	1.14	33.8	83.2	0.5	31
26	FMX06451LLB2		1017	38.2	4.9	1.10	31.1	83.2	0.9	31
27	PHY 370 WR	✔	1013	40.3	4.7	1.06	31.1	83.6	0.5	31
28	DP 445 BG/RR		947	39.9	4.4	1.09	31.5	83.7	0.8	31
	Mean		1135	40.3	4.6	1.09	31.2	83.1	0.6	31
	LSD (0.05)		147							
	CV (%)		9.2							

Planted 15 May 2006. Harvest-aids applied 26 Sept 2006. Harvested 9 Oct 2006. 80-30-100 lb/ac N-P_2O_5-K_2O.
No-tilled, non-irrigated Memphis silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).
HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 5. Lint yield, gin turnout, and fiber quality of 28 entries in the 2006 Tennessee Official Variety Trial "A" at WTREC, Jackson TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	DP 454 BG/RR		1817	42.0	4.5	1.05	29.2	83.1	1.6	41
2	ST 5599BR	✔	1794	40.6	5.0	1.09	30.9	82.9	0.7	41
3	PHY 370 WR	✔	1786	41.5	5.0	1.05	29.4	82.8	0.8	31
4	PHY 310 R		1778	42.6	5.1	1.06	29.6	82.8	0.5	31
5	FM 960 BR	✔	1762	39.7	4.8	1.09	32.5	82.3	0.5	31
6	DP 515 BG/RR		1757	41.4	4.8	1.10	29.7	81.9	0.4	31
7	ST 5242BR	✔	1742	41.3	5.0	1.07	27.4	83.4	0.4	31
8	DP 488 BG/RR		1709	39.7	4.8	1.15	30.5	83.5	0.4	31
9	DP 494 RR		1707	39.7	4.7	1.14	32.5	83.5	0.8	31
10	DP 555 BG/RR		1699	41.3	4.8	1.07	30.1	81.0	0.4	31
11	FM 1600LL		1689	40.1	4.8	1.10	32.1	82.9	0.6	31
12	DP 455 BG/RR		1667	42.1	4.6	1.11	30.8	81.9	0.6	31
13	DP 393		1640	39.7	4.5	1.14	32.0	84.5	0.7	31
14	DP 449 BG/RR		1637	39.8	4.5	1.09	31.9	82.9	0.4	31
15	DP 432 RR	✔	1623	40.9	4.7	1.10	30.5	84.2	0.8	31
16	ST 4686R		1617	40.7	4.6	1.09	29.7	83.6	0.7	31
17	ST 4575BR		1605	40.3	4.8	1.07	29.3	83.1	0.7	31
18	FM 966 LL		1597	38.4	4.7	1.10	33.4	82.9	0.7	31
19	FMX06451LLB2		1591	39.3	4.9	1.13	30.6	83.1	1.1	41
20	FM 960 B2R		1589	40.0	4.6	1.13	32.5	82.1	0.4	31
21	DP 444 BG/RR	✔	1583	41.2	4.5	1.09	29.7	83.4	0.6	31
22	FM 965 LLB2		1534	37.4	4.4	1.14	33.3	83.2	0.6	31
23	DP 434 RR		1531	41.1	4.5	1.14	29.4	82.9	0.5	31
24	FM 958 LL		1495	39.6	4.9	1.13	31.6	82.4	0.9	41
25	PM 1218 BG/RR		1489	40.4	5.1	1.06	27.5	83.6	0.6	31
26	DP 445 BG/RR		1462	40.5	4.6	1.11	32.2	84.0	0.8	31
27	PHY 470 WR		1446	39.6	5.0	1.10	29.6	83.7	0.8	41
28	FM 955 LLB2		1432	38.1	4.8	1.15	31.2	83.8	0.7	31
	Mean		1635	40.3	4.7	1.10	30.7	83.0	0.7	31
	LSD (0.05)		170.1							
	CV (%)		7.4							

Planted 8 May 2006. Harvest-aids applied 21 Sept and 26 Sept 2006. Harvested 3 Oct 2006. 80-0-90 lb/ac N-P_2O_5-K_2O. No-tilled, irrigated Loring-Calloway silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 6. Lint yield, gin turnout, and fiber quality of 28 entries in the 2006 Tennessee Official Variety Trial "A" at Milan REC, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	PHY 310 R		1701	42.4	4.8	1.07	29.8	83.9	1.1	31
2	ST 4575BR		1663	39.8	4.6	1.11	31.6	84.6	1.5	31
3	DP 432 RR	✔	1572	39.5	4.7	1.12	30.6	84.8	1.4	41
4	DP 455 BG/RR		1569	40.9	4.4	1.14	32.6	83.5	0.7	31
5	PHY 370 WR	✔	1558	39.6	4.8	1.09	30.3	84.2	1.1	31
6	DP 454 BG/RR		1534	40.6	4.2	1.10	30.7	83.8	2.3	41
7	DP 555 BG/RR		1533	41.7	4.8	1.09	29.6	81.7	0.6	31
8	ST 5242BR	✔	1531	39.3	4.6	1.11	30.1	84.5	0.9	31
9	ST 4686R		1526	39.3	4.5	1.11	30.7	84.3	1.3	41
10	DP 488 BG/RR		1524	38.7	4.6	1.16	32.8	83.7	0.9	41
11	DP 444 BG/RR	✔	1522	41.0	4.3	1.10	31.4	84.0	1.1	41
12	DP 515 BG/RR		1516	39.3	4.8	1.10	30.8	83.4	0.6	31
13	DP 494 RR		1513	39.7	4.8	1.14	32.2	83.2	0.8	31
14	FM 960 BR	✔	1476	38.6	4.6	1.12	35.6	83.5	1.0	31
15	ST 5599BR	✔	1464	39.6	4.9	1.10	32.4	82.9	1.1	31
16	DP 393		1451	39.8	4.8	1.14	31.2	84.7	1.1	31
17	PM 1218 BG/RR		1442	40.4	5.0	1.06	28.0	84.1	1.1	31
18	DP 449 BG/RR		1428	38.9	4.6	1.11	33.7	84.1	1.0	31
19	DP 445 BG/RR		1387	39.6	4.5	1.13	31.2	84.3	1.1	31
20	FM 1600LL		1372	39.1	4.5	1.12	33.7	83.9	0.6	41
21	FMX06451LLB2		1366	37.3	4.9	1.13	31.9	83.7	1.0	41
22	PHY 470 WR		1339	38.3	4.9	1.09	30.0	84.0	1.0	41
23	FM 958 LL		1307	39.2	4.8	1.15	33.8	83.3	0.9	41
24	FM 960 B2R		1304	37.5	4.2	1.15	36.7	83.3	0.7	31
25	FM 966 LL		1297	38.0	4.8	1.11	35.3	84.1	0.7	41
26	FM 955 LLB2		1277	36.5	4.7	1.18	33.3	83.9	0.8	31
27	FM 965 LLB2		1248	35.4	4.3	1.16	34.4	84.7	1.1	41
28	DP 434 RR		1240	41.2	4.4	1.13	30.2	83.6	0.7	31
	Mean		1452	39.3	4.6	1.12	31.9	83.8	1.0	31
	LSD (0.05)		253							
	CV (%)		12.4							

Planted 18 May 2006. Harvest-aids applied 2 Oct 2006. Harvested 10 Oct 2006. 97-45-90 lb/ac N-P_2O_5-K_2O.
No-tilled, non-irrigated Loring silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).
HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 7. Final plant height of 28 entries in the 2006 OVT-A planted at four test locations in Tennessee, listed alphabetically.

Entry	✔	Agricenter	Ames Pln.	Jackson	Milan	Average
		in.	in.	in.	in.	in.
DP 393		27	35	36	32	33
DP 432 RR	✔	25	33	35	37	32
DP 434 RR		26	36	38	33	33
DP 444 BG/RR	✔	28	39	39	37	36
DP 445 BG/RR		25	31	36	32	31
DP 449 BG/RR		25	33	34	29	30
DP 454 BG/RR		30	40	41	35	36
DP 455 BG/RR		27	38	35	34	33
DP 488 BG/RR		26	37	37	33	33
DP 494 RR		28	34	35	35	33
DP 515 BG/RR		26	35	37	34	33
DP 555 BG/RR		28	39	38	38	36
FM 955 LLB2		25	34	33	32	31
FM 958 LL		24	31	30	29	29
FM 960 B2R		24	35	34	30	31
FM 960 BR	✔	26	35	35	35	33
FM 965 LLB2		24	31	32	28	28
FM 966 LL		25	37	35	30	32
FMX06451LLB2		27	34	37	33	33
FM 1600LL		27	37	39	35	34
PHY 310 R		28	36	37	35	34
PHY 370 WR	✔	27	37	38	39	35
PHY 470 WR		25	36	35	30	32
PM 1218 BG/RR		28	36	37	36	34
ST 4575BR		25	36	34	34	32
ST 4686R		27	37	34	33	33
ST 5242BR	✔	27	40	38	38	36
ST 5599BR	✔	29	38	38	34	35
Mean		26	36	36	34	33
LSD (0.05)		2.5	4.8	3.1	5.3	2.0
CV (%)		5.8	8.2	5.3	9.6	7.6

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

Table 8. Nodes above cracked boll (NACB) on dates indicated, and estimated DD60s remaining to maturity of 28 entries in the 2006 OVT-A planted at four locations in Tennessee, listed in order of average maturity.

Entry		Agricenter 9/6/06		Ames Pln. 9/13/06		Jackson 9/13/06		Milan 9/19/06		Average 9/12/06	
		NACB†	DD60‡	NACB	DD60	NACB	DD60	NACB	DD60	NACB	DD60
PM 1218 BG/RR		1.4	72	4.2	210	1.9	93	1.0	50	2.1	106
FM 958 LL		1.2	62	3.5	177	2.8	138	1.4	70	2.2	112
DP 432 RR	✔	1.9	93	3.4	168	2.8	138	1.8	88	2.4	122
FM 966 LL		1.8	92	2.3	117	4.0	198	1.9	97	2.5	126
PHY 310 R		1.9	93	3.7	187	3.1	155	1.6	80	2.6	129
DP 444 BG/RR	✔	1.6	78	3.1	153	3.1	157	3.3	163	2.8	138
FM 1600LL		1.4	70	4.3	217	3.7	185	1.6	82	2.8	138
ST 5242BR	✔	2.0	100	2.9	147	3.4	170	2.7	137	2.8	138
PHY 470 WR		2.1	105	4.8	238	2.9	143	1.5	73	2.8	140
DP 488 BG/RR		1.8	88	4.7	235	3.9	193	1.5	75	3.0	148
FMX06451LLB2		1.7	85	4.9	243	4.3	213	1.3	65	3.0	152
ST 4686R		1.9	95	4.9	243	2.9	145	2.7	135	3.1	155
DP 455 BG/RR		2.1	105	5.9	293	2.7	133	2.4	120	3.3	163
FM 965 LLB2		1.9	95	3.9	193	4.4	220	3.1	153	3.3	165
PHY 370 WR	✔	1.9	97	5.0	248	3.6	180	2.7	137	3.3	165
DP 434 RR		2.1	103	4.1	207	4.0	202	3.2	158	3.4	168
DP 515 BG/RR		2.7	133	5.1	255	3.9	195	2.2	112	3.5	174
ST 4575BR		2.8	142	3.7	187	4.2	210	3.2	162	3.5	175
DP 449 BG/RR		2.0	100	5.0	252	5.2	260	2.1	103	3.6	179
FM 960 BR	✔	2.1	105	5.3	263	4.7	233	2.3	113	3.6	179
DP 393		2.3	115	5.0	250	4.5	223	2.6	128	3.6	179
FM 960 B2R		2.4	120	4.9	247	5.7	287	2.0	100	3.8	188
DP 454 BG/RR		2.7	135	5.4	272	4.4	218	2.9	145	3.9	193
DP 494 RR		2.2	108	6.0	300	4.1	207	3.1	155	3.9	193
DP 445 BG/RR		2.7	133	6.6	332	3.9	197	3.3	163	4.1	206
FM 955 LLB2		2.5	123	6.2	309	4.1	205	3.8	188	4.1	206
ST 5599BR	✔	2.6	130	7.4	370	4.5	227	3.3	167	4.5	223
DP 555 BG/RR		3.6	178	6.9	347	5.8	290	3.8	190	5.0	251
Mean		2.1	106	4.8	238	3.9	193	2.4	122	3.3	165
LSD (0.05)		0.9	47	1.9	95	1.5	76	1.3	65	0.7	36
CV (%)		27	27	24	24	24	24	32	32	27	27

†NACB = nodes above highest 1st-position cracked boll to the highest harvestable boll.

‡DD60 = degree-days, base 60 F. DD60 to maturity = NACB x (50 DD60/node) to open the highest harvestable boll.

