PERFORMANCE OF ROUNDUP FLEX© COTTON VARIETIES IN THE NORTH MISSISSIPPI RIVER DELTA

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Abstract

Roundup Flex™ cotton varieties will be available for widespread planting in 2006. In 2005, thirty-three Roundup Flex™ cotton varieties were evaluated in Missouri, Tennessee and Arkansas. The best varieties compared very well when compared to Roundup Ready™ varieties in the official variety trials. In Missouri a Roundup Flex™ variety was in the top five in every official variety trial. No adverse effects were observed due to application over the top after the fifth true leaf. These trials demonstrated that Roundup Flex™ will allow improved weed control with the application over the top after the fifth true leaf.

Introduction

Roundup Flex™ cotton varieties will be available for wide scale planting in 2006. Producers need to know the yield potential of the new varieties. In prior years it has been demonstrated that the new gene allow application of Roundup Weathermax™ to be applied over the top of the crop after the fifth true leaf without the risk of crop damage unlike Roundup Ready™ varieties. This will result in improved weed control and much easier application of Roundup Weathermax™.

Materials and Methods

Trials to evaluate thirty-three new Roundup Flex™ varieties were conducted in Missouri, Tennessee and Arkansas in 2005 were sponsored by Monsanto. The Missouri trial was a split plot design with four replications on a silt loam soil near Portageville. The trial was irrigated as needed. The main plots evaluated Roundup Weathermax and MON 3539. Subplots were the varieties. Twenty-two ounces of Roundup Weathermax™ was applied before the fifth true leaf. Due to a miscalculation forty four ounces of MON 3539 was applied before the fifth true leaf. Both treatments had twenty-two ounces applied broadcast after the fifth true leaf. The plots were harvested with a two-row picker. Two replications were ginned on a twenty-saw gin with an inclined cleaner, feeder extractor and single stage lint cleaner. Fiber quality was evaluated on a high volume instrument at the International Textile Research Center at Lubbock, Texas.

The Tennessee trial was a randomized complete block design with four replications on a non-irrigated silt loam soil at Jackson. The trial was planted on May 10. MON 3539 was used on all plots. Twenty-two ounces was applied before the fifth true leaf and two applications of twenty-two ounces each was applied after the fifth true leaf. It was harvested with a John Deere picker and a grab sample ginned on a research hand gin.

The Arkansas trial was a randomized complete block design with four replications on an irrigated soil at Marianna. Roundup Weathermax™ was applied over the top only before the fifth true leaf. The trial was harvested with a John Deere picker and ginned on a research hand gin.

Results and Discussion

The Roundup Flex™ varieties showed excellent yield potential with one yielding 1801 pounds per acre in the official variety trial at Senath, Missouri. In the five official trials in Missouri, a Roundup Flex™ variety was in the top five in every trial. The fiber properties appeared to be very good. Growth habit was similar to the Roundup Ready™ varieties. Beaked bolls and aborted fruiting positions appeared to be normal as compared to conventional cotton indicating that Roundup Weathermax™ and MON 3539 had no adverse effect upon the plants when applied anytime during the growing season.

Conclusions

The top varieties compared favorably to the leading present day varieties when compared in the official variety trials. No damage to the crop was observed when Roundup Weathermax™ was applied over the top even after the fifth true leaf. Fiber quality appears to be very satisfactory. The new gene will allow producers to have improved weed control.

University of Missouri - Delta Center
Monsanto RR Flex Cotton Trait
Planted May 5, 2005 Harvested October 4, 2005

May 18 44 oz MON 3539.
June 1 22 oz MON 3539.
June 20 22oz MON 3539.

