

Cotton Variety Trial at a Fusarium wilt, Root-knot nematode, and Verticillium wilt Location

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Table 1. Average for yield across all four replications.

Variety	Lbs of Lint/a	\$/Acre ²	Loan Value (\$/lb)	% Lint	% Wilt 8 August	% Death Due to Fusarium wilt	Plants/ft. row	RK/ 500 cc soil
Deltapine 174RF	1,733 a¹	862 a	0.528	35.8	22.3 a	0.0	2.4 cde	353
Stoneville 5458B2RF	1,423 b	650 b	0.501	35.2	11.7 a-h	0.0	3.1 abc	1367
Stoneville 4554B2RF	1,136 bc	546 bc	0.537	35.3	17.2 a-d	0.0	2.4 de	1467
NexGen 3410RF	1,068 cd	524 bcd	0.531	33.5	4.0 gh	0.3	2.7 bcd	1500
All-Tex Apex B2RF	1,041 cde	505 b-e	0.540	33.4	12.0 a-h	1.0	3.0 a-d	2320
Deltapine 164B2RF	930 c-f	452 c-g	0.553	32.3	7.0 c-h	0.7	2.6 cd	2547
Americot 1532B2RF	924 c-f	450 c-g	0.552	34.6	13.6 a-g	1.3	3.0 abc	3080
Deltapine 161B2RF	915 c-f	449 c-g	0.559	31.8	6.1 d-h	3.6	2.9 a-d	2767
Fibermax 9160B2RF	914 c-f	432 c-h	0.542	35.6	1.8 h	0.0	2.9 a-d	2220
All-Tex Orbit RF	881 c-g	445 c-g	0.553	29.7	5.7 e-h	0.0	2.6 bcd	2447
Deltapine 104B2RF	868 c-g	392 d-i	0.523	33.3	3.9 gh	5.1	3.0 a-d	1667
All-Tex Patriot RF	854 d-g	407 c-h	0.527	32.8	7.7 b-h	0.0	2.8 a-d	3267
AFD 5065B2RF	848 d-h	411 c-h	0.552	32.2	5.8 e-h	2.3	2.8 a-d	2000
Deltapine 143B2RF	833 d-h	344 e-k	0.489	32.7	12.3 a-h	1.9	2.8 a-d	2327
Fibermax 9063B2RF	817 d-i	379 d-j	0.542	34.5	5.9 d-h	1.9	3.1 abc	3007
Fibermax 9180B2RF	809 d-i	376 d-j	0.543	32.7	5.0 fgh	3.3	3.2 ab	1827
Americot 1622B2RF	807 d-i	365 e-j	0.527	31.3	13.9 a-g	6.5	2.7 a-d	3133
Phytogen 485WRF	788 d-j	341 f-k	0.500	32.0	18.2 abc	3.1	2.8 a-d	1460
Deltapine 147RF	773 d-j	365 e-j	0.540	34.5	8.7 b-h	1.3	2.6 cd	1153
Fibermax 1880B2RF	764 e-j	327 f-k	0.512	33.1	4.6 fgh	0.3	2.7 a-d	3973
NexGen 4370B2RF	762 e-j	339 f-k	0.522	33.6	7.8 b-h	9.8	2.6 bcd	2100
Cropland Genetics 4020B2RF	737 f-j	340 f-k	0.547	31.8	12.9 a-h	2.1	3.0 abc	4520
All-Tex Titan B2RF	717 f-j	338 f-k	0.551	29.2	11.1 a-h	5.0	2.5 cd	2233
All-Tex Epic RF	685 f-j	327 f-k	0.540	34.9	16.0 a-f	18.7	2.9 a-d	2020
Americot 1550B2RF	683 f-j	302 g-k	0.531	36.4	18.7 ab	17.9	3.0 abc	1520
Cropland Genetics 3035RF	614 g-j	283 h-k	0.549	34.8	16.4 a-e	9.1	2.6 cd	2867
Deltapine 167RF	550 hij	244 jk	0.539	30.1	4.9 fgh	0.5	3.0 abc	1680
Fibermax 820RF	549 hij	244 jk	0.544	33.6	4.4 gh	1.6	2.8 a-d	2253
Phytogen 375WRF	549 ij	238 jk	0.529	34.2	9.9 b-h	3.4	3.0 a-d	2567
Fibermax 840B2RF	513 j	208 k	0.530	32.7	6.9 c-h	22.8	2.7 a-d	1500

¹Different letters mean that varieties are significantly different at $P = 0.05$. ²\$/acre was calculated as the yield (lbs/acre) x loan value (\$/lb) minus seed and technology fees for planting four seed/ft row on 40-inch centers (52,272 seed/acre). ³This field had a combination of Fusarium wilt, root-knot nematode, and Verticillium wilt. The Verticillium wilt was probably less important than the other diseases.

Table 2. Fiber properties for Gaines county test for the half of the field without Fusarium wilt.