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

Table 9. Lint yield and gin turnout of 19 entries in the 2005 and 2006 Tennessee Official Variety Trial "B" averaged across two years and five locations, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout
			lb/ac	%
1	ST 5599BR	✔	1492	38.4
2	DP 432 RR	✔	1484	38.7
3	ST 5242BR	✔	1465	38.8
4	ST 4554B2RF		1380	37.0
5	DP 444 BG/RR	✔	1379	39.0
6	FM 960 BR	✔	1336	37.4
7	PHY 425 RF		1313	36.1
8	BW-4630B2F		1305	36.8
9	DP 110 RF		1291	37.3
10	ST 4357B2RF		1287	36.9
11	PHY 485 WRF		1267	36.6
12	DP 117 B2RF		1266	37.7
13	DG 2520 B2RF		1260	36.6
14	CG 4020B2RF		1240	36.1
15	BW-3255B2F		1223	35.5
16	CG 3020B2RF		1221	35.2
17	DG 2100 B2RF		1206	35.2
18	CG 3520B2RF		1202	35.8
19	DG 2242 B2RF		1192	35.6
	Mean		1306	36.9
	LSD (0.05)		60.0	0.8
	CV (%)		10.3	2.5

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

Table 10. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" averaged across five test locations, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strengt	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	ST 5599BR	✔	1594	39.0	4.8	1.10	31.2	82.9	1.0	41
2	ST 5242BR	✔	1541	39.8	4.7	1.07	28.1	83.7	0.7	31
3	PHY 370 WR	✔	1538	39.7	4.7	1.08	30.6	83.8	0.8	31
4	DP 432 RR	✔	1505	38.9	4.7	1.09	29.9	84.2	1.1	41
5	ST 4427B2RF		1478	37.5	4.3	1.11	30.8	83.3	1.3	41
6	FM 960 BR	✔	1474	38.3	4.6	1.09	33.3	83.2	0.8	31
7	PHY 425 RF		1473	37.2	4.8	1.12	31.3	84.5	1.2	41
8	ST 5327B2RF		1458	38.7	4.4	1.11	31.6	83.7	0.9	31
9	DP 444 BG/RR	✔	1422	40.0	4.2	1.09	30.2	83.4	1.1	31
10	DP 147 RF		1413	38.0	4.2	1.17	31.9	82.3	1.1	41
11	ST 4554B2RF		1412	38.1	4.6	1.10	30.9	83.4	1.0	31
12	DP 143 B2RF		1396	37.4	4.1	1.18	31.5	81.9	1.0	41
13	DP 117 B2RF		1390	38.8	4.5	1.12	33.5	83.5	1.5	41
14	DP 110 RF		1387	38.3	4.6	1.12	34.4	84.2	1.4	41
15	DPLX06W650F		1376	37.9	4.4	1.12	30.9	83.7	1.1	41
16	DG 2520 B2RF		1365	37.8	4.3	1.13	29.3	82.7	0.7	31
17	PHY 485 WRF		1362	37.8	4.8	1.11	31.1	84.1	1.3	41
18	BW-4630B2F		1355	37.8	4.2	1.13	29.1	83.1	0.8	31
19	ST 4357B2RF		1352	37.7	4.3	1.12	28.9	82.8	0.7	31
20	Americot 1532B2RF		1349	38.0	4.3	1.13	29.3	82.7	0.7	31
21	DG 2490 B2RF		1338	36.1	3.8	1.08	29.2	82.9	0.9	31
22	DP 121 RF		1334	40.2	4.7	1.11	31.3	83.7	1.0	41
23	FM 9060F		1322	39.2	4.5	1.15	31.6	82.3	0.7	31
24	FM 9068F		1320	37.9	4.5	1.15	33.0	83.4	1.0	31
25	FM 9058F		1314	38.8	4.4	1.15	31.5	82.3	0.8	31
26	BW-2038B2F		1308	36.8	4.2	1.13	28.8	83.3	1.3	41
27	DG 2100 B2RF		1307	36.4	4.2	1.08	29.0	83.3	0.7	31
28	ST 4700 B2RF		1307	36.9	4.2	1.12	28.9	83.0	1.0	41
29	CG 4020B2RF		1305	37.5	4.2	1.14	29.5	83.2	0.7	31
30	CG 3520B2RF		1297	37.3	4.2	1.12	28.7	83.2	1.1	41
31	CG 3020B2RF		1294	36.1	4.2	1.09	29.2	83.4	0.8	31
32	FM 9063 B2F		1282	37.1	4.4	1.17	34.1	83.2	1.0	31
33	DG 2242 B2RF		1276	36.9	4.2	1.12	29.0	83.3	1.2	41
34	BW-3255B2F		1269	36.4	4.1	1.10	29.2	83.4	0.8	31
35	BW-8391 B2F		1246	34.8	4.3	1.17	30.4	83.8	0.9	41
36	BW-4021B2F		1216	35.6	4.0	1.10	29.3	82.9	0.8	31
	Mean		1371	37.8	4.4	1.12	30.6	83.3	1.0	31
	LSD (0.05)		78.7	0.8	0.1	0.01	0.9	0.5	0.3	
	CV (%)		9.2	2.3	3.0	1.2	3.2	0.7	25.8	

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data provided by ITC, Lubbock TX.

Table 11. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" at Agricenter International, Memphis TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strengt	Uni-formity	HVI Trash	HVI Color
			lb/ac	%		in.	g/tex	%	%	
1	ST 5242BR	✔	923	39.6	5.4	0.99	26.5	83.0	0.4	41
2	DP 444 BG/RR	✔	862	38.9	4.8	1.02	27.3	82.0	1.0	41
3	DP 432 RR	✔	807	37.8	5.4	1.02	28.6	82.4	0.8	42
4	ST 4427B2RF		786	36.3	5.0	1.02	28.3	82.5	0.7	41
5	PHY 370 WR	✔	784	38.9	5.3	1.00	29.1	82.7	0.6	41
6	ST 5599BR	✔	782	39.3	5.7	1.01	28.2	82.2	0.5	42
7	DP 143 B2RF		744	36.2	4.9	1.10	29.1	81.4	0.7	41
8	DP 117 B2RF		738	37.8	5.2	1.04	30.7	82.9	0.9	41
9	ST 5327B2RF		715	37.1	5.0	1.02	30.1	82.7	0.7	42
10	DP 110 RF		706	37.2	5.2	1.04	32.2	83.6	0.9	41
11	FM 960 BR	✔	704	38.0	5.3	1.00	31.3	81.7	0.6	41
12	PHY 425 RF		696	35.0	5.3	1.04	31.0	83.6	0.8	42
13	ST 4554B2RF		696	37.4	5.1	1.01	30.2	82.0	0.6	42
14	ST 4357B2RF		684	36.2	4.8	1.04	27.8	81.3	0.5	41
15	DP 147 RF		680	36.9	4.8	1.09	29.2	80.7	0.9	41
16	DP 121 RF		674	39.4	5.3	1.01	28.4	83.0	0.9	41
17	FM 9068F		666	38.0	5.1	1.09	32.0	81.9	0.7	31
18	DPLX06W650F		659	36.6	5.0	1.03	29.3	82.6	0.7	41
19	Americot 1532B2RF		656	37.2	4.9	1.05	27.8	82.1	0.4	31
20	DG 2520 B2RF		655	36.2	4.7	1.07	28.7	81.4	0.6	41
21	DG 2100 B2RF		648	34.3	4.6	1.02	27.9	82.5	1.0	41
22	PHY 485 WRF		642	37.1	5.3	1.03	30.8	83.1	0.9	42
23	DG 2490 B2RF		642	34.8	4.3	1.02	28.9	81.7	0.7	41
24	FM 9063 B2F		634	37.1	4.9	1.10	32.4	81.9	0.9	41
25	BW-4630B2F		626	36.2	4.7	1.05	28.2	82.0	0.9	41
26	CG 4020B2RF		616	36.4	4.8	1.06	27.6	82.6	0.5	41
27	CG 3520B2RF		609	35.3	4.6	1.05	27.0	82.1	0.9	41
28	BW-8391 B2F		596	34.0	4.7	1.08	27.8	82.7	0.5	41
29	CG 3020B2RF		592	34.2	4.6	1.01	27.4	81.7	0.6	31
30	DG 2242 B2RF		586	34.6	4.6	1.05	28.2	82.1	0.9	41
31	FM 9060F		581	38.3	5.0	1.09	29.8	81.4	0.8	41
32	BW-2038B2F		581	34.8	4.6	1.04	27.5	81.8	0.9	41
33	ST 4700 B2RF		570	34.1	4.6	1.06	27.6	82.6	0.7	41
34	FM 9058F		558	37.7	4.9	1.07	29.9	80.7	0.8	41
35	BW-3255B2F		558	34.7	4.5	1.03	28.1	82.3	0.6	41
36	BW-4021B2F		512	32.9	4.4	1.02	27.5	82.2	0.5	41
	Mean		671	36.6	4.9	1.04	28.9	82.2	0.7	41
	LSD (0.05)		88.5							
	CV (%)		9.4							

Planted 17 May 2006. Harvest-aids applied 9 Sept and 20 Sept 2006. Harvested 28 Sept 2006. 100-60-90 lb/ac N-P_2O_5-K_2O. Conventional, non-irrigated Falaya silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 12. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" at Ames Plantation, Grand Junction TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strengt	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	DP 432 RR	✔	1288	39.9	5.0	1.05	29.8	83.7	0.8	41
2	DP 143 B2RF		1283	38.6	4.4	1.14	30.1	80.6	0.7	31
3	PHY 425 RF		1281	38.4	5.2	1.10	31.0	84.3	0.9	31
4	ST 5242BR	✔	1272	41.9	4.8	1.05	27.7	83.3	0.3	21
5	ST 5599BR	✔	1264	39.8	4.9	1.09	30.8	82.5	0.9	31
6	PHY 370 WR	✔	1261	39.8	4.9	1.05	30.5	83.1	0.6	31
7	DP 147 RF		1243	40.0	4.4	1.15	32.1	81.8	1.0	31
8	ST 4554B2RF		1232	38.2	4.8	1.08	30.7	83.1	1.0	31
9	ST 5327B2RF		1228	39.3	4.4	1.09	30.5	83.6	0.9	31
10	FM 960 BR	✔	1220	40.2	5.0	1.05	32.6	82.3	0.5	31
11	DP 444 BG/RR	✔	1219	41.3	4.4	1.05	30.1	82.5	0.6	31
12	DP 110 RF		1210	39.8	4.7	1.11	34.6	83.6	1.6	41
13	DPLX06W650F		1206	39.3	4.5	1.10	30.2	82.8	0.9	31
14	PHY 485 WRF		1193	38.9	5.2	1.08	30.8	83.6	1.2	41
15	ST 4427B2RF		1192	38.5	4.7	1.09	29.6	82.8	0.9	31
16	FM 9060F		1189	41.1	4.6	1.13	31.3	81.7	0.5	31
17	DP 117 B2RF		1157	40.6	4.8	1.10	32.4	82.6	1.1	41
18	FM 9058F		1151	40.0	4.8	1.12	30.4	81.3	0.5	31
19	FM 9063 B2F		1132	39.1	4.6	1.17	33.2	82.9	0.6	31
20	FM 9068F		1128	39.7	4.8	1.14	33.0	82.9	0.7	31
21	DP 121 RF		1125	41.9	4.7	1.09	32.0	83.1	0.8	31
22	BW-4630B2F		1110	38.8	4.5	1.10	28.0	81.9	0.3	21
23	ST 4700 B2RF		1095	38.7	4.4	1.10	28.6	82.0	0.6	31
24	BW-2038B2F		1094	37.5	4.3	1.10	28.2	82.5	1.2	31
25	Americot 1532B2RF		1077	40.3	4.6	1.10	29.1	81.6	0.4	31
26	ST 4357B2RF		1066	39.0	4.5	1.10	27.6	82.5	0.6	31
27	DG 2520 B2RF		1062	39.0	4.6	1.11	28.5	81.9	0.4	31
28	BW-3255B2F		1056	37.3	4.2	1.09	29.5	82.4	0.5	31
29	CG 4020B2RF		1051	39.1	4.4	1.11	29.3	82.2	0.6	31
30	DG 2100 B2RF		1038	38.1	4.5	1.05	27.8	82.3	0.5	31
31	DG 2490 B2RF		1003	36.8	3.9	1.06	28.6	82.1	0.7	31
32	CG 3520B2RF		982	37.8	4.2	1.11	28.1	82.3	0.7	31
33	DG 2242 B2RF		975	37.9	4.6	1.08	27.3	82.6	0.8	31
34	BW-8391 B2F		974	35.7	4.3	1.15	29.6	82.8	0.7	31
35	CG 3020B2RF		956	36.8	4.2	1.07	28.9	82.3	0.6	31
36	BW-4021B2F		873	36.6	4.2	1.08	28.6	82.4	0.4	21
	Mean		1136	39.0	4.6	1.09	30.0	82.5	0.7	31
	LSD (0.05)		146							
	CV (%)		9.2							