	Yield	Turnout	Mic	Length	Unif.	Strength	Elon.	Rd	+b	Leaf
Treatment 1										
1 PHY 415 RF	1299 b-m	37 a-g	4.6 abc	1.09 no	82.2 h-m	28.5 h-r	6.9 c-f	72 f-n	9.3 a-h	3 ab
2 PHY 425 RF	1271 d-n	37 b-g	4.7 ab	1.14 f-l	83.7 a-e	30.1 c-h	6.8 c-i	72 h-n	9.6 abc	3 ab
3 PHY 475 WRF	1171 g-p	37 a-g	4.4 b-h	1.13 g-n	83.6 a-g	29.6 d-j	6.8 c-i	73 a-n	9.4 a-f	3 ab
4 PHY 485 WRF	1333 a-k	37 a-g	4.6 a-d	1.12 h-n	83.7 a-e	30.0 c-h	6.9 c-g	72 f-n	9.6 abc	3 ab
5 ST 4554 B2RF	1472 a-d	39 abc	4.7 a	1.10 l-o	83.4 a-j	29.6 d-k	7.8 a	73 a-n	9.1 c-k	3 ab
6 ST 4664 RF	1511 abc	40 a	4.6 a-d	1.11 j-o	82.5 c-m	29.3 e-m	7.2 b-e	73 c-n	9.7 a	2 ab
7 STX 5885 B2RF	1210 f-p	35 efg	4.4 b-g	1.14 f-k	82.7 a-m	29.5 d-l	5.6 o-u	74 a-k	9.5 a-e	3 ab
8 ST 4357 B2RF	1444 a-e	38 a-e	4.2 f-j	1.15 e-i	82.5 c-m	27.8 m-u	5.7 n-u	74 a-m	9.0 d-m	2 ab
9 ST 5007 B2RF	1110 k-q	35 efg	4.3 d-j	1.21 a	83.8 a-d	29.6 d-k	5.8 m-t	74 a-l	8.6 k-o	3 ab
10 CG 3020 B2RF	1232 e-p	36 d-g	4.1 g-k	1.12 h-n	83.0 a-m	27.2 r-u	6.3 f-n	74 a-m	8.9 f-m	2 ab
11 CG 3520 B2RF	1277 d-m	37 a-g	4.4 b-h	1.16 c-g	82.4 e-m	27.5 p-u	6.1 i-r	73 a-n	9.2 b-j	2 ab
12 CG 4020 B2RF	1377 a-i	38 a-f	4.3 d-j	1.15 e-i	82.0 j-m	27.5 p-u	5.8 l-t	73 b-n	9.0 e-m	3 ab
14 XBCG-1505	1043 n-q	36 d-g	4.4 b-h	1.14 f-l	82.3 f-m	31.1 a-d	4.3 ABC	74 a-j	9.1 c-k	2 b
15 XBCG-2038	1305 b-l	37 b-g	4.5 a-f	1.15 e-i	82.6 b-m	26.9 r-u	6.1 j-r	73 a-n	8.9 f-n	3 ab
16 XBCG-3255	1344 a-j	36 c-g	4.2 e-j	1.11 k-o	83.1 a-l	26.4 tu	6.3 f-n	73 a-n	9.0 e-m	2 b
17 XBCG-4021	1199 f-p	35 efg	4.1 h-k	1.13 g-n	82.7 a-m	27.2 r-u	6.0 k-s	74 a-h	8.2 o	2 ab
18 XBCG-4575	1277 d-m	37 a-g	4.5 a-f	1.10 mno	82.4 e-m	27.4 r-u	6.2 g-p	75 a-e	8.8 g-n	2 ab
19 XBCG-4630	1255 d-o	38 a-f	4.2 f-j	1.16 d-h	82.1 h-m	28.1 i-s	5.5 r-x	75 a-d	8.7 i-o	3 ab
20 XBCG-8391	1082 l-q	34 g	4.3 c-i	1.19 a-d	83.7 a-e	29.2 f-o	5.5 q-w	74 a-l	8.8 h-n	3 ab
21 XBCG-9124	1427 a-f	38 a-e	4.4 b-g	1.16 d-h	82.8 a-m	27.3 r-u	5.6 p-v	75 abc	8.5 mno	2 ab
22 Dyna-Gro 2100	1266 d-n	36 c-g	4.2 f-j	1.11 k-o	82.2 g-m	27.6 o-u	5.9 k-s	72 lmn	8.8 h-n	4 a
23 Dyna-Gro 2215	1277 d-m	36 c-g	4.1 g-k	1.12 i-o	82.1 i-m	27.6 o-u	5.9 k-s	75 ab	8.6 k-o	2 ab
24 Dyna-Gro 2242	1361 a-j	38 a-e	4.4 b-h	1.14 f-l	82.3 f-m	27.1 r-u	6.2 g-p	73 a-n	9.0 d-m	2 ab
25 Dyna-Gro 2520	1355 a-j	38 a-f	4.3 c-i	1.15 e-i	82.4 e-m	28.1 i-s	5.9 k-s	75 a	8.7 i-o	3 ab
26 DP 108 RF	1032 opq	38 a-f	4.3 d-j	1.11 k-o	82.7 a-m	30.2 b-g	4.9 x-A	73 d-n	9.1 c-k	3 ab
27 DP 110 RF	1149 i-p	38 a-f	4.5 a-e	1.13 g-n	83.9 ab	31.8 a	6.6 e-k	72 j-n	9.1 c-k	3 ab
28 DP 147 RF	1266 d-n	39 abc	4.1 g-k	1.18 a-e	82.1 i-m	30.1 c-h	4.0 C	73 a-n	8.8 g-n	4 a
29 DP 113 B2RF	1310 b-l	37 a-g	4.4 b-h	1.13 g-m	82.9 a-m	29.4 e-m	4.2 BC	72 j-n	9.4 a-f	3 ab
30 DP 117 B2RF	1266 d-n	38 a-e	4.6 abc	1.13 g-n	82.6 b-m	31.3 abc	5.2 t-y	72 f-n	9.0 e-m	3 ab
31 DP 143 B2RF	1210 f-p	37 a-g	4.0 ijk	1.16 c-g	81.8 lm	29.1 g-p	5.2 t-y	75 a-e	8.8 g-n	2 b
32 CX601	1338 a-k	37 b-g	4.2 e-j	1.10 l-o	83.2 a-j	27.5 p-u	6.2 h-q	74 a-k	8.9 f-n	2 ab
33 CX612	1271 d-n	37 a-g	4.3 d-j	1.14 f-l	82.1 h-m	26.8 stu	6.0 k-s	74 a-m	9.0 e-m	3 ab
34 CX621	1377 a-i	38 a-f	4.1 g-k	1.16 d-h	82.9 a-m	27.7 n-u	5.8 l-t	75 a-f	9.0 e-m	3 ab

Table 1. Missouri Flex trial sprayed with MON 3539.