Variety	Micronaire	Length	Uniformity	Strength	Elongation	Rd	+b	Leaf
AFD 5065B2RF	4.5	1.11	82.7	2.86	10.3	78.2	6.9	3.0
Americot 1532B2RF	4.4	1.10	81.6	26.5	10.0	77.2	7.2	2.5
Americot 1550B2RF	4.2	1.07	81.7	26.6	9.9	75.3	7.8	3.0
Americot 1622B2RF	4.3	1.05	82.3	26.4	10.2	76.6	7.4	3.0
All-Tex Orbit RF	4.1	1.14	82.2	28.7	10.4	77.6	7.5	3.0
All-Tex Patriot RF	4.4	1.13	81.9	28.5	10.2	76.7	7.5	4.0
All-Tex Epic RF	3.9	1.07	80.9	27.3	11.0	76.1	8.3	3.5
All-Tex Apex B2RF	4.3	1.13	82.4	26.7	10.1	77.0	7.5	4.0
All-Tex Titan B2RF	4.0	1.16	82.3	28.3	9.9	77.7	7.1	3.5
Fibermax 9160B2RF	4.1	1.13	82.9	28.9	8.4	77.8	7.0	2.5
Cropland Genetics 3035RF	3.6	1.08	81.9	28.3	10.7	76.3	8.2	2.0
Cropland Genetics 4020B2RF	4.0	1.09	81.7	26.1	10.0	76.7	7.7	3.0
Deltapine 104B2RF	4.1	1.10	82.9	29.1	10.4	75.7	7.2	4.5
Deltapine 143B2RF	3.6	1.12	80.3	27.0	9.4	74.5	7.0	5.0
Deltapine 147RF	3.9	1.13	81.3	28.9	8.8	76.3	7.1	3.5
Deltapine 161B2RF	4.1	1.17	83.0	30.3	8.8	77.8	7.5	2.5
Deltapine 164B2RF	4.0	1.15	81.8	29.3	8.8	77.9	7.6	3.0
Deltapine 167RF	3.7	1.12	81.3	28.1	9.0	77.2	7.1	2.5
Deltapine 174RF	4.3	1.14	81.9	27.5	10.3	76.1	7.6	3.5
Fibermax 1880B2RF	3.6	1.11	81.4	29.5	9.6	75.7	6.4	4.5
Fibermax 820RF	3.8	1.15	81.7	30.5	8.5	78.5	6.8	2.5
Fibermax 840B2RF	3.8	1.15	81.5	30.5	9.3	77.0	6.6	4.5
Fibermax 9063B2RF	4.5	1.14	81.8	29.8	8.9	78.1	6.8	2.0
Fibermax 9180B2RF	4.3	1.13	82.6	29.7	9.4	77.9	6.7	3.5
NexGen 3410RF	4.1	1.14	83.2	30.1	9.6	74.4	7.5	4.5
NexGen 4370B2RF	4.2	1.09	82.6	27.3	9.8	74.1	7.6	4.5
Phytogen 375WRF	4.0	1.07	81.3	27.3	9.8	75.0	7.2	3.5
Phytogen 485WRF	4.3	1.09	82.1	28.0	10.7	72.7	7.4	5.0
Stoneville 4554B2RF	4.7	1.10	83.0	29.3	11.8	75.1	7.9	2.5
Stoneville 5458B2RF	4.4	1.10	81.5	29.4	9.3	73.5	7.8	5.0

Table 3. Average of yield by Fusarium wilt half, Verticillium wilt half, and root-knot nematode density.

Cultivar	Yield (lbs lint/a)		Root-knot nematode per 500 cm ³ soil
	Fusarium half	Verticillium half	
Deltapine 174F	1,836 a	1,704 a	167
Stoneville 5458B2RF	1,359 ab	1,486 a	273
All-Tex Orbit RF	980 bc	854 e-k	1,833
NexGen 3410RF	976 bc	1,161 bc	300
All-Tex Apex B2RF	894 bc	1,189 bc	1,680
Fibermax 1880B2RF	845 bc	683 h-k	1,787
Fibermax 9160B2RF	843 bc	986 c-g	1,980
All-Tex Patriot RF	825 bc	884 d-j	653
Phytogen 485WRF	791 bc	785 g-k	580
Americot 1532B2RF	778 bc	1,071 c-f	2,600
AFD 5065B2F	748 bc	948 c-h	400
Deltapine 147RF	694 bc	835 e-k	807
Deltapine 164B2RF	677 bc	1,079 c-f	1,373
Americot 1622B2RF	645 bc	969 c-g	627
NexGen 4370B2RF	640 bc	884 d-j	420
Fibermax 9063B2RF	635 bc	998 c-g	1,753
Stoneville 4554B2RF	611 bc	1,422 ab	613
Cropland Genetics 4020B2RF	595 bc	879 d-j	2,120
All-Tex Titan B2RF	553 c	880 d-j	1,087
Fibermax 820RF	527 c	582 k	1,027
Deltapine 161B2RF	494 c	1,148 bcd	553
Phytogen 375WRF	476 c	622 jk	513
All-Tex Epic RF	449 c	920 c-i	1,140
Deltapine 104B2RF	438 c	1,106 cde	493
Americot 1550B2RF	424 c	942 d-i	880
Fibermax 9180B2RF	423 c	1,025 c-g	1,293
Deltapine 167RF	418 c	681 h-k	560
Deltapine 143B2RF	411 c	1,067 c-g	1,393
Cropland Genetics 3035RF	371 c	856 e-k	573
Fibermax 840B2RF	365 c	662 ijk	1,180