Planted 15 May 2006. Harvest-aids applied 26 Sept 2006. Harvested 9 Oct 2006. 80-30-100 lb/ac N-P_2O_5-K_2O.
No-tilled, non-irrigated Memphis silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).
HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 13. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" at WTREC, Jackson TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	PHY 370 WR	✔	1897	41.2	4.2	1.12	31.1	83.9	0.8	31
2	ST 5599BR	✔	1838	39.5	4.3	1.12	33.2	82.8	1.0	31
3	ST 5242BR	✔	1815	39.9	4.2	1.11	29.1	84.0	0.8	31
4	DP 432 RR	✔	1753	39.6	3.9	1.14	30.6	84.7	1.2	41
5	ST 5327B2RF		1713	39.0	3.8	1.14	31.8	83.7	0.7	31
6	DPLX06W650F		1702	39.1	4.0	1.16	31.8	83.9	1.1	41
7	ST 4427B2RF		1689	37.4	3.6	1.15	31.4	83.7	1.7	41
8	FM 960 BR	✔	1668	37.9	3.9	1.13	33.5	83.6	0.6	31
9	DP 147 RF		1656	37.7	3.7	1.23	32.4	83.2	1.1	31
10	DP 117 B2RF		1639	39.2	4.0	1.17	35.3	84.0	1.6	41
11	DP 444 BG/RR	✔	1625	39.7	3.5	1.14	31.2	83.8	0.8	31
12	DP 110 RF		1621	38.6	4.0	1.16	36.1	84.2	1.5	41
13	FM 9068F		1606	37.7	4.0	1.17	33.3	83.3	1.1	31
14	PHY 425 RF		1580	38.2	4.1	1.16	31.8	84.6	1.2	41
15	PHY 485 WRF		1565	38.6	4.4	1.15	31.0	84.4	1.2	41
16	ST 4357B2RF		1563	37.4	3.7	1.17	30.1	83.6	0.5	31
17	DP 121 RF		1562	40.1	4.1	1.16	31.7	84.1	0.7	31
18	DP 143 B2RF		1544	37.2	3.5	1.22	32.3	81.6	0.8	31
19	FM 9060F		1544	39.0	3.9	1.19	31.6	82.4	0.8	31
20	Americot 1532B2RF		1543	38.4	3.7	1.19	30.2	83.5	1.0	31
21	ST 4554B2RF		1542	38.3	3.9	1.14	31.7	83.7	1.0	31
22	FM 9058F		1535	39.2	3.9	1.20	32.6	82.5	1.2	31
23	BW-8391 B2F		1523	35.3	3.8	1.21	31.0	84.7	0.5	31
24	CG 4020B2RF		1509	37.7	3.7	1.18	30.8	82.9	0.8	31
25	CG 3020B2RF		1509	37.3	3.7	1.14	30.6	84.3	0.9	41
26	DG 2520 B2RF		1508	37.5	3.6	1.17	30.5	82.7	0.7	31
27	DG 2100 B2RF		1506	36.4	3.7	1.13	30.0	84.5	0.7	31
28	CG 3520B2RF		1495	37.2	3.6	1.18	29.5	83.8	1.0	41
29	BW-4630B2F		1491	38.1	3.6	1.18	30.1	83.7	0.8	31
30	BW-2038B2F		1463	37.8	3.7	1.18	29.4	83.8	1.4	41
31	BW-4021B2F		1447	37.2	3.4	1.16	30.5	83.0	0.7	31
32	FM 9063 B2F		1444	37.2	3.9	1.20	34.8	83.5	0.8	31
33	DG 2490 B2RF		1443	36.3	3.3	1.12	30.3	83.4	0.8	41
34	BW-3255B2F		1393	36.9	3.4	1.14	29.2	84.1	1.1	31
35	DG 2242 B2RF		1387	36.7	3.5	1.15	30.2	83.4	1.3	31
36	ST 4700 B2RF		1347	36.3	3.5	1.14	29.5	82.6	1.4	31
	Mean		1574	38.1	3.8	1.16	31.4	83.6	1.0	31
	LSD (0.05)		160							
	CV (%)		7.3							

Planted 8 May 2006. Harvest-aids applied 29 Sept and 4 Oct 2006. Harvested 12 Oct 2006. 80-0-90 lb/ac N-P_2O_5-K_2O.
No-tilled, irrigated Calloway silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).
HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 14. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" at the Milan REC, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	ST 5599BR	✔	1990	39.2	4.9	1.12	32.5	83.2	0.9	41
2	PHY 425 RF		1861	38.0	5.0	1.14	31.2	85.0	1.5	41
3	ST 5242BR	✔	1816	39.3	4.7	1.11	28.6	84.9	1.2	31
4	PHY 370 WR	✔	1807	40.5	4.8	1.09	31.6	84.4	1.0	41
5	ST 5327B2RF		1742	39.6	4.5	1.16	32.4	84.6	1.0	41
6	ST 4357B2RF		1736	38.8	4.5	1.15	29.0	84.2	0.8	31
7	DP 432 RR	✔	1713	39.3	4.7	1.11	29.9	85.1	1.2	41
8	FM 960 BR	✔	1713	37.3	4.5	1.16	34.2	84.3	1.4	41
9	CG 3520B2RF		1707	38.6	4.5	1.15	29.6	84.1	1.3	41
10	DP 121 RF		1702	41.0	4.9	1.14	31.7	84.5	1.2	41
11	ST 4427B2RF		1696	38.1	4.3	1.14	32.0	84.2	1.7	41
12	DG 2520 B2RF		1692	38.9	4.5	1.15	29.2	84.7	0.8	31
13	DP 143 B2RF		1686	38.7	4.2	1.21	32.1	82.8	1.7	41
14	DG 2490 B2RF		1672	36.8	3.9	1.10	29.2	83.9	1.0	31
15	DP 110 RF		1669	39.2	4.6	1.14	33.0	85.4	1.3	41
16	ST 4554B2RF		1663	38.9	4.7	1.13	30.5	83.8	0.8	31
17	PHY 485 WRF		1659	38.4	4.7	1.14	31.1	84.8	1.7	41
18	ST 4700 B2RF		1640	38.2	4.4	1.14	28.9	83.8	1.2	41
19	BW-4630B2F		1639	38.7	4.4	1.15	29.4	84.2	1.0	31
20	DPLX06W650F		1633	38.3	4.4	1.15	32.4	84.9	1.1	41
21	Americot 1532B2RF		1627	37.1	4.2	1.16	30.0	83.3	0.8	31
22	BW-2038B2F		1624	37.0	4.6	1.14	29.1	84.4	1.0	41
23	DP 117 B2RF		1623	39.0	4.5	1.14	35.1	84.3	1.7	41
24	DP 147 RF		1621	39.2	4.3	1.20	32.3	83.2	1.1	41
25	DG 2242 B2RF		1605	38.6	4.5	1.15	29.0	84.6	1.4	41
26	DP 444 BG/RR	✔	1599	39.8	4.2	1.12	31.7	84.7	1.7	41
27	FM 9068F		1574	38.5	4.7	1.18	33.0	84.8	1.5	41
28	FM 9060F		1570	39.6	4.6	1.17	32.5	83.4	0.7	31
29	CG 4020B2RF		1566	38.1	4.4	1.15	28.8	84.2	0.8	31
30	DG 2100 B2RF		1552	37.3	4.5	1.09	29.7	84.2	0.4	31
31	CG 3020B2RF		1538	37.1	4.5	1.10	29.0	84.2	0.7	31
32	FM 9058F		1532	39.8	4.5	1.19	31.8	84.0	0.8	41
33	BW-3255B2F		1515	36.7	4.3	1.12	29.3	84.3	1.0	31
34	FM 9063 B2F		1499	37.4	4.5	1.18	33.8	84.2	1.4	41
35	BW-8391 B2F		1477	35.8	4.5	1.18	31.9	84.0	1.1	41
36	BW-4021B2F		1441	35.8	4.3	1.12	29.3	83.8	1.2	41
	Mean		1650	38.4	4.5	1.14	30.9	84.2	1.1	41
	LSD (0.05)		204							
	CV (%)		8.8							

Planted 18 May 2006. Harvest-aids applied 2 Oct 2006. Harvested 11 Oct 2006. 97-45-90 lb/ac N-P_2O_5-K_2O.
No-tilled, non-irrigated Loring silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).
HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 15. Lint yield, gin turnout, and fiber quality of 36 entries in the 2006 Tennessee Official Variety Trial "B" at Fullen Farms, Golddust TN, listed by yield rank.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	HVI Trash	Color Grade
			lb/ac	%		in.	g/tex	%	%	
1	ST 5599BR	✔	2096	37.4	4.5	1.15	31.3	83.9	1.8	41
2	FM 960 BR	✔	2066	38.0	4.5	1.12	34.8	84.3	1.0	31
3	ST 4427B2RF		2025	37.1	4.2	1.15	32.6	83.6	1.5	41
4	DP 432 RR	✔	1963	38.1	4.4	1.15	30.5	85.0	1.8	41
5	PHY 425 RF		1947	36.4	4.7	1.16	31.7	85.3	1.9	41
6	PHY 370 WR	✔	1939	38.1	4.6	1.14	30.8	84.9	1.0	31
7	DG 2490 B2RF		1932	35.6	3.8	1.12	29.2	83.3	1.2	41
8	ST 4554B2RF		1926	37.6	4.4	1.17	31.7	84.5	1.5	41
9	BW-4630B2F		1910	37.3	4.1	1.19	29.7	83.8	0.9	31
10	DG 2520 B2RF		1906	37.3	4.1	1.18	29.6	82.8	0.9	41
11	ST 5327B2RF		1892	38.3	4.3	1.15	33.6	84.2	1.3	41
12	ST 4700 B2RF		1883	37.5	4.2	1.18	29.9	84.1	1.2	41
13	ST 5242BR	✔	1881	38.4	4.5	1.12	28.8	83.5	1.2	31
14	CG 3020B2RF		1876	35.3	4.0	1.15	30.4	84.5	1.0	31
15	DP 147 RF		1865	36.2	3.9	1.21	33.8	82.8	1.6	41
16	Americot 1532B2RF		1839	37.1	4.2	1.17	29.4	82.9	0.9	41
17	DG 2242 B2RF		1827	36.6	4.0	1.16	30.3	84.0	1.7	41
18	BW-3255B2F		1823	36.4	4.1	1.13	29.8	83.8	0.8	41
19	BW-4021B2F		1808	35.3	3.8	1.14	30.8	83.4	1.1	41
20	DP 444 BG/RR	✔	1804	40.1	4.0	1.14	30.7	84.2	1.4	41
21	DP 117 B2RF		1793	37.5	4.2	1.18	34.2	83.8	2.2	51
22	FM 9058F		1792	37.4	4.1	1.21	33.0	83.1	0.9	41
23	DG 2100 B2RF		1791	35.7	3.9	1.13	29.8	83.3	0.7	31
24	CG 4020B2RF		1781	36.1	4.0	1.22	31.2	84.2	1.0	31
25	BW-2038B2F		1775	36.8	4.1	1.18	29.9	84.1	2.0	41
26	PHY 485 WRF		1754	36.2	4.6	1.18	31.8	84.5	1.4	41
27	DP 110 RF		1732	36.6	4.4	1.17	36.0	84.4	1.7	41
28	FM 9060F		1724	37.7	4.4	1.18	33.1	82.9	1.0	31
29	DP 143 B2RF		1723	36.1	3.8	1.24	34.0	83.0	1.4	41
30	ST 4357B2RF		1712	36.8	4.3	1.16	30.0	82.3	1.0	41
31	FM 9063 B2F		1701	34.5	4.2	1.21	36.3	83.8	1.3	41
32	CG 3520B2RF		1691	37.6	4.2	1.13	29.5	83.7	1.6	41
33	DPLX06W650F		1681	36.3	4.0	1.19	30.8	84.3	1.8	41
34	BW-8391 B2F		1660	33.4	4.1	1.22	31.6	84.8	1.6	41
35	FM 9068F		1625	35.7	4.1	1.19	34.1	84.2	1.3	41
36	DP 121 RF		1604	38.6	4.4	1.15	32.9	84.2	1.4	41
	Mean		1826	36.9	4.2	1.16	31.6	83.8	1.3	41
	LSD (0.05)		244							
	CV (%)		9.5							

Planted 16 May 2006. Harvest-aids applied 21 Sept and 26 Sept 2006. Harvested 13 Oct 2006. 133-0-54 lb/ac N-P_2O_5-K_2O. Conventional, non-irrigated Commerce silt loam. Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006). HVI fiber data furnished by the International Textile Center, Lubbock TX, based on lint samples from the WTREC gin.

Table 16. Final plant height of 36 entries in the 2006 OVT-B planted at five test locations in Tennessee, listed alphabetically.

Entry	✔	Agricenter	Ames Pln.	Jackson	Milan	Fullen Farm	Average
		in.	in.	in.	in.	in	in.
Americot 1532B2RF		24	32	38	36	40	34
BW-2038B2F		24	38	38	35	39	35
BW-3255B2F		24	33	37	35	40	34
BW-4021B2F		24	30	37	32	40	33
BW-4630B2F		25	35	38	34	41	35
BW-8391 B2F		24	32	37	33	39	33
CG 3020B2RF		24	35	36	32	41	34
CG 3520B2RF		24	34	37	33	41	34
CG 4020B2RF		24	35	37	35	42	35
DG 2100 B2RF		24	33	36	33	40	33
DG 2242 B2RF		24	36	39	34	41	35
DG 2520 B2RF		26	34	38	34	42	35
DG 2490 B2RF		24	32	37	33	41	33
DP 110 RF		25	35	41	38	41	36
DP 117 B2RF		25	36	39	37	43	36
DP 121 RF		25	34	41	36	44	36
DP 143 B2RF		24	33	40	33	43	35
DP 147 RF		25	38	40	36	45	37
DP 432 RR	✔	25	36	39	35	43	36
DP 444 BG/RR	✔	29	36	42	39	41	37
DPLX06W650F		25	39	40	37	43	37
FM 9058F		23	32	35	34	39	33
FM 9060F		23	30	35	34	36	32
FM 9063 B2F		22	31	33	31	37	31
FM 9068F		22	30	36	32	37	32
FM 960 BR	✔	24	31	36	35	38	33
PHY 370 WR	✔	27	38	41	38	44	38
PHY 425 RF		25	38	43	40	48	39
PHY 485 WRF		26	37	42	39	47	38
ST 4357B2RF		26	34	38	36	38	34
ST 4427B2RF		26	34	39	36	43	36
ST 4554B2RF		24	33	37	32	39	33
ST 4700 B2RF		25	35	37	34	40	34
ST 5242BR	✔	27	38	41	39	42	37
ST 5327B2RF		26	36	39	37	42	36
ST 5599BR	✔	27	37	42	39	44	38
Mean		25	34	38	35	41	35
LSD (0.05)		1.7	4.0	2.2	4.0	3.9	1.5
CV (%)		4.1	7.2	3.6	7.1	5.7	5.9

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

Table 17. Nodes above cracked boll (NACB) on dates indicated, and estimated DD60s remaining to maturity of 36 entries in the 2006 OVT-B at five locations in Tennessee, listed in order of average maturity.