University of Missouri - Delta Center
Monsanto RR Flex Cotton Trait
Planted May 5, 2005 Harvested October 4, 2005

May 18 22 oz Weathermax.
June 1 22 oz Weathermax.
June 20 22 oz Weathermax directed.

Treatment 2										
35 PHY 415 RF	1277 d-m	38 a-f	4.7 a	1.08 o	82.2 g-m	29.2 f-o	6.5 f-l	71 mn	9.7 ab	2 ab
36 PHY 425 RF	1316 a-k	37 a-g	4.7 a	1.13 g-n	83.6 a-f	29.5 d-l	7.2 a-d	73 e-n	9.5 a-d	3 ab
37 PHY 475 WRF	1344 a-j	38 a-d	4.3 c-i	1.10 l-o	82.8 a-m	29.2 e-n	6.8 c-h	72 e-n	9.1 c-k	4 a
38 PHY 485 WRF	1416 a-f	38 a-e	4.6 abc	1.12 i-o	83.7 a-e	30.4 a-g	6.7 d-j	73 a-n	9.1 c-l	3 ab
39 ST 4554 B2RF	1545 a	38 a-d	4.7 ab	1.12 i-o	83.0 a-m	30.1 c-h	7.6 ab	73 c-n	9.3 a-g	2 ab
40 ST 4664 RF	1450 a-e	40 a	4.6 a-d	1.11 j-o	82.7 a-m	29.2 e-n	7.4 abc	74 a-m	9.2 a-i	2 ab
41 STX 5885 B2RF	1143 j-q	36 c-g	4.4 b-h	1.16 c-g	82.5 d-m	30.7 a-f	5.9 l-t	75 a-e	9.4 a-f	2 ab
42 ST 4357 B2RF	1411 a-f	38 a-e	4.2 e-j	1.15 f-j	82.1 h-m	28.3 i-s	5.8 l-t	75 a-e	9.2 a-i	2 b
43 ST 5007 B2RF	1071 m-q	34 fg	4.2 e-j	1.20 ab	83.5 a-h	29.6 d-j	5.7 n-u	74 a-l	8.4 no	2 ab
44 CG 3020 B2RF	1349 a-j	37 a-g	4.1 g-k	1.11 j-o	83.2 a-k	27.3 r-u	6.3 g-o	74 a-h	8.9 f-n	2 ab
45 CG 3520 B2RF	1366 a-j	38 a-e	4.5 a-f	1.15 e-i	82.1 h-m	28.0 j-t	6.0 k-s	74 a-l	8.6 k-o	3 ab
46 CG 4020 B2RF	1416 a-f	38 a-f	4.2 f-j	1.14 f-l	82.4 e-m	28.0 k-t	5.6 o-u	75 a-e	9.1 c-l	2 b
48 XBCG-1505	1071 m-q	36 d-g	4.4 b-g	1.13 g-m	83.0 a-m	30.6 a-g	4.7 y-B	73 a-n	8.8 h-n	2 ab
49 XBCG-2038	1316 a-k	38 a-f	4.5 a-f	1.15 f-j	82.4 e-m	27.2 r-u	6.4 f-m	73 e-n	8.7 i-o	3 ab
50 XBCG-3255	1227 e-p	36 c-g	4.2 f-j	1.12 i-o	83.0 a-m	27.6 o-u	6.2 g-p	74 a-m	9.0 e-m	3 ab
51 XBCG-4021	1149 i-p	35 efg	4.2 f-j	1.12 h-n	82.9 a-m	27.3 r-u	6.0 k-s	73 a-n	8.8 g-n	2 ab
52 XBCG-4575	1377 a-i	36 c-g	4.2 f-j	1.10 mno	83.4 a-i	27.6 o-u	6.4 f-m	74 a-h	9.1 c-k	2 ab
53 XBCG-4630	1400 a-g	38 a-f	4.4 b-h	1.15 e-i	81.8 klm	27.7 n-u	5.7 n-u	74 a-m	9.0 e-m	3 ab
54 XBCG-8391	1165 h-p	35 efg	4.3 d-j	1.19 a-d	83.9 abc	29.4 e-m	5.6 p-v	73 a-n	8.9 f-n	2 ab
55 XBCG-9124	1316 a-k	37 a-g	4.4 b-h	1.15 e-i	82.4 e-m	27.5 p-u	6.0 k-s	74 a-k	8.7 i-o	2 ab
56 Dyna-Gro 2100	1288 c-m	36 c-g	4.4 b-h	1.10 l-o	82.5 c-m	27.2 r-u	6.2 g-p	74 a-l	8.9 f-m	2 ab
57 Dyna-Gro 2215	1138 j-q	36 c-g	4.6 a-d	1.13 g-n	82.1 h-m	26.3 u	6.0 k-s	75 a-e	8.6 l-o	3 ab
58 Dyna-Gro 2242	1266 d-n	38 a-f	4.3 c-i	1.16 c-g	82.2 h-m	27.9 l-t	6.1 j-r	74 a-m	8.7 j-o	3 ab
59 Dyna-Gro 2520	1349 a-j	38 a-e	4.3 c-i	1.13 g-m	81.7 m	27.1 r-u	5.8 m-t	74 a-j	8.8 h-n	2 ab
60 DP 108 RF	1020 pq	37 a-g	4.2 e-j	1.11 j-o	81.8 klm	29.2 f-o	5.1 u-z	72 k-n	9.2 a-i	3 ab
61 DP 110 RF	1026 opq	37 a-g	4.5 a-e	1.12 i-o	83.8 a-d	31.7 ab	6.3 f-n	71 n	9.0 d-m	4 a
62 DP 147 RF	1227 e-p	38 a-f	4.0 jk	1.17 b-f	81.7 m	30.5 a-g	4.1 C	74 a-j	8.9 f-n	3 ab
63 DP 113 B2RF	1165 h-p	37 b-g	4.4 b-h	1.12 i-o	82.2 h-m	30.8 a-e	4.5 z-C	72 i-n	9.1 c-k	4 a
64 DP 117 B2RF	926 q	30 h	4.4 b-h	1.14 f-k	82.2 h-m	31.3 abc	5.0 v-z	72 g-n	8.8 g-n	4 a
65 DP 143 B2RF	1171 g-p	37 b-g	3.9 k	1.19 abc	82.3 f-m	30.0 c-h	4.9 w-z	74 a-m	8.9 f-m	3 ab
66 CX601	1288 c-m	37 b-g	4.1 h-k	1.10 l-o	82.7 a-m	27.4 r-u	6.2 h-q	73 d-n	8.6 k-o	3 ab
67 CX612	1388 a-h	38 a-f	4.3 d-j	1.15 e-i	83.3 a-j	27.6 o-u	6.3 g-o	73 a-n	8.8 h-n	3 ab
68 CX621	1361 a-j	38 a-d	4.1 h-k	1.15 e-i	83.1 a-m	27.4 q-u	5.8 m-t	74 a-g	8.9 f-m	2 ab
LSD (P=.05)	186.1	0.026	0.243	0.0285	1.104	1.318	0.533	1.911	0.436	1.36
Standard Deviation	93.1	0.013	0.122	0.0143	0.552	0.659	0.266	0.956	0.218	0.68
CV	7.29	3.47	2.82	1.26	0.67	2.3	4.51	1.3	2.43	28.04
Grand Mean	1275.93	0.37	4.3	1.13	82.71	28.68	5.91	73.44	8.95	2.42
Replicate F	1.464	15.139	0.108	1.041	0.279	9.535	87.074	0.653	0.063	4.618
Replicate Prob(F)	0.2307	0.0002	0.7434	0.3113	0.599	0.0029	0.0001	0.422	0.8029	0.035
Treatment F	3.974	3.033	5.636	7.338	2.588	9.422	17.129	2.236	3.741	1.252
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0001	0.181