Entry		Agricenter 9/6/06		Ames Pln. 9/7/06		Jackson 9/19/06		Milan 9/19/06		Fullen Farm 9/14/06		Average 9/13/06	
		NACB†	DD60‡	NACB	DD60	NACB	DD60	NACB	DD60	NACB	DD60	NACB	DD60
CG 3520B2RF		1.4	70	3.6	180	3.3	165	1.2	58	4.1	207	2.7	136
DP 117 B2RF		2.0	102	4.4	220	3.5	175	1.9	93	2.5	125	2.9	143
DP 121 RF		1.9	95	4.1	205	3.5	173	1.9	97	3.2	162	2.9	146
BW-8391B2F		1.2	58	4.3	217	4.3	213	1.7	83	3.4	170	3.0	148
DG 2242 B2RF		1.6	80	4.2	212	3.9	193	1.4	70	3.7	187	3.0	148
DG 2100 B2RF		1.7	85	4.4	222	3.8	192	1.7	87	3.5	177	3.1	152
ST 4700 B2RF		2.0	102	5.3	265	3.6	180	1.6	78	3.0	148	3.1	155
ST 4357B2RF		1.5	73	5.2	260	4.0	200	2.3	115	2.6	130	3.1	156
FM 960 BR	✔	2.2	110	4.3	215	5.0	248	1.7	87	2.4	120	3.1	156
DP 444 BG/RR	✔	2.1	105	4.7	235	3.7	183	2.4	120	3.0	152	3.2	159
FM 9060F		1.6	78	4.8	240	4.5	227	2.2	110	2.9	145	3.2	160
Americot 1532B2RF		2.3	117	5.0	250	4.0	198	2.2	110	2.5	127	3.2	160
BW-4021B2F		2.6	128	4.4	222	4.2	208	2.4	120	2.5	125	3.2	161
CG 3020B2RF		2.1	103	4.8	240	3.8	192	1.9	95	3.8	188	3.3	164
DG 2520 B2RF		1.6	82	5.2	260	4.5	223	2.0	102	3.5	173	3.4	168
DG 2490 B2RF		2.2	108	4.7	233	3.7	187	2.6	130	3.7	183	3.4	168
ST 4427B2RF		1.6	82	3.9	193	3.8	190	2.9	143	4.7	235	3.4	169
BW-2038B2F		1.4	72	6.0	300	3.4	170	2.3	115	3.9	195	3.4	170
DP 110 RF		1.8	88	5.9	293	3.8	188	2.8	140	3.0	152	3.5	172
FM 9068F		2.4	122	4.4	220	4.7	233	2.0	100	3.8	190	3.5	173
FM 9063 B2F		2.1	103	4.7	235	4.2	212	1.3	65	5.1	253	3.5	174
DP 432 RR	✔	2.0	100	5.6	280	3.8	192	1.3	65	4.8	238	3.5	175
PHY 425 RF		1.5	75	5.1	255	4.0	202	2.2	112	4.8	238	3.5	176
BW-4630B2F		2.2	108	5.3	265	4.3	215	1.7	83	4.5	225	3.6	179
BW-3255B2F		1.9	95	6.0	302	3.9	195	2.7	137	3.5	175	3.6	181
CG 4020B2RF		2.2	108	6.0	302	3.8	190	3.1	155	4.1	203	3.8	192
DP 147 RF		1.7	83	6.0	300	3.4	170	3.7	183	4.7	235	3.9	194
ST 4554B2RF		2.1	107	6.3	317	4.8	242	2.0	98	4.3	213	3.9	195
ST 5242BR	✔	2.2	108	6.0	300	4.5	225	3.1	155	4.0	198	4.0	197
PHY 485 WRF		1.7	85	5.5	277	3.9	197	3.4	168	5.3	265	4.0	198
FM 9058F		2.1	107	4.5	227	5.6	282	2.7	133	5.0	252	4.0	200
DPLX06W650F		2.3	113	6.8	342	3.8	190	2.6	132	4.5	227	4.0	201
PHY 370 WR	✔	1.7	87	6.8	338	4.8	240	2.6	128	5.6	280	4.3	215
DP 143 B2RF		2.8	142	6.3	317	5.0	248	2.6	132	6.4	322	4.6	232
ST 5327B2RF		2.6	128	7.4	372	5.2	258	4.2	210	4.3	213	4.7	236
ST 5599BR	✔	3.2	158	5.7	287	5.5	273	4.7	235	4.9	247	4.8	240
Mean		2.0	99	5.2	261	4.2	207	2.4	118	3.9	197	3.5	176
LSD (0.05)		0.8	39	2.0	98	0.9	46	1.2	59	1.8	92	0.6	32
CV (%)		24	24	23	23	14	14	31	31	29	29	25	25

†NACB = nodes above highest 1st-position cracked boll to the highest harvestable boll.

‡DD60 = degree-days, base 60 F. DD60 to maturity = NACB x (50 DD60/node) to open the highest harvestable boll.

Tennessee Agricultural Experiment Station data of Gwathmey et al. (2006).

STAGE 4 ADVANCED STRAINS TEST

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Eight experimental cotton strains were tested in a Stage 4 Advanced Strains Test at the West Tennessee Research and Education Center in Jackson, TN. The test also included 12 popular cultivars as checks. Seed of the experimental strains were furnished by Delta and Pine Land Co. There were 15 entries with Roundup-Ready Flex (F or RF) genes and five entries with Roundup Ready (RR) gene technology. Five entries had Bollgard II (B2 or D) genes and three entries had Bollgard (BG) gene technology.

All entries were planted on 8 May 2006 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 80-0-90 lb/ac N-P_2O_5-K_2O, per UT soil fertility recommendations for cotton. In addition, 0.5 lb/ac Mg and 0.5 lb/ac S were applied as a foliar spray at 60 days after planting (DAP).

Plant population density averaged 47,000/acre. Supplemental irrigation was initiated 16 DAP by overhead sprinkler boom, and total of 3.1 inches of irrigation was applied during the season. A total of 40 oz/ac of mepiquat-type PGR product was applied in three applications between 73 and 102 DAP. A defoliant and boll opener were applied at 144 DAP, followed by an additional application of ethephon boll opener at 149 DAP, in preparation for once-over harvest. A total of 2380 DD60s accumulated between planting on 8 May and harvest on 11 October.

Plots were spindle-picked into separate bags 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 only for experimental strains that were advanced by D&PL, as well as for the check varieties.

Table 1 presents lint yield, gin turnout, and fiber data for 15 entries in the 2006 Stage 4 test at Jackson. Lint yield of the experimental strain, DPLX04Z514DF, was statistically higher than any other entry. Lint yield of the highest yielding check, DP 555 BG/RR, was equivalent to entries ranked 3rd to 11th in lint yield. This group included two popular BG/RR cultivars, two RR-only cultivars, two new B2/RF varieties, and three new RF-only varieties. The highest yielding Roundup-Ready Flex and Bollgard II RR-Flex cultivars were DP 147 RF and DP 117 B2RF, respectively.

Relatively high gin turnouts were recorded for all entries in this test. While significant differences in fiber properties were detected, none of the entries in this test were likely to incur price discounts for micronaire, staple length, strength, uniformity, or color grade. Most entries had fiber profiles in ranges eligible for price premiums for these fiber properties. However, the data do not provide an accurate estimate of classer's leaf grade, so loan value is not reported.

Table 1. Lint yield, gin turnout, and fiber properties of 15 varieties tested in the 2006 Stage 4 advanced strains test at Jackson TN, listed by yield rank†.

Yield Rank	Entry		Lint Yield	Gin Turnout	Micro-naire	Fiber Length	Fiber Strength	Uni-formity	Color Grade
			lb/ac	%		in.	g/tex	%	
1	DPLX04Z514DF		1871	40.1	4.4	1.20	33.7	85.0	41
2	DP 555 BG/RR	✔	1732	40.6	4.1	1.15	29.5	82.8	21
3	DP 147 RF	✔	1706	38.7	3.8	1.21	30.4	83.7	31
4	DP 432 RR	✔	1705	38.8	4.2	1.18	31.5	84.3	31
5	DP 494 RR	✔	1699	39.4	4.4	1.21	31.8	84.3	31
6	DP 444 BG/RR	✔	1657	39.8	3.9	1.16	29.9	84.2	31
7	DPLX06W650F		1650	39.1	4.1	1.20	30.9	84.4	31
8	ST 4664RF	✔	1632	39.5	4.0	1.17	32.2	84.3	31
9	DP 117 B2RF	✔	1616	38.2	4.0	1.20	34.1	84.6	41
10	DP 110 RF	✔	1602	38.8	4.3	1.21	36.1	85.2	41
11	DP 143 B2RF	✔	1597	37.2	3.8	1.24	29.6	83.4	31
12	DP 121 RF ‡		1586	40.6	4.3	1.17	30.9	84.3	31
13	ST 4554B2RF	✔	1575	38.6	4.1	1.18	32.0	84.3	31
14	FM 9060RF	✔	1512	38.9	4.0	1.22	30.2	83.9	31
15	DP 445 BG/RR	✔	1451	38.9	3.9	1.20	32.5	84.7	31
	Mean		1639	39.2	4.1	1.19	31.7	84.2	31
	LSD (0.05)		138	1.1	0.3	0.03	2.2	1.1	
	CV (%)		5.9	2.0	4.7	2.0	4.8	0.9	

Planted 8 May 2006. Harvest-aids applied 29 Sept and 4 Oct 2006. Harvested 11 Oct 2006.
No-tilled, irrigated Loring-Calloway silt loam. 80-0-90 lb/ac N-P_2O_5-K_2O.
† Raw data furnished by Delta and Pine Land Co. Statistical analysis by Tennessee Agric. Experiment Station.
‡ Tested as DPLX06W660F.

COUNTY STANDARD TEST DEMONSTRATIONS

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County Standard Test demonstrations were conducted in 2006 to evaluate commercial cultivar performance in multiple large plot environments. County standard testing included Roundup Ready and Roundup Ready Flex cultivars. County standard tests of early/mid-season Roundup Ready cultivars were planted in 12 locations with each location containing 9 cultivars. County standard tests of early-season Roundup Ready Flex cultivars were planted in 13 locations with each location containing 10 cultivars. County standard tests of medium/full-season Roundup Ready Flex cultivars were planted in 10 locations with each location containing 5 cultivars. Each variety was planted in only one plot 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 a boll buggy equipped with load cells. Seedcotton samples were ginned similarly to small-plot samples, as described previously. Lint samples were analyzed by HVI and hand classing methods at the USDA Cotton Classing Office in Memphis, TN. Loan values were calculated by the Cotton Loan Valuation Model from Cotton Inc. County standard test data were analyzed using Proc MIXED with locations as replications.

Table 1. Results of early-mid season Roundup Ready cotton variety test across 12 locations, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	39.0	1374	4.7	1.10	31.1	82.5	41-1	4	51.83
2	PHY 370 WR	E-M	39.4	1324	4.8	1.08	31.8	82.6	32-2	4	52.43
3	PHY 310 R	E-M	40.1	1321	4.8	1.07	31.4	82.3	41-1	4	52.25
4	ST 5242 BR	E-M	38.4	1318	4.5	1.10	30.0	82.8	41-1	4	53.58
5	DP 445 BG/RR	E-M	39.0	1304	4.6	1.13	32.2	82.6	31-1	4	54.18
6	DP 454 BG/RR	E-M	40.0	1286	4.3	1.08	31.1	82.2	41-1	5	49.50
7	DP 444 BG/RR	E-M	39.0	1261	4.3	1.11	31.3	82.8	32-1	4	53.28
8	ST 5599 BR	E-M	38.7	1256	4.7	1.10	32.5	81.7	32-2	4	51.10
9	FM 960 BR	E-M	37.4	1250	4.4	1.10	33.7	82.2	31-2	4	53.54
	Mean		**39.0**	**1299**	**4.6**	**1.10**	**31.7**	**82.4**		**4**	**52.41**
	CV %		**4.2**	**17**	**9.1**	**3.30**	**4.6**	**1.0**		**21.9**	**6.60**
	LSD (0.05)		**1.2**	**NS**	**0.3**	**0.03**	**0.9**	**0.7**		**0.7**	**2.69**

Table 2. Results of early season Roundup Ready Flex cotton variety test across 13 locations, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4554 B2RF	E	38.1	1167	4.7	1.12	32.1	82.4	32-1	5	50.92
2	DP 117 B2RF	E	38.1	1145	4.6	1.13	33.0	82.1	41-1	5	50.50
3	CG 4020 B2RF	E	37.8	1145	4.3	1.15	30.0	82.3	31-1	4	54.50
4	BW-4630 B2F	E	37.7	1117	4.4	1.14	29.4	82.1	41-1	4	54.09
5	ST 4664 RF	E	38.9	1145	4.6	1.10	31.0	81.9	41-1	5	51.82
6	DG 2100 B2RF	E	36.6	1119	4.3	1.10	29.4	82.4	31-2	4	54.13
7	BW-3255 B2F	E	36.9	1106	4.3	1.11	29.3	82.3	31-1	4	52.82
8	PHY 485 WRF	E	38.1	1083	4.6	1.12	32.4	82.9	41-1	6	49.80
9	DP 110 RF	E	38.8	1097	4.6	1.14	33.1	82.6	41-1	6	50.00
10	FM 9063 B2F	E	37.1	1047	4.4	1.16	33.7	82.1	31-2	5	53.52
	Mean		**37.8**	**1117**	**4.5**	**1.13**	**31.3**	**82.3**		**5**	**52.21**
	CV %		**4.9**	**18**	**8.1**	**4.0**	**6.1**	**1.0**		**24.3**	**6.6**
	LSD (0.05)		**1.5**	**NS**	**0.3**	**0.04**	**1.2**	**0.7**		**0.9**	**2.67**