Table 2. Missouri Flex trial sprayed with RoundupWeathermax.

2005 TN Monsanto Sponsored Roundup Ready Flex Variety Trial
Trial ID: 2005MONFLEXVAR Study Dir.: Chism Craig
Location: WTES Crop: Cotton
Investigator: Dr. Chism Craig

	GTO %	Lint Yield lb/ac	Mic units	Length inches	Unif. %	Strength g/tex	Elon.	Rd	+b	Leaf
1 BW-1004 B2F	40 d-j	1278 ab	3.7 a-e	1.15 a-e	84.2 a-e	28.3 j-m	6.68 d-g	70.1 a-f	7.0 e-i	5 a
2 BW-3255 B2F	39 g-k	1134 ab	3.7 a-e	1.11 h-k	83.7 a-e	27.8 lm	6.28 f-i	68.9 b-g	7.2 c-h	5 a
3 BW-4153 B2F	39 ijk	1154 ab	3.8 a-e	1.12 e-k	83.5 b-e	27.2 m	6.38 fgh	70.7 ab	6.8 ghi	5 a
4 BW-4630 B2F	40 c-i	1360 ab	3.8 a-e	1.15 a-f	83.7 a-e	29.9 e-l	6.47 fg	68.9 b-g	7.1 d-i	5 a
5 BW-9124 B2F	40 c-g	1238 ab	3.7 a-e	1.15 a-g	83.6 a-e	28.7 h-m	6.3 fgh	70.7 abc	7.6 a-d	5 a
6 CG 3020B2RF	39 ijk	1391 a	3.6 a-e	1.14 b-i	83.9 a-e	28.5 i-m	6.37 fgh	68.7 b-h	6.9 ghi	5 a
7 CG 3520B2RF	39 f-k	1053 b	3.5 cde	1.16 a-d	83.3 b-e	28.1 klm	6.5 fg	67.9 f-i	6.8 hi	5 a
8 CG 4020B2RF	40 b-f	1058 b	3.6 a-e	1.18 ab	83.4 b-e	28.9 h-m	5.95 ghi	71.6 a	6.8 ghi	5 a
9 CX 601B2F	39 h-k	1092 ab	3.5 e	1.13 c-j	84.1 a-e	27.7 lm	6.38 fgh	70.2 a-f	6.9 ghi	5 a
10 CX 611B2F	38 kl	1187 ab	3.7 a-e	1.12 e-k	82.9 de	28.7 h-m	6.25 f-i	69.8 a-f	6.8 ghi	5 a
11 CX 612B2F	39 e-k	1277 ab	3.8 a-e	1.16 a-d	84.2 a-e	28.3 j-m	6.6 efg	68.9 b-g	7.0 f-i	5 a
12 CX 621B2F	39 f-k	1195 ab	3.6 a-e	1.15 b-h	82.5 e	28.9 h-m	6.1 f-i	70.5 a-e	7.5 b-f	5 a
13 DG 2100 B2RF	39 jk	1281 ab	3.6 b-e	1.10 ijk	83.0 cde	28.9 h-m	6.25 f-i	70.5 a-d	7.6 a-d	4 b
14 DG 2215 B2RF	38 jk	1132 ab	3.5 de	1.11 f-k	83.3 b-e	27.9 lm	6.43 fg	70.0 a-f	6.6 i	5 a
15 DG 2242 B2RF	39 g-k	1302 ab	3.5 de	1.16 a-d	83.9 a-e	29.1 g-m	7.35 bc	68.5 b-i	7.1 c-i	5 a
16 DG 2520 B2RF	40 c-h	1221 ab	3.8 a-e	1.17 abc	83.2 cde	29.0 h-m	6.23 f-i	70.8 ab	6.9 ghi	5 ab
17 DP 113 B2RF	40 c-h	1249 ab	3.6 b-e	1.15 a-f	83.8 a-e	32.8 bc	4.75 j	68.4 c-i	7.5 b-f	5 a
18 DP 117 B2RF	40 b-f	1213 ab	3.9 a-d	1.16 a-d	83.3 b-e	33.1 b	5.57 i	69.2 b-g	7.5 b-f	5 a
19 DP 108 RF	41 bc	1345 ab	3.5 e	1.11 h-k	83.3 b-e	30.8 c-h	4.98 j	68.3 d-i	7.5 a-e	5 a
20 DP 110 RF	41 bcd	1327 ab	3.8 a-e	1.15 a-e	85.4 a	35.4 a	6.77 c-f	67.3 ghi	7.5 b-f	5 a
21 PHY 415 RF	41 bcd	1380 a	3.8 a-e	1.08 k	84.1 a-e	30.3 e-k	7.28 cd	66.6 hi	7.3 b-h	5 a
22 PHY 425 RF	40 c-g	1296 ab	3.8 a-e	1.13 d-j	84.9 abc	31.6 b-e	7.22 cde	66.6 hi	7.5 b-e	5 a
23 PHY 475 WRF	41 bc	1204 ab	4 ab	1.10 jk	85.1 ab	30.6 d-i	7.35 bc	68.9 b-g	7.3 b-g	5 a
24 PHY 485 WRF	40 b-f	1243 ab	4 a	1.11 g-k	84.7 a-d	31.2 b-g	7.38 bc	66.3 i	7.5 b-f	5 a
25 STX416B2R	41 bcd	1326 ab	4 ab	1.10 jk	84.5 a-d	32.5 bcd	5.7 hi	67.3 ghi	6.8 ghi	5 a
26 ST 4357B2RF	40 b-e	1225 ab	3.8 a-e	1.18 ab	83.4 b-e	29.2 g-m	5.7 hi	69.1 b-g	7.2 b-h	5 a
27 ST 5007B2RF	37 lm	1102 ab	3.8 a-e	1.19 a	84.3 a-d	29.3 f-m	6.17 f-i	69.7 a-f	6.9 ghi	5 a
28 ST 4554B2RF	41 b	1343 ab	3.9 abc	1.13 d-j	83.6 b-e	30.5 d-j	7.98 ab	68.2 e-i	7.7 ab	5 a
29 ST 4664RF	42 a	1309 ab	3.8 a-e	1.12 e-k	83.8 a-e	30.4 d-k	8.13 a	68.9 b-g	8.0 a	5 a
30 STX5885B2RF	37 m	1110 ab	3.9 a-d	1.16 a-d	83.9 a-e	31.5 b-f	6.13 f-i	70.2 a-f	7.7 abc	5 a
LSD (P=.05)	0.9621	249.37	0.335	0.0325	1.51	1.866	0.597	1.893	0.445	0.42
Standard Deviation	0.6803	176.33	0.237	0.023	1.067	1.319	0.422	1.339	0.315	0.3
CV	1.72	14.29	6.37	2.03	1.27	4.42	6.54	1.94	4.37	6.11
Grand Mean	39.58	1233.97	3.72	1.14	83.8	29.81	6.45	69.05	7.2	4.91
Replicate F	1.542	2.052	4.43	4.803	1.929	3.033	5.065	2.309	3.647	1.575
Replicate Prob(F)	0.2095	0.1125	0.006	0.0038	0.1308	0.0335	0.0028	0.082	0.0157	0.2012
Treatment F	11.298	1.209	1.75	5.676	1.544	8.217	13	4.137	5.108	1.435
Treatment Prob(F)	0.0001	0.2471	0.0246	0.0001	0.0635	0.0001	0.0001	0.0001	0.0001	0.1023

Table 3. Tennessee Flex trial results.

Lee County
Billy Don Hinkle – Cooperator
Bill Robertson - Extension Agronomist

Planting Date: 5/3/05 Harvest Date: 10/18/05
Replications: 2 Soil Series: Henry Silt Loam
Irrigation: Furrow
Management: Bollgard II/WideStrike Roundup Ready BMPs

Variety	Lint Yield	Lint Fraction†	Micronaire	Length	Strength
	lb/A			in	g/tex
DP 164B2RF	1301	0.42	4.6	1.19	31.9
DP 444BG/RR	1270	0.44	4.1	1.11	28.8
ST4554B2RF	1246	0.43	4.4	1.14	30.3
CG 3020B2RF	1235	0.42	4.5	1.09	25.2
DP 108RF	1230	0.45	4.5	1.11	29.8
DP 117B2RF	1215	0.43	4.6	1.12	31.3
ST 4664RF	1113	0.43	4.6	1.08	29
DP 113B2RF	1097	0.4	4	1.15	31.8
CG 4020B2RF	1067	0.42	4.3	1.15	26.8
BCG 4630B2RF	1051	0.42	4.2	1.14	27.8
CG 3520B2RF	1015	0.4	4.2	1.14	26.4
BCG 9775B2RF	962	0.38	3.9	1.19	28.1
BCG 2038B2RF	953	0.41	4.3	1.15	27.6
BCG 3255B2RF	944	0.4	4.3	1.11	27.5
BCG 3255B2RF	944	0.4	4.3	1.11	27.5
DP 110RF	700	0.43	4.2	1.11	31.9
Mean	1093	0.42	4.3	1.13	28.9
LSD (0.05)	559.43	--	--	--	--
CV (%)	23.86	--	--	--	--

† Data obtained from a laboratory gin without the use of a lint cleaner.

Table 4. Arkansas Flex trial results.

Obs	Variety	Lint	Standard Error	Letter Group	MinSigDiff	MaxSigDiff	AvgSigDiff
1	ST 4554 B2RF	1374.19	68.3944	A	138.86	170.015	150.323
2	ST 4664 RF	1322.94	68.3944	AB	138.86	170.015	150.323
3	CG 3020 B2RF	1304.41	68.3944	ABC	138.86	170.015	150.323
4	PHY 415 RF	1293.1	73.4516	ABCD	138.86	170.015	150.323
5	ST 4357 B2RF	1285.05	73.4516	ABCDE	138.86	170.015	150.323
6	PHY 485 WRF	1267.44	73.4516	ABCDEF	138.86	170.015	150.323
7	DG 2242 B2RF	1266.52	73.4516	ABCDEF	138.86	170.015	150.323
8	BW-4630B2F	1265	68.4581	ABCDEF	138.86	170.015	150.323
9	CX 612B2F	1262.13	73.4516	ABCDEF	138.86	170.015	150.323
10	BW-9124B2F	1258.04	73.5445	ABCDEF	138.86	170.015	150.323
11	PHY 425 RF	1253.64	73.4516	ABCDEFG	138.86	170.015	150.323
12	DG 2520 B2RF	1245.66	73.4516	ABCDEFG	138.86	170.015	150.323
13	CX 621B2F	1240.78	73.4516	ABCDEFG	138.86	170.015	150.323
14	DG 2100 B2RF	1237.65	73.4516	ABCDEFG	138.86	170.015	150.323
15	DP 110 RF	1200.48	70.6141	BCDEFGH	138.86	170.015	150.323
16	DP 113 B2RF	1198.82	68.3944	BCDEFGH	138.86	170.015	150.323
17	PHY 475 WRF	1189.52	73.4516	BCDEFGH	138.86	170.015	150.323
18	CG 4020 B2RF	1179.88	68.3944	CDEFGH	138.86	170.015	150.323
19	DP 108 RF	1179.16	68.3944	CDEFGH	138.86	170.015	150.323
20	BW-2038B2F	1175.08	79.5679	BCDEFGH	138.86	170.015	150.323
21	CX 601B2F	1161.27	73.4516	CDEFGH	138.86	170.015	150.323
22	DP 117 B2RF	1151.14	68.3944	DEFGH	138.86	170.015	150.323
23	BW-3255B2F	1141.18	68.3944	EFGH	138.86	170.015	150.323
24	CG 3520 B2RF	1137.67	68.3944	EFGH	138.86	170.015	150.323
25	DG 2215 B2RF	1128.67	73.4516	FGH	138.86	170.015	150.323
26	STX 5885 B2RF	1101.96	73.4516	GH	138.86	170.015	150.323
27	ST 5007 B2RF	1054.75	73.4516	H	138.86	170.015	150.323