Table 3. Results of mid-full season Roundup Ready Flex cotton variety test across 10 locations, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DG 2520 B2RF	M-F	37.7	1125	4.4	1.14	29.5	81.9	31-2	4	51.36
2	DP 143 B2RF	M-F	36.8	1089	4.2	1.18	31.1	80.6	41-2	5	51.54
3	DP 164 B2RF	M-F	36.0	1053	4.4	1.15	32.2	81.6	31-2	4	54.98
4	DP 147 RF	M-F	37.7	1002	4.2	1.16	31.9	81.4	31-1	5	52.96
5	DP 167 RF	M-F	36.7	979	4.4	1.16	32.5	81.6	31-2	4	54.76
	Mean		**37.0**	**1050**	**4.3**	**1.16**	**31.4**	**81.4**		**4**	**53.12**
	CV %		**7.3**	**22**	**11.0**	**4.9**	**4.0**	**1.4**		**24.1**	**6.1**
	LSD		**2.4**	**NS**	**0.2**	**0.02**	**0.7**	**0.6**		**0.6**	**1.85**

Table 4. Results of early-mid season Roundup Ready cotton variety test, Carroll County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	40.3	1534	5.0	1.13	31.4	83.0	31-3	3	55.75
2	ST 5242 BR	E-M	40.6	1518	4.9	1.10	30.5	82.9	21-1	3	58.20
3	DP 445 BG/RR	E-M	42.1	1430	4.9	1.13	33.5	82.3	21-1	3	59.10
4	PHY 310 R	E-M	41.1	1425	5.2	1.06	32.0	82.4	11-3	3	53.00
5	DP 454 BG/RR	E-M	40.8	1396	4.7	1.08	31.7	82.6	31-1	4	55.65
6	PHY 370 WR	E-M	41.8	1314	5.2	1.06	31.9	82.5	21-3	3	53.25
7	ST 5599 BR	E-M	39.2	1264	5.2	1.10	33.5	80.9	21-4	3	55.25
8	FM 960 BR	E-M	39.4	1249	4.9	1.10	34.2	82.5	21-1	3	58.25
9	DP 444 BG/RR	E-M	40.8	1217	4.6	1.11	33.5	82.4	31-1	3	58.30
	Mean		**40.7**	**1372**	**5.0**	**1.10**	**32.5**	**82.4**		**3**	**56.31**

Agent	Steve Burgess	**Soil Type**	Grenada silt loam
Producer	David Renfro	**Tillage**	No-Till
Planting Date	5/2/2006	**Previous Crop**	Cotton
Defoliation Date	9/20/2006	**Fertilizer**	110-100-80
Harvest Date	10/6/2006	**Row Spacing**	30 inch solid

Table 5. Results of early season Roundup Ready Flex cotton variety test, Carroll County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4664 RF	E	39.7	1386	5.2	1.07	31.2	81.8	32-1	3	50.00
2	DP 117 B2RF	E	40.0	1329	4.8	1.08	27.8	80.6	31-2	4	54.95
3	ST 4554 B2RF	E	37.3	1323	4.6	1.15	32.6	82.4	31-4	4	56.25
4	BW-4630 B2F	E	38.3	1317	4.6	1.13	30.7	81.9	21-2	3	58.25
5	DG 2100 B2RF	E	37.4	1288	4.5	1.09	29.3	82.1	21-2	3	57.50
6	PHY 485 WRF	E	38.4	1218	5.0	1.14	32.9	84.5	31-4	5	51.65
7	BW-3255 B2F	E	37.2	1204	4.5	1.11	31.0	82.1	21-2	3	59.05
8	CG 4020 B2RF	E	37.7	1186	4.4	1.17	31.8	81.6	21-2	3	59.20
9	DP 110 RF	E	39.3	1180	4.7	1.18	33.4	82.7	31-2	4	56.50
10	FM 9063 B2F	E	36.4	1072	4.7	1.17	34.6	81.8	31-1	4	56.25
	Mean		**38.2**	**1250**	**4.7**	**1.13**	**31.5**	**82.2**		**4**	**55.96**

Agent	Steve Burgess	**Soil Type**	Grenada silt loam
Producer	David Renfro	**Tillage**	No-Till
Planting Date	5/2/2006	**Previous Crop**	Cotton
Defoliation Date	9/20/2006	**Fertilizer**	110-100-80
Harvest Date	10/6/2006	**Row Spacing**	30 inch solid

Table 6. Results of early-mid season Roundup Ready cotton variety test, Crockett County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 5599 BR	E-M	38.0	1625	4.7	1.09	33.6	82.8	31-2	4	55.70
2	ST 4575 BR	E-M	36.4	1607	4.8	1.14	33.0	83.4	31-4	5	54.20
3	ST 5242 BR	E-M	37.2	1542	4.6	1.13	31.1	82.3	31-2	4	56.00
4	DP 454 BG/RR	E-M	39.1	1526	4.5	1.10	33.1	82.9	41-1	5	52.05
5	PHY 370 WR	E-M	37.9	1495	5.0	1.11	33.6	83.6	31-4	5	51.35
6	DP 445 BG/RR	E-M	38.8	1484	4.6	1.16	34.4	84.1	31-2	4	54.95
7	PHY 310 R	E-M	38.8	1423	4.9	1.09	33.6	82.8	31-2	4	52.25
8	DP 444 BG/RR	E-M	37.8	1410	4.4	1.14	33.5	83.4	31-2	4	56.50
9	FM 960 BR	E-M	34.8	1340	4.8	1.09	33.3	82.9	21-2	4	56.10
	Mean		**37.6**	**1495**	**4.7**	**1.12**	**33.2**	**83.1**		**4**	**54.34**

Agent	Richard Buntin	**Soil Type**	Grenada silt loam
Producer	Dwayne Dove	**Tillage**	No-Till
Planting Date	5/8/2006	**Previous Crop**	Cotton
Defoliation Date	9/20/2006	**Fertilizer**	90-46-100
Harvest Date	10/5/2006	**Row Spacing**	38 inch solid

Table 7. Results of early-mid season Roundup Ready cotton variety test, Crockett County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	37.9	1020	4.6	1.13	30.3	82.8	51-1	6	47.80
2	PHY 370 WR	E-M	37.9	996	4.6	1.10	31.4	83.6	41-1	6	49.50
3	DP 454 BG/RR	E-M	39.3	972	4.3	1.11	30.7	82.0	51-1	7	46.15
4	DP 445 BG/RR	E-M	38.5	962	4.5	1.14	32.1	83.2	51-1	7	46.40
5	DP 444 BG/RR	E-M	38.9	961	4.6	1.11	29.8	84.0	41-2	5	52.20
6	ST 5599 BR	E-M	37.4	955	4.4	1.12	32.6	82.3	41-4	7	47.55
7	ST 5242 BR	E-M	36.9	928	4.6	1.10	29.7	83.3	41-1	6	49.20
8	PHY 310 R	E-M	37.9	917	4.7	1.08	30.9	83.4	41-1	5	52.00
9	FM 960 BR	E-M	37.6	890	3.8	1.08	35.2	82.3	41-1	6	49.40
	Mean		**38.0**	**956**	**4.5**	**1.11**	**31.4**	**83.0**		**6**	**48.91**

Agent	Richard Buntin	**Soil Type**	Grenada silt loam
Producer	Stoney Hargett	**Tillage**	No-Till
Planting Date	5/24/2006	**Previous Crop**	Cotton
Defoliation Date	9/20/2006	**Fertilizer**	100-50-125
Harvest Date	11/13/2006	**Row Spacing**	30 inches 2+1 skip

Table 8. Results of early season Roundup Ready Flex cotton variety test, Crockett County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 117 B2RF	E	38.5	1420	4.4	1.13	33.2	83.3	41-1	5	52.35
2	CG 4020 B2RF	E	37.4	1377	4.2	1.18	29.9	82.9	31-1	4	56.45
3	ST 4554 B2RF	E	38.0	1358	4.8	1.16	33.2	83.5	41-1	6	49.70
4	ST 4664 RF	E	40.0	1353	4.7	1.14	33.3	83.2	41-1	5	52.35
5	FM 9063 B2F	E	39.2	1344	4.2	1.17	34.9	82.8	31-1	6	51.00
6	DG 2100 B2RF	E	37.5	1328	4.3	1.15	30.5	82.7	31-1	4	56.45
7	DP 110 RF	E	39.9	1328	4.5	1.18	32.5	83.5	31-2	6	50.90
8	BW-4630 B2F	E	39.2	1315	4.4	1.19	30.2	83.0	31-1	4	56.25
9	BW-3255 B2F	E	38.3	1266	4.4	1.15	28.7	83.2	21-1	4	56.70
10	PHY 485 WRF	E	36.8	1175	4.5	1.17	34.2	83.0	41-2	7	47.85
	Mean		**38.5**	**1327**	**4.4**	**1.16**	**32.1**	**83.1**		**5**	**53.00**

Agent	Richard Buntin	**Soil Type**	Adler silt loam
Producer	Kevin Earnhart	**Tillage**	No-Till
Planting Date	5/17/2006	**Previous Crop**	Cotton
Defoliation Date	9/25/2006	**Fertilizer**	80-25-60
Harvest Date	10/10/2006	**Row Spacing**	38 inch solid

Table 9. Results of mid-full season Roundup Ready Flex cotton variety test, Crockett County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 167 RF	M-F	43.8	1365	4.8	1.19	32.8	82.7	31-2	4	56.50
2	DP 147 RF	M-F	38.7	1293	4.3	1.21	32.9	82.1	41-1	4	55.00
3	DG 2520 B2RF	M-F	37.2	1245	4.4	1.19	29.9	82.5	31-2	5	53.95
4	DP 143 B2RF	M-F	36.6	1188	4.3	1.22	31.2	80.4	41-1	7	47.55
5	DP 164 B2RF	M-F	34.4	1020	4.6	1.18	32.8	81.9	31-2	5	53.95
	Mean		**38.1**	**1222**	**4.5**	**1.20**	**31.9**	**81.9**		**5**	**53.39**

Agent	Richard Buntin	**Soil Type**	Adler silt loam
Producer	Bubba Fincher	**Tillage**	No-Till
Planting Date	5/22/2006	**Previous Crop**	Cotton
Defoliation Date	10/3/2006	**Fertilizer**	90-50-100-15S-32Zn-1B
Harvest Date	10/23/2006	**Row Spacing**	38 inch solid

Table 10. Results of early-mid season Roundup Ready cotton variety test, Dyer County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	PHY 310 R	E-M	40.6	1679	4.5	1.10	30.3	82.8	41-1	5	51.80
2	ST 4575 BR	E-M	38.4	1596	4.2	1.14	30.5	82.4	41-3	5	52.25
3	PHY 370 WR	E-M	37.7	1564	4.0	1.12	30.4	83.5	51-1	7	46.50
4	ST 5242 BR	E-M	37.1	1560	3.8	1.14	29.8	83.9	41-1	5	52.40
5	ST 5599 BR	E-M	35.9	1484	3.6	1.18	30.8	83.1	41-2	6	49.55
6	DP 444 BG/RR	E-M	35.6	1458	3.8	1.14	31.7	83.6	41-1	4	55.50
7	DP 445 BG/RR	E-M	34.3	1435	3.9	1.17	29.8	83.9	41-3	4	55.30
8	FM 960 BR	E-M	36.9	1433	4.2	1.14	34.8	81.9	41-1	4	55.20
9	DP 454 BG/RR	E-M	38.8	1244	3.6	1.13	31.5	84.0	41-1	6	49.65
	Mean		**37.3**	**1495**	**4.0**	**1.14**	**31.1**	**83.2**		**5**	**52.02**

Agent	Tim Campbell	**Soil Type**	Falaya silt loam
Producer	Davis Bros.	**Tillage**	No-Till
Planting Date	5/16/2006	**Previous Crop**	Corn
Defoliation Date	10/10/2006	**Fertilizer**	120-30-90
Harvest Date	11/9/2006	**Row Spacing**	38 inches

Table 11. Results of early season Roundup Ready Flex cotton variety test, Dyer County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DG 2100 B2RF	E	34.6	1563	3.9	1.15	28.7	83.2	41-1	4	54.95
2	DP 117 B2RF	E	36.7	1538	4.1	1.22	33.6	82.8	41-2	5	52.55
3	BW-3255 B2F	E	34.6	1525	3.7	1.15	29.0	82.5	41-1	4	54.95
4	BW-4630 B2F	E	33.9	1492	3.4	1.23	28.0	82.3	41-3	6	46.95
5	ST 4554 B2RF	E	35.0	1481	3.9	1.19	32.2	82.3	42-2	7	46.15
6	CG 4020 B2RF	E	33.7	1457	3.5	1.22	29.3	82.1	41-1	6	48.85
7	FM 9063 B2F	E	34.0	1439	3.9	1.23	32.7	82.1	41-1	5	52.30
8	ST 4664 RF	E	36.1	1404	3.8	1.19	30.5	83.1	41-3	6	49.75
9	DP 110 RF	E	36.9	1377	4.2	1.18	34.0	83.3	51-1	7	46.65
10	PHY 485 WRF	E	34.8	1368	3.9	1.19	30.6	83.4	41-3	7	48.00
	Mean		**35.0**	**1464**	**3.8**	**1.20**	**30.9**	**82.7**		**6**	**50.11**