Obs	Variety	Turnout	Standard Error	Letter Group	MinSigDiff	MaxSigDiff	AvgSigDiff
1	ST 4664 RF	28.5246	13.451	A	0.71491	0.87565	0.77408
2	DP 108 RF	28.3796	13.451	AB	0.71491	0.87565	0.77408
3	ST 4554 B2RF	28.1076	13.451	ABC	0.71491	0.87565	0.77408
4	PHY 475 WRF	27.8677	13.4517	ABCDE	0.71491	0.87565	0.77408
5	DP 110 RF	27.8549	13.4513	ABCD	0.71491	0.87565	0.77408
6	PHY 415 RF	27.7252	13.4517	BCDEF	0.71491	0.87565	0.77408
7	DP 117 B2RF	27.6836	13.451	BCDEF	0.71491	0.87565	0.77408
8	ST 4357 B2RF	27.6665	13.4517	BCDEFG	0.71491	0.87565	0.77408
9	PHY 485 WRF	27.5227	13.4517	CDEFGH	0.71491	0.87565	0.77408
10	CG 4020 B2RF	27.4896	13.451	CDEFGH	0.71491	0.87565	0.77408
11	PHY 425 RF	27.4215	13.4517	CDEFGHI	0.71491	0.87565	0.77408
12	BW-9124B2F	27.3915	13.4517	CDEFGHI	0.71491	0.87565	0.77408
13	DG 2520 B2RF	27.359	13.4517	CDEFGHIJ	0.71491	0.87565	0.77408
14	BW-4630B2F	27.3456	13.451	DEFGHI	0.71491	0.87565	0.77408
15	CX 612B2F	27.1065	13.4517	DEFGHIJ	0.71491	0.87565	0.77408
16	CX 621B2F	27.0915	13.4517	DEFGHIJ	0.71491	0.87565	0.77408
17	BW-2038B2F	26.996	13.4526	EFGHIJ	0.71491	0.87565	0.77408
18	DP 113 B2RF	26.9856	13.451	FGHIJ	0.71491	0.87565	0.77408
19	CG 3020 B2RF	26.9126	13.451	GHIJ	0.71491	0.87565	0.77408
20	DG 2242 B2RF	26.8877	13.4517	GHIJK	0.71491	0.87565	0.77408
21	CX 601B2F	26.8102	13.4517	HIJK	0.71491	0.87565	0.77408
22	DG 2100 B2RF	26.6952	13.4517	IJK	0.71491	0.87565	0.77408
23	CG 3520 B2RF	26.6896	13.451	IJK	0.71491	0.87565	0.77408
24	DG 2215 B2RF	26.6365	13.4517	IJKL	0.71491	0.87565	0.77408
25	BW-3255B2F	26.6086	13.451	JK	0.71491	0.87565	0.77408
26	ST 5007 B2RF	26.1127	13.4517	KL	0.71491	0.87565	0.77408
27	STX 5885 B2RF	25.8377	13.4517	L	0.71491	0.87565	0.77408

Table 6. Missouri, Tennessee, and Arkansas turnout.

Obs	Variety	Mic	Standard Error	Letter Group	MinSigDiff	MaxSigDiff	AvgSigDiff
1	PHY 485 WRF	4.3844	0.2217	A	0.19808	0.24415	0.20733
2	ST 4554 B2RF	4.3746	0.22	A	0.19808	0.24415	0.20733
3	PHY 415 RF	4.3344	0.2217	AB	0.19808	0.24415	0.20733
4	PHY 425 RF	4.3344	0.2217	AB	0.19808	0.24415	0.20733
5	ST 4664 RF	4.2961	0.22	ABC	0.19808	0.24415	0.20733
6	DP 117 B2RF	4.2854	0.22	ABCD	0.19808	0.24415	0.20733
7	PHY 475 WRF	4.2469	0.2217	ABCDE	0.19808	0.24415	0.20733
8	STX 5885 B2RF	4.2219	0.2217	ABCDEF	0.19808	0.24415	0.20733
9	BW-2038B2F	4.2053	0.2279	ABCDEFGH	0.19808	0.24415	0.20733
10	DP 110 RF	4.1966	0.22	ABCDEFG	0.19808	0.24415	0.20733
11	DG 2520 B2RF	4.1285	0.2233	BCDEFGHI	0.19808	0.24415	0.20733
12	CX 612B2F	4.1219	0.2217	CDEFGHI	0.19808	0.24415	0.20733
13	BW-9124B2F	4.1153	0.2221	CDEFGHI	0.19808	0.24415	0.20733
14	ST 5007 B2RF	4.0969	0.2217	CDEFGHI	0.19808	0.24415	0.20733
15	BW-4630B2F	4.0862	0.2204	DEFGHIJ	0.19808	0.24415	0.20733
16	ST 4357 B2RF	4.0844	0.2217	DEFGHIJ	0.19808	0.24415	0.20733
17	CG 3520 B2RF	4.0526	0.22	EFGHIJ	0.19808	0.24415	0.20733
18	BW-3255B2F	4.0386	0.22	FGHIJ	0.19808	0.24415	0.20733
19	DP 113 B2RF	4.0327	0.22	FGHIJ	0.19808	0.24415	0.20733
20	CG 4020 B2RF	4.0187	0.22	FGHIJ	0.19808	0.24415	0.20733
21	DG 2100 B2RF	4.0094	0.2217	GHIJ	0.19808	0.24415	0.20733
22	DG 2242 B2RF	3.9969	0.2217	GHIJ	0.19808	0.24415	0.20733
23	DG 2215 B2RF	3.9969	0.2217	GHIJ	0.19808	0.24415	0.20733
24	CG 3020 B2RF	3.9945	0.22	HIJ	0.19808	0.24415	0.20733
25	DP 108 RF	3.9735	0.22	HIJ	0.19808	0.24415	0.20733
26	CX 621B2F	3.9469	0.2217	IJ	0.19808	0.24415	0.20733
27	CX 601B2F	3.8844	0.2217	J	0.19808	0.24415	

Table 7. Missouri. Tennessee. and Arkansas micronaire.

Obs	Variety	Length	Standard Error	Letter Group	MinSigDiff	MaxSigDiff	AvgSigDiff
1	ST 5007 B2RF	1.1908	0.008823	A	0.01892	0.02374	0.0199
2	ST 4357 B2RF	1.1583	0.008823	B	0.01892	0.02374	0.0199
3	CG 4020 B2RF	1.1554	0.008407	B	0.01892	0.02374	0.0199
4	CG 3520 B2RF	1.1532	0.008407	BC	0.01892	0.02374	0.0199
5	DG 2520 B2RF	1.1512	0.009219	BCD	0.01892	0.02374	0.0199
6	STX 5885 B2RF	1.1508	0.008823	BC	0.01892	0.02374	0.0199
7	DG 2242 B2RF	1.1495	0.008823	BCD	0.01892	0.02374	0.0199
8	BW-2038B2F	1.1494	0.01035	BCD	0.01892	0.02374	0.0199
9	CX 612B2F	1.1483	0.008823	BCD	0.01892	0.02374	0.0199
10	BW-4630B2F	1.1472	0.008443	BCD	0.01892	0.02374	0.0199
11	BW-9124B2F	1.1464	0.008862	BCD	0.01892	0.02374	0.0199
12	CX 621B2F	1.1458	0.008823	BCDE	0.01892	0.02374	0.0199
13	DP 117 B2RF	1.1421	0.008407	BCDE	0.01892	0.02374	0.0199
14	DP 113 B2RF	1.1354	0.008407	CDEF	0.01892	0.02374	0.0199
15	DP 110 RF	1.131	0.008407	DEFG	0.01892	0.02374	0.0199
16	PHY 425 RF	1.1258	0.008823	EFGH	0.01892	0.02374	0.0199
17	CG 3020 B2RF	1.1199	0.008407	FGHI	0.01892	0.02374	0.0199
18	ST 4554 B2RF	1.1166	0.008407	FGHIJ	0.01892	0.02374	0.0199
19	DG 2215 B2RF	1.1133	0.008823	GHIJ	0.01892	0.02374	0.0199
20	CX 601B2F	1.112	0.008823	GHIJ	0.01892	0.02374	0.0199
21	PHY 485 WRF	1.1108	0.008823	HIJ	0.01892	0.02374	0.0199
22	ST 4664 RF	1.1066	0.008407	HIJ	0.01892	0.02374	0.0199
23	BW-3255B2F	1.1066	0.008407	HIJ	0.01892	0.02374	0.0199
24	DP 108 RF	1.1054	0.008407	IJ	0.01892	0.02374	0.0199
25	PHY 475 WRF	1.102	0.008823	IJ	0.01892	0.02374	0.0199
26	DG 2100 B2RF	1.0983	0.008823	JK	0.01892	0.02374	0.0199
27	PHY 415 RF	1.0808	0.008823	K	0.01892	0.02374	0.0199

Table 8. Missouri. Tennessee. and Arkansas length.