Agent	Tim Campbell	**Soil Type**	Falaya silt loam
Producer	Davis Bros.	**Tillage**	No-Till
Planting Date	5/16/2006	**Previous Crop**	Corn
Defoliation Date	10/10/2006	**Fertilizer**	120-30-90
Harvest Date	11/9/2006	**Row Spacing**	38 inches

Table 12. Results of mid-full season Roundup Ready Flex cotton variety test, Dyer County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DG 2520 B2RF	M-F	34.9	1495	3.6	1.22	28.4	82.9	41-1	5	51.85
2	DP 164 B2RF	M-F	32.7	1303	3.3	1.20	32.8	81.3	41-3	6	47.45
3	DP 143 B2RF	M-F	32.6	1246	3.0	1.23	31.7	81.7	42-2	7	42.35
4	DP 167 RF	M-F	32.9	1194	3.5	1.23	32.7	82.1	41-1	5	52.10
5	DP 147 RF	M-F	34.1	1178	3.4	1.23	29.8	81.0	41-3	7	45.45
	Mean		**33.5**	**1283**	**3.4**	**1.22**	**31.1**	**81.8**		**6**	**47.84**

Agent	Tim Campbell	**Soil Type**	Falaya silt loam
Producer	Davis Bros.	**Tillage**	No-Till
Planting Date	5/16/2006	**Previous Crop**	Corn
Defoliation Date	10/10/2006	**Fertilizer**	120-30-90
Harvest Date	11/9/2006	**Row Spacing**	38 inches

Table 13. Results of mid-full season Roundup Ready Flex cotton variety test, Dyer County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 164 B2RF	M-F	36.6	1506	4.7	1.19	33.7	82.6	21-2	3	59.50
2	DP 143 B2RF	M-F	37.3	1466	4.2	1.21	31.3	81.4	31-2	6	50.70
3	DG 2520 B2RF	M-F	38.6	1465	4.7	1.15	30.8	83.3	31-1	4	56.45
4	DP 167 RF	M-F	36.5	1278	4.4	1.21	33.5	81.9	31-1	4	56.25
5	DP 147 RF	M-F	36.0	1216	4.1	1.20	31.7	81.6	31-1	5	54.10
	Mean		**37.0**	**1387**	**4.4**	**1.19**	**32.2**	**82.2**		**4**	**55.40**

Agent	Tim Campbell	**Soil Type**	Grenada silt loam
Producer	Bill Lemons	**Tillage**	No-Till
Planting Date	5/16/2006	**Previous Crop**	Cotton
Defoliation Date	9/30/2006	**Fertilizer**	60-30-90
Harvest Date	10/13/2006	**Row Spacing**	38 inches

Table 14. Results of early-mid season Roundup Ready cotton variety test, Fayette County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	39.3	1250	5.1	1.04	30.5	82.8	42-1	4	47.15
2	ST 5242 BR	E-M	39.7	1219	4.9	1.03	29.9	81.2	41-3	4	50.80
3	ST 5599 BR	E-M	39.9	1212	5.1	1.06	31.0	81.3	42-1	5	45.90
4	DP 454 BG/RR	E-M	41.7	1197	4.7	1.02	28.9	81.0	41-1	6	48.00
5	DP 445 BG/RR	E-M	40.0	1158	4.7	1.09	31.7	82.6	31-4	4	55.65
6	PHY 370 WR	E-M	40.6	1131	5.2	1.02	31.0	82.1	41-3	4	48.25
7	FM 960 BR	E-M	37.9	1101	4.7	1.04	30.7	82.8	41-3	4	51.25
8	DP 444 BG/RR	E-M	40.7	1088	4.7	1.05	30.4	82.4	41-3	4	52.70
9	PHY 310 R	E-M	41.4	1067	5.1	1.00	30.2	81.1	31-4	4	48.10
	Mean		**40.1**	**1158**	**4.9**	**1.04**	**30.5**	**81.9**		**4**	**49.76**

Agent	Jeff Via	**Soil Type**	Memphis silt loam
Producer	McNabb Brothers	**Tillage**	Conventional
Planting Date	5/1/2006	**Previous Crop**	Cotton
Defoliation Date	9/13/2006	**Fertilizer**	90-60-80
Harvest Date	9/28/2006	**Row Spacing**	38"

Table 15. Results of early season Roundup Ready Flex cotton variety test, Fayette County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 110 RF	E	40.9	1117	4.8	1.08	34.0	82.1	42-1	6	47.45
2	DP 117 B2RF	E	40.1	1034	4.8	1.10	30.9	82.5	41-4	5	52.00
3	BW-3255 B2F	E	37.1	1001	4.5	1.07	29.7	82.1	32-2	4	51.60
4	PHY 485 WRF	E	38.8	978	5.0	1.09	34.1	82.6	42-1	6	44.95
5	ST 4554 B2RF	E	36.9	971	4.9	1.05	29.9	81.3	32-2	5	49.45
6	ST 4664 RF	E	38.3	965	4.6	1.07	30.5	81.0	41-3	5	50.70
7	CG 4020 B2RF	E	37.6	955	4.6	1.09	28.3	81.8	31-4	4	54.95
8	FM 9063 B2F	E	37.5	941	4.8	1.09	31.9	81.6	41-3	4	54.30
9	DG 2100 B2RF	E	35.1	911	4.2	1.04	28.0	81.9	31-4	5	50.05
10	BW-4630 B2F	E	39.0	889	4.9	1.09	29.7	81.4	42-1	4	51.05
	Mean		**38.1**	**976**	**4.7**	**1.08**	**30.7**	**81.8**		**5**	**50.65**

Agent	Jeff Via	**Soil Type**	Memphis silt loam
Producer	McNabb Brothers	**Tillage**	Conventional
Planting Date	5/1/2006	**Previous Crop**	Cotton
Defoliation Date	9/13/2006	**Fertilizer**	90-60-80
Harvest Date	9/28/2006	**Row Spacing**	38"

Table 16. Results of early season Roundup Ready Flex cotton variety test, Fayette County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4664 RF	E	42.4	1065	4.5	1.06	30.3	80.5	32-2	5	49.45
2	CG 4020 B2RF	E	42.2	991	4.4	1.08	28.9	80.7	21-2	3	57.50
3	ST 4554 B2RF	E	41.7	959	4.7	1.06	32.0	81.4	31-3	4	53.80
4	DP 117 B2RF	E	40.4	954	4.8	1.06	33.3	80.9	41-3	5	50.75
5	DP 110 RF	E	40.2	950	4.6	1.07	34.6	82.2	41-3	6	48.70
6	DG 2100 B2RF	E	37.9	917	4.2	1.06	27.7	81.4	21-4	4	53.75
7	BW-4630 B2F	E	38.2	914	4.2	1.05	27.5	79.5	21-3	3	55.50
8	FM 9063 B2F	E	39.5	894	4.4	1.11	33.5	80.9	41-1	5	52.10
9	PHY 485 WRF	E	40.2	883	4.7	1.08	31.9	80.7	42-1	6	47.40
10	BW-3255 B2F	E	37.5	863	4.1	1.11	28.7	82.2	31-1	4	55.75
	Mean		**39.9**	**939**	**4.5**	**1.07**	**30.8**	**81.0**		**5**	**52.47**

Agent	Jeff Via	**Soil Type**	Memphis silt loam
Producer	Conrad Powers	**Tillage**	Conventional
Planting Date	4/17/2006	**Previous Crop**	Cotton
Defoliation Date	9/13/2006	**Fertilizer**	90-60-80
Harvest Date	9/20/2006	**Row Spacing**	38"

Table 17. Results of mid-full season Roundup Ready Flex cotton variety test, Fayette County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 164 B2RF	M-F	40.7	1178	4.9	1.10	30.8	81.6	31-1	4	55.40
2	DP 147 RF	M-F	40.7	1127	4.8	1.10	32.4	81.8	41-3	4	54.30
3	DP 167 RF	M-F	38.0	1095	4.8	1.10	31.5	80.1	31-4	4	55.40
4	DP 143 B2RF	M-F	38.5	1074	4.7	1.07	30.9	79.6	41-3	4	52.90
5	DG 2520 B2RF	M-F	39.4	1040	4.7	1.09	28.5	81.0	41-3	5	51.30
	Mean		**39.5**	**1103**	**4.8**	**1.09**	**30.8**	**80.8**		**4**	**53.86**

Agent	Jeff Via	**Soil Type**	Memphis silt loam
Producer	McNabb Brothers	**Tillage**	Conventional
Planting Date	5/1/2006	**Previous Crop**	Cotton
Defoliation Date	9/13/2006	**Fertilizer**	90-60-80
Harvest Date	9/28/2006	**Row Spacing**	38"

Table 18. Results of mid-full season Roundup Ready Flex cotton variety test, Fayette County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 143 B2RF	M-F	41.6	950	4.4	1.10	29.8	79.7	31-1	4	55.20
2	DG 2520 B2RF	M-F	38.7	901	4.3	1.06	28.6	80.9	31-3	4	53.35
3	DP 147 RF	M-F	39.9	768	4.4	1.05	29.4	79.3	31-3	4	52.85
4	DP 164 B2RF	M-F	38.2	663	4.4	1.05	28.6	79.8	21-2	3	55.30
5	DP 167 RF	M-F	38.2	658	4.8	1.07	30.3	79.2	31-1	3	54.55
	Mean		**39.3**	**788**	**4.5**	**1.07**	**29.3**	**79.8**		**4**	**54.25**

Agent	Jeff Via	**Soil Type**	Memphis silt loam
Producer	Conrad Powers	**Tillage**	Conventional
Planting Date	4/17/2006	**Previous Crop**	Cotton
Defoliation Date	9/13/2006	**Fertilizer**	90-60-80
Harvest Date	9/20/2006	**Row Spacing**	38"

Table 19. Results of early-mid season Roundup Ready cotton variety test, Gibson County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 444 BG/RR	E-M	39.8	1405	4.2	1.11	31.3	82.5	31-2	5	54.15
2	ST 4575 BR	E-M	39.1	1363	4.6	1.11	31.0	81.9	41-3	5	52.05
3	DP 445 BG/RR	E-M	40.4	1316	4.4	1.13	31.0	82.3	31-1	4	56.00
4	PHY 370 WR	E-M	38.7	1314	4.5	1.07	31.4	81.8	31-3	4	53.80
5	ST 5599 BR	E-M	38.6	1291	4.3	1.12	34.2	82.1	41-3	6	49.35
6	ST 5242 BR	E-M	38.6	1288	4.8	1.10	29.4	82.7	31-1	4	55.20
7	PHY 310 R	E-M	39.2	1280	4.5	1.09	31.4	81.8	31-2	4	55.40
8	DP 454 BG/RR	E-M	38.8	1235	3.8	1.10	30.8	83.1	41-1	7	47.90
9	FM 960 BR	E-M	36.5	1150	4.0	1.12	34.4	81.6	41-1	5	52.30
	Mean		**38.9**	**1294**	**4.3**	**1.11**	**31.7**	**82.2**		**5**	**52.91**

Agent	Philip Shelby	**Soil Type**	Gernada silt loam
Producer	Tommy Griggs	**Tillage**	No-Till
Planting Date	5/15/2006	**Previous Crop**	Cotton
Defoliation Date	9/5/2006	**Fertilizer**	85-0-120
Harvest Date	11/3/2006	**Row Spacing**	38 inches

Table 20. Results of early season Roundup Ready Flex cotton variety test, Gibson County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 110 RF	E	40.8	1205	4.7	1.22	30.4	81.6	41-1	5	51.85
2	ST 4664 RF	E	40.0	1204	4.7	1.08	32.3	82.6	31-3	3	57.80
3	ST 4554 B2RF	E	40.3	1199	5.1	1.09	31.7	82.8	31-3	3	55.05
4	DP 117 B2RF	E	39.4	1149	4.5	1.16	30.8	82.4	31-1	5	53.90
5	BW-4630 B2F	E	38.6	1129	4.6	1.11	30.1	82.2	31-1	3	58.05
6	CG 4020 B2RF	E	39.3	1088	4.3	1.12	30.2	83.1	31-1	4	56.05
7	BW-3255 B2F	E	37.6	1052	4.3	1.08	29.6	83.0	31-1	4	55.45
8	PHY 485 WRF	E	37.8	1031	4.5	1.11	34.0	83.8	31-4	4	56.40
9	FM 9063 B2F	E	37.1	981	4.2	1.11	34.1	82.9	31-1	4	56.50
10	DG 2100 B2RF	E	37.6	944	4.1	1.09	30.1	83.0	31-1	4	55.65
	Mean		**38.9**	**1098**	**4.5**	**1.12**	**31.3**	**82.7**		**4**	**55.67**

Agent	Philip Shelby	**Soil Type**	Grenada silt loam
Producer	Jason Luckey	**Tillage**	No-Till
Planting Date	4/28/2006	**Previous Crop**	Cotton
Defoliation Date	8/9/2006	**Fertilizer**	80-30-90
Harvest Date	9/29/2006	**Row Spacing**	38 inches

Table 21. Results of mid-full season Roundup Ready Flex cotton variety test, Gibson County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 147 RF	M-F	35.0	1097	4.1	1.19	32.0	82.7	51-1	4	51.45
2	DP 167 RF	M-F	34.0	1057	4.6	1.18	32.9	81.9	41-2	4	55.00
3	DP 164 B2RF	M-F	34.6	1041	4.7	1.15	32.9	81.2	41-2	4	55.00
4	DP 143 B2RF	M-F	34.6	1030	4.2	1.21	30.9	81.8	51-1	5	50.05
5	DG 2520 B2RF	M-F	35.5	1000	4.4	1.15	29.0	81.7	41-2	4	54.50
	Mean		**34.7**	**1045**	**4.4**	**1.18**	**31.5**	**81.9**		**4**	**53.20**

Agent	Philip Shelby	**Soil Type**	Rowon silt loam
Producer	Jason Luckey	**Tillage**	No-Till
Planting Date	4/28/2006	**Previous Crop**	Cotton
Defoliation Date	None	**Fertilizer**	80-30-90
Harvest Date	11/19/2006	**Row Spacing**	38 inches

Table 22. Results of early-mid season Roundup Ready cotton variety test, Haywood County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	PHY 310 R	E-M	38.8	1038	5.4	1.04	31.7	82.6	51-1	5	44.85
2	DP 444 BG/RR	E-M	38.5	1004	5.0	1.08	30.8	84.2	51-1	5	47.35
3	PHY 370 WR	E-M	37.6	979	5.4	1.02	31.6	82.1	41-2	4	47.40
4	DP 454 BG/RR	E-M	38.3	973	5.3	1.03	30.8	82.3	41-4	6	45.70
5	ST 5242 BR	E-M	38.9	945	4.6	1.05	32.0	82.6	41-1	4	53.15
6	ST 4575 BR	E-M	38.0	938	5.5	1.05	31.9	82.5	51-3	6	43.90
7	ST 5599 BR	E-M	38.8	924	5.5	1.06	33.4	82.5	42-2	5	45.35
8	DP 445 BG/RR	E-M	37.3	893	5.3	1.06	31.4	82.7	41-1	4	50.40
	Mean		**38.3**	**962**	**5.3**	**1.05**	**31.7**	**82.7**		**5**	**47.26**

Agent	Tracey Sullivan	**Soil Type**	Loring silt loam
Producer	Taylor Sullivan	**Tillage**	No-Till
Planting Date	5/25/2006	**Previous Crop**	Cotton
Defoliation Date	10/8/2006	**Fertilizer**	80-50-90-1B
Harvest Date	11/13/2006	**Row Spacing**	38 inches

Table 23. Results of early season Roundup Ready Flex cotton variety test, Haywood County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 117 B2RF	E	38.3	1188	4.6	1.17	34.9	82.6	51-1	7	46.45
2	CG 4020 B2RF	E	37.4	1122	4.8	1.16	34.6	82.9	41-4	6	49.60
3	DP 110 RF	E	37.4	1007	4.2	1.11	28.9	82.1	41-1	6	49.05
4	DG 2100 B2RF	E	34.5	1004	5.0	1.10	33.3	83.5	41-3	6	46.80
5	PHY 485 WRF	E	37.5	995	4.2	1.10	29.2	83.0	41-1	5	51.75
6	BW-3255 B2F	E	35.6	936	4.5	1.10	30.2	81.8	41-2	7	47.25
7	ST 4664 RF	E	37.8	911	4.2	1.14	28.8	81.5	41-1	4	54.70
8	ST 4554 B2RF	E	38.0	879	4.8	1.13	32.7	82.4	41-3	4	55.00
9	BW-4630 B2F	E	37.7	811	4.5	1.14	29.1	81.9	41-1	5	51.60
	Mean		**37.1**	**984**	**4.5**	**1.13**	**31.3**	**82.4**		**6**	**50.24**

Agent	Tracey Sullivan	**Soil Type**	Calloway silt loam
Producer	Lewis Farms	**Tillage**	No-Till
Planting Date	5/18/2006	**Previous Crop**	Cotton
Defoliation Date	10/7/2006	**Fertilizer**	40-46-110-5B-10S+60N
Harvest Date	10/30/2006	**Row Spacing**	38 inches

Table 24. Results of mid-full season Roundup Ready Flex cotton variety test, Haywood County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 143 B2RF	M-F	37.3	1126	4.4	1.22	32.7	80.1	412	6	49.35
2	DG 2520 B2RF	M-F	38.0	1090	4.2	1.15	29.6	80.9	411	5	52.05
3	DP 164 B2RF	M-F	35.6	1075	4.3	1.14	33.1	81.4	411	5	52.10
4	DP 147 RF	M-F	37.0	976	4.5	1.17	32.9	81.7	312	5	53.95
5	DP 167 RF	M-F	35.0	833	4.0	1.16	32.7	82.3	411	6	49.55
	Mean		**36.6**	**1020**	**4.3**	**1.17**	**32.2**	**81.3**		**5**	**51.40**

Agent	Tracey Sullivan	**Soil Type**	Calloway silt loam
Producer	Lewis Farms	**Tillage**	No-Till
Planting Date	5/18/2006	**Previous Crop**	Cotton
Defoliation Date	10/7/2006	**Fertilizer**	40-46-110-5B-10S+60N
Harvest Date	10/30/2006	**Row Spacing**	38 inches

Table 25. Results of early-mid season Roundup Ready cotton variety test, Lake County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 445 BG/RR	E-M	40.0	1613	4.3	1.15	31.2	81.9	31-1	4	56.20
2	ST 5242 BR	E-M	36.8	1584	4.2	1.10	29.4	82.5	21-4	4	55.80
3	PHY 310 R	E-M	39.3	1516	4.5	1.09	30.3	81.9	31-3	4	55.20
4	PHY 370 WR	E-M	39.5	1510	4.6	1.11	31.0	82.9	21-4	4	56.90
5	ST 4575 BR	E-M	38.5	1502	4.3	1.12	30.7	81.8	31-3	4	56.00
6	ST 5599 BR	E-M	38.5	1501	4.6	1.11	31.1	80.6	31-3	4	56.00
7	FM 960 BR	E-M	36.1	1411	4.4	1.09	33.1	82.5	31-1	4	55.70
8	DP 444 BG/RR	E-M	37.2	1386	3.7	1.13	30.6	82.0	31-1	4	56.20
9	DP 454 BG/RR	E-M	38.6	1373	4.1	1.10	30.4	82.2	31-2	5	53.30
	Mean		**38.3**	**1488**	**4.3**	**1.11**	**30.9**	**82.0**		**4**	**55.70**

Agent	Greg Allen	**Soil Type**	Tiptonville silt loam
Producer	Tony Bargery	**Tillage**	No-Till
Planting Date	5/2/2006	**Previous Crop**	Cotton
Defoliation Date	10/2/2006	**Fertilizer**	0-0-100 + 100N
Harvest Date	10/11/2006	**Row Spacing**	38 inches

Table 26. Results of early season Roundup Ready Flex cotton variety test, Lake County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4664 RF	E	39.4	1274	4.6	1.12	29.3	82.6	41-3	5	51.85
2	ST 4554 B2RF	E	38.0	1243	4.6	1.15	30.9	83.7	41-1	6	49.65
3	DP 117 B2RF	E	37.7	1240	4.4	1.16	34.7	82.5	41-1	6	49.60
4	PHY 485 WRF	E	38.4	1233	4.6	1.14	30.5	83.2	41-2	6	49.55
5	DG 2100 B2RF	E	35.2	1223	4.1	1.12	28.0	83.1	31-2	4	56.00
6	BW-4630 B2F	E	35.4	1219	4.0	1.18	28.4	82.7	31-2	4	56.20
7	CG 4020 B2RF	E	34.8	1218	4.2	1.18	27.1	82.7	31-2	4	56.20
8	DP 110 RF	E	38.3	1218	4.6	1.16	33.0	83.4	41-2	6	49.60
9	FM 9063 B2F	E	36.2	1119	4.3	1.21	32.4	82.3	41-1	6	49.30
10	BW-3255 B2F	E	35.1	1118	4.0	1.15	28.9	82.5	31-2	4	56.20
	Mean		**36.9**	**1211**	**4.3**	**1.16**	**30.3**	**82.9**		**5**	**52.42**

Agent	Greg Allen	**Soil Type**	Tiptonville silt loam
Producer	John Lindamood	**Tillage**	No-Till
Planting Date	4/19/2006	**Previous Crop**	Cotton
Defoliation Date	10/3/2006	**Fertilizer**	26-0-74-20S-05B+70N
Harvest Date	10/25/2006	**Row Spacing**	38 inches

Table 27. Results of early-mid season Roundup Ready cotton variety test, Lauderdale County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	39.6	1693	4.9	1.13	30.0	82.5	41-1	4	55.00
2	PHY 370 WR	E-M	39.7	1676	4.8	1.11	31.3	82.5	41-1	4	55.20
3	DP 445 BG/RR	E-M	40.0	1671	4.6	1.13	31.8	82.0	31-1	4	56.00
4	DP 444 BG/RR	E-M	39.5	1664	4.4	1.12	30.8	83.0	31-2	4	56.25
5	ST 5242 BR	E-M	38.6	1616	4.7	1.09	29.8	83.6	31-2	4	55.55
6	ST 5599 BR	E-M	38.9	1599	4.5	1.14	32.9	81.5	41-1	5	52.10
7	DP 454 BG/RR	E-M	39.8	1599	4.0	1.12	30.9	83.0	41-2	6	49.75
8	PHY 310 R	E-M	40.2	1590	5.0	1.10	30.2	82.8	41-1	4	51.60
9	FM 960 BR	E-M	36.8	1558	4.6	1.10	34.9	82.6	31-2	4	55.70
	Mean		**39.2**	**1630**	**4.6**	**1.12**	**31.4**	**82.6**		**4**	**54.13**

Agent	Jerry Parker	**Soil Type**	Robinsville sandy loam
Producer	Leslie Crook	**Tillage**	Minimun
Planting Date	5/16/2006	**Previous Crop**	Cotton
Defoliation Date	9/21/2006	**Fertilizer**	30-0-120 + 62N
Harvest Date	10/24/2006	**Row Spacing**	38 inches

Table 28. Results of early season Roundup Ready Flex cotton variety test, Lauderdale County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	BW-4630 B2F	E	39.2	1419	4.3	1.18	29.9	82.2	31-2	4	56.00
2	BW-3255 B2F	E	34.4	1218	4.5	1.14	29.9	82.7	31-2	4	56.25
3	DP 117 B2RF	E	35.6	1203	4.5	1.18	34.6	83.5	41-2	5	52.45
4	DG 2100 B2RF	E	35.2	1199	4.4	1.15	30.2	82.6	31-2	4	56.25
5	ST 4554 B2RF	E	35.8	1191	4.5	1.17	32.4	82.6	31-2	4	56.45
6	CG 4020 B2RF	E	35.8	1171	4.0	1.20	30.3	82.7	31-2	5	54.15
7	PHY 485 WRF	E	34.3	1121	4.5	1.19	31.9	83.3	41-1	6	49.55
8	ST 4664 RF	E	36.1	1048	4.5	1.16	30.8	82.4	31-4	5	53.90
9	FM 9063 B2F	E	34.2	945	4.4	1.23	33.2	82.4	31-1	4	56.25
10	DP 110 RF	E	34.8	861	4.5	1.19	32.5	81.9	42-1	6	47.55
	Mean		**35.5**	**1138**	**4.4**	**1.18**	**31.6**	**82.6**		**5**	**53.88**

Agent	Jerry Parker	**Soil Type**	Commerce-Keyspoint
Producer	Leslie Crook	**Tillage**	Minimun
Planting Date	5/16/2006	**Previous Crop**	Cotton
Defoliation Date	9/30/2006	**Fertilizer**	30-0-120 + 62N
Harvest Date	10/25/2006	**Row Spacing**	38 inches

Table 29. Results of mid-full season Roundup Ready Flex cotton variety test, Lauderdale County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DG 2520 B2RF	M-F	37.1	1219	4.4	1.20	30.3	82.7	31-1	4	56.25
2	DP 164 B2RF	M-F	33.0	1032	4.1	1.22	32.4	83.3	31-2	4	56.65
3	DP 143 B2RF	M-F	33.7	1009	3.8	1.23	30.5	81.5	41-1	5	52.25
4	DP 147 RF	M-F	33.2	659	3.9	1.25	31.8	81.9	31-2	5	54.10
5	DP 167 RF	M-F	33.0	649	4.1	1.24	31.7	83.2	41-1	4	55.40
	Mean		**34.0**	**914**	**4.1**	**1.23**	**31.3**	**82.5**		**4**	**54.93**

Agent	Jerry Parker	**Soil Type**	Commerce-Keyspoint
Producer	Leslie Crook	**Tillage**	Minimun
Planting Date	5/16/2006	**Previous Crop**	Cotton
Defoliation Date	9/30/2006	**Fertilizer**	30-0-120 + 62N
Harvest Date	10/25/2006	**Row Spacing**	38 inches

Table 30. Results of early-mid season Roundup Ready cotton variety test, Lincoln County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 454 BG/RR	E-M	42.2	1443	4.1	1.05	31.1	81.6	41-1	5	50.90
2	PHY 310 R	E-M	41.1	1334	4.5	1.06	31.8	82.5	41-1	5	50.95
3	PHY 370 WR	E-M	40.8	1281	4.4	1.10	32.5	81.8	41-1	4	54.35
4	ST 4575 BR	E-M	39.3	1273	4.1	1.10	30.6	82.5	41-1	5	52.20
5	DP 445 BG/RR	E-M	38.0	1214	.	.	.	.	.	.	.
6	FM 960 BR	E-M	37.9	1201	4.1	1.10	32.9	82.4	31-2	4	55.65
7	ST 5242 BR	E-M	37.5	1174	3.9	1.14	28.3	83.6	41-3	6	49.40
8	DP 444 BG/RR	E-M	40.3	1160	3.9	1.07	31.0	82.0	41-1	4	53.10
9	ST 5599 BR	E-M	39.8	790	4.3	1.12	32.3	81.7	31-4	4	56.00
	Mean		**39.7**	**1208**	**4.2**	**1.09**	**31.3**	**82.3**		**5**	**52.82**

Agent	David Qualls	**Soil Type**	Silt loam
Producer	JBH Farms	**Tillage**	Minimum
Planting Date	4/24/2006	**Previous Crop**	Cotton
Defoliation Date	9/12/2006	**Fertilizer**	30-50-100 + 110 N
Harvest Date	10/2/2006	**Row Spacing**	38 inches

Table 31. Results of early season Roundup Ready Flex cotton variety test, Lincoln County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	CG 4020 B2RF	E	38.7	1193	4.4	1.17	29.6	83.3	41-1	4	55.00
2	DP 110 RF	E	38.3	1183	4.5	1.10	33.7	83.3	41-2	6	49.45
3	BW-4630 B2F	E	38.8	1141	4.4	1.16	29.7	83.7	41-1	4	55.10
4	BW-3255 B2F	E	38.0	1113	.	.	.	.	.	.	.
5	DG 2100 B2RF	E	36.7	1102	4.3	1.10	29.4	83.1	31-2	4	55.20
6	ST 4554 B2RF	E	38.0	1098	4.8	1.13	34.6	82.3	41-3	5	52.10
7	ST 4664 RF	E	38.5	1009	4.7	1.11	30.5	82.9	41-2	5	52.30
8	FM 9063 B2F	E	38.5	989	4.4	1.18	34.4	83.0	31-2	4	56.50
9	PHY 485 WRF	E	37.7	949	4.7	1.13	32.3	82.5	41-4	5	52.30
10	DP 117 B2RF	E	30.7	854	4.6	1.13	35.0	82.4	41-2	5	52.10
	Mean		**37.4**	**1063**	**4.5**	**1.13**	**32.1**	**82.9**		**5**	**53.34**

Agent	David Qualls	**Soil Type**	Silt loam
Producer	JBH Farms	**Tillage**	Minimum
Planting Date	4/24/2006	**Previous Crop**	Cotton
Defoliation Date	9/12/2006	**Fertilizer**	30-50-100 + 110 N
Harvest Date	10/2/2006	**Row Spacing**	38 inches

Table 32. Results of early-mid season Roundup Ready cotton variety test, Madison County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	PHY 370 WR	E-M	39.1	1234	5.0	1.10	32.8	83.4	31-2	5	50.85
2	DP 454 BG/RR	E-M	40.7	1222	4.5	1.08	32.2	81.9	41-1	6	49.15
3	PHY 310 R	E-M	40.0	1201	4.9	1.08	32.3	82.8	41-1	4	54.55
4	FM 960 BR	E-M	37.9	1192	4.9	1.15	33.7	81.4	31-2	5	53.95
5	ST 4575 BR	E-M	38.8	1186	4.7	1.12	32.2	83.0	31-2	4	56.25
6	ST 5242 BR	E-M	38.7	1170	4.7	1.12	30.1	83.9	41-1	4	55.10
7	ST 5599 BR	E-M	37.9	1166	5.0	1.15	33.6	82.4	32-2	5	47.95
8	DP 445 BG/RR	E-M	38.5	1125	4.6	1.14	33.5	82.7	31-2	4	56.50
9	DP 444 BG/RR	E-M	37.9	1081	4.3	1.11	32.6	82.3	31-2	4	56.05
	Mean		**38.9**	**1175**	**4.7**	**1.12**	**32.6**	**82.6**		**5**	**53.37**

Agent	Bill Wyatt	**Soil Type**	Memphis silt loam
Producer	Mark Smith	**Tillage**	No-Till
Planting Date	5/8/2006	**Previous Crop**	Cotton
Defoliation Date	10/7/2006	**Fertilizer**	Variable Rate
Harvest Date	11/2/2006	**Row Spacing**	38 inches

Table 33. Results of early season Roundup Ready Flex cotton variety test, Shelby County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4554 B2RF	E	38.4	945	5.4	1.07	31.4	82.8	31-3	4	50.45
2	DP 117 B2RF	E	39.0	914	5.2	1.11	34.7	82.2	31-4	5	51.00
3	BW-3255 B2F	E	38.2	893	4.9	1.06	29.7	81.9	41-3	5	50.50
4	ST 4664 RF	E	37.8	826	5.3	1.07	32.7	82.6	31-4	4	51.35
5	DP 110 RF	E	39.9	809	5.3	1.12	34.7	82.7	31-4	4	53.55
6	DG 2100 B2RF	E	38.4	786	4.8	1.08	29.3	81.4	21-3	3	57.50
7	CG 4020 B2RF	E	39.4	772	5.1	1.10	30.0	81.6	21-4	3	55.00
8	BW-4630 B2F	E	37.6	755	4.9	1.12	30.1	82.6	31-3	3	58.30
9	FM 9063 B2F	E	37.0	637	5.1	1.09	33.9	81.8	31-3	4	52.70
10	PHY 485 WRF	E	35.8	612	5.3	1.09	34.5	83.0	42-1	5	46.90
	Mean		**38.1**	**795**	**5.1**	**1.09**	**32.1**	**82.3**		**4**	**52.73**

Agent	Becky Muller	**Soil Type**	Memphis silt loam
Producer	Sneed Brothers	**Tillage**	Conventional
Planting Date	5/9/2006	**Previous Crop**	Cotton
Defoliation Date	9/14/2006	**Fertilizer**	50-30-80 + 50N
Harvest Date	10/2/2006	**Row Spacing**	30 inches

Table 34. Results of mid-full season Roundup Ready Flex cotton variety test, Shelby County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 164 B2RF	M-F	35.3	743	5.2	1.14	33.6	81.9	31-3	3	55.75
2	DG 2520 B2RF	M-F	39.5	737	5.1	1.11	30.4	82.1	21-4	3	56.10
3	DP 143 B2RF	M-F	37.5	736	4.9	1.19	33.5	81.6	31-4	4	56.25
4	DP 167 RF	M-F	37.7	693	5.1	1.12	33.4	81.8	21-2	3	56.35
5	DP 147 RF	M-F	41.5	657	4.9	1.15	33.6	81.4	31-3	4	56.25
	Mean		**38.3**	**713**	**5.0**	**1.14**	**32.9**	**81.8**		**3**	**56.14**

Agent	Becky Muller	**Soil Type**	Memphis silt loam
Producer	Sneed Brothers	**Tillage**	Conventional
Planting Date	5/9/2006	**Previous Crop**	Cotton
Defoliation Date	9/14/2006	**Fertilizer**	50-30-80 + 50N
Harvest Date	10/2/2006	**Row Spacing**	30 inches

Table 35. Results of early season Roundup Ready Flex cotton variety test, Tipton County, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4554 B2RF	E	36.3	1436	4.3	1.15	31.9	82.4	52-1	7	44.65
2	PHY 485 WRF	E	37.7	1382	4.4	1.16	31.6	83.0	51-4	7	46.40
3	DG 2100 B2RF	E	35.8	1286	4.5	1.12	29.4	82.0	51-1	5	49.40
4	BW-3255 B2F	E	36.3	1279	4.5	1.13	28.5	81.9	41-4	7	47.05
5	FM 9063 B2F	E	36.9	1277	4.7	1.20	34.0	82.0	41-2	5	52.10
6	DP 117 B2RF	E	38.4	1266	4.8	1.11	34.1	82.6	51-1	7	46.45
7	CG 4020 B2RF	E	37.6	1258	4.2	1.16	29.4	83.0	41-2	5	52.05
8	BW-4630 B2F	E	36.1	1241	4.6	1.13	28.9	81.9	41-2	6	48.85
9	ST 4664 RF	E	37.2	1103	4.8	1.14	30.6	80.8	52-1	7	44.65
10	DP 110 RF	E	37.7	890	4.8	1.16	34.2	83.1	51-4	7	46.45
	Mean		**37.0**	**1242**	**4.6**	**1.15**	**31.3**	**82.3**		**6**	**47.81**

Agent	Daniel Jacobs	**Soil Type**	Adler silt loam
Producer	David Templeton	**Tillage**	No-Till
Planting Date	5/23/2006	**Previous Crop**	Cotton
Defoliation Date	None	**Fertilizer**	40-0-110
Harvest Date	11/10/2006	**Row Spacing**	38 inches

Table 36. Results of early-mid season Roundup Ready cotton variety test, WTREC, Jackson, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4575 BR	E-M	41.4	1573	4.9	1.09	31.6	81.2	31-3	4	55.40
2	PHY 370 WR	E-M	41.9	1396	4.7	1.08	32.6	81.4	31-1	3	57.60
3	PHY 310 R	E-M	43.0	1380	4.5	1.07	32.5	81.1	31-1	4	53.85
4	DP 445 BG/RR	E-M	40.4	1352	4.4	1.14	34.2	81.3	31-1	4	56.25
5	DP 444 BG/RR	E-M	40.7	1301	3.9	1.10	29.6	82.0	31-1	4	55.40
6	ST 5242 BR	E-M	40.5	1271	4.5	1.08	30.5	82.0	21-2	3	57.95
7	ST 5599 BR	E-M	41.7	1257	4.8	1.05	31.0	79.6	31-3	4	53.80
8	DP 454 BG/RR	E-M	41.7	1251	4.1	1.04	31.6	80.3	21-2	5	50.50
9	FM 960 BR	E-M	39.2	1218	4.4	1.09	33.8	81.3	21-2	4	55.85
	Mean		**41.2**	**1333**	**4.5**	**1.08**	**31.9**	**81.1**		**4**	**55.18**

Agent	Tracy Bush	**Soil Type**	Dexter loam
Producer	WTREC	**Tillage**	No-Till
Planting Date	4/19/2006	**Previous Crop**	Corn
Defoliation Date	9/7/2006	**Fertilizer**	75-70-70
Harvest Date	9/21/2006	**Row Spacing**	38 inches

Table 37. Results of early season Roundup Ready Flex cotton variety test, WTREC, Jackson, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	ST 4664 RF	E	40.8	1245	4.4	1.04	31.9	80.7	31-4	4	51.75
2	BW-4630 B2F	E	39.5	1184	3.9	1.18	30.0	81.5	31-1	4	56.20
3	PHY 485 WRF	E	42.8	1168	4.4	1.06	32.8	82.0	41-3	5	50.75
4	CG 4020 B2RF	E	38.1	1121	4.0	1.13	30.9	82.0	31-1	3	58.45
5	ST 4554 B2RF	E	38.8	1116	4.4	1.09	32.4	81.9	31-4	4	55.40
6	DG 2100 B2RF	E	37.5	1071	3.8	1.10	28.8	81.8	31-1	3	57.30
7	BW-3255 B2F	E	36.8	1020	4.0	1.11	28.8	82.1	31-1	3	58.00
8	DP 110 RF	E	36.0	897	4.2	1.09	33.6	81.4	41-1	4	54.55
9	DP 117 B2RF	E	38.9	852	4.1	1.12	32.7	80.9	41-1	5	52.30
10	FM 9063 B2F	E	36.8	826	4.0	1.16	33.8	81.7	31-1	4	56.45
	Mean		**38.6**	**1050**	**4.1**	**1.11**	**31.6**	**81.6**		**4**	**55.12**

Agent	Tracy Bush	**Soil Type**	Dexter loam
Producer	WTREC	**Tillage**	No-Till
Planting Date	4/19/2006	**Previous Crop**	Corn
Defoliation Date	9/7/2006	**Fertilizer**	75-70-70
Harvest Date	9/21/2006	**Row Spacing**	38 inches

Table 38. Results of mid-full season Roundup Ready Flex cotton variety test, WTREC, Jackson, 2006

Rank	Variety	Maturity	Gin Turnout (%)	Lint Yield (lb./acre)	Mic	Length (inches)	Strength (g/tex)	Uni-formity (%)	HVI Color	Leaf Grade	Loan Value (¢/lb.)
1	DP 143 B2RF	M-F	38.6	1062	4.0	1.12	30.7	78.5	31-1	4	55.70
2	DG 2520 B2RF	M-F	38.2	1059	4.6	1.12	29.2	80.7	31-1	3	57.80
3	DP 147 RF	M-F	41.1	1044	4.4	1.07	30.6	79.8	31-1	3	55.25
4	DP 167 RF	M-F	37.9	970	3.9	1.14	33.9	80.9	31-1	4	56.45
5	DP 164 B2RF	M-F	38.8	967	3.9	1.16	31.4	80.5	31-1	3	58.65
	Mean		**38.9**	**1020**	**4.2**	**1.12**	**31.2**	**80.1**		**3**	**56.77**

Agent	Tracy Bush	**Soil Type**	Dexter loam
Producer	WTREC	**Tillage**	No-Till
Planting Date	4/19/2006	**Previous Crop**	Corn
Defoliation Date	9/7/2006	**Fertilizer**	75-70-70
Harvest Date	9/21/2006	**Row Spacing**	38 inches

GLOSSARY OF TERMS

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

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.

CST: County Standard Test of cotton.

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 to describe 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.

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.

Liberty Link: 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.*** No decimal point is used by the USDA (1999) in reporting micronaire values, while others report values in tenths of units.

Market Value	HVI Micronaire
Low discount range	34 and below
Base range	35 – 36
Premium range	37 – 42
Base range	43 – 49
High discount range	50 and above

Source: USDA (1999)

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 ***F*** or ***RF*** in a variety name.

Seedcotton: Lint plus seed, trash and excess moisture.

Staple: A traditional term applied to lengths of fiber that require spinning or twisting in the manufacture of yarn. Staple also refers to the average length of the bulk fibers measured in 32nds of one inch. Cotton fiber considered with regard to its length.

short staple : less than 25 mm (<0.98 inches)
medium staple : 25 to 30 mm (0.98–1.18 inches)
long staple : 30 to 37 mm (1.18-1.46 inches)
extra long staple : 37mm and above (>1.46 inches)

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)

Widestrike: A variety containing a pair of 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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