



Irrigated Cotton Variety Test

Marty Brooks, 2003

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Summary:

The Trans-Pecos Area of Texas has experienced a severe drought for the past seven years and cotton producers have become quite frustrated with trying to manage their crop with such unsure moisture conditions. The 2003 crop started off with relatively good soil moisture conditions but dry conditions in July and August hurt most cotton fields. Several rainfall events in late August and September with the warm open fall in October and November allowed many cotton fields to produce adequate lint yields. This coupled with high cotton prices made this crop a profitable one.

Nine cotton varieties were compared under similar growing conditions to determine which cotton varieties produced the highest yields and the best fiber qualities. Deltapine 555 BG/RR topped the test with a gross return of \$1083.22 per acre. Fiber properties of all varieties in this test were excellent.

Stoneville 5303 RR, Deltapine 5415 RR and BCG 24 RR topped this test in gross returns of \$284.57 per acre, \$260.19 per acre and \$260.16 per acre, respectively. When evaluating the cotton varieties on just lint yields, Stoneville 5303 RR, Stoneville 5599 BG/RR and BCG 24 RR topped the test with lint yields of 471 lbs. per acre, 437 lbs. per acre and 416 lbs. per acre, respectively. Due to the late maturity of the crop, fiber quality had a detrimental effect on a number of cotton varieties in this test. Producers should keep in mind that these results can change under different field conditions, soil fertility and irrigation practices, so it is suggested that you look at the better cultivars on your farm for several seasons.

Objective:

Cotton cultivars and commercial cotton varieties require testing each year for determinations of continuity of yield and fiber quality measurements. Through the use of a field test, a comparison is made of new varieties of cotton with varieties that have proven to be successful, long term yielders. Testing of said varieties within a geographic area of production is important to provide local producers with the latest information on old and new varieties.

Materials and Methods:

Ten cotton varieties were planted using an eight row John Deere Maxi-Merge planter and replicated three times across the field in the Miles farming community. The following is a list of materials and methods used in this test.

Planting Date: May 29, 2003
Seeding Rate: 7 lbs./acre in 16 row plots
Planting Pattern: Solid on 40' centers
Previous Crop: Cotton
Herbicides: 32 ounces of Roundup applied at four-leaf stage
Harvest Date:

Plant Populations

Sample date: July 1st, 2003. Plant stage: 2nd true leaf.

Variety	Plants / ten foot of planted row
Stoneville 5303 RR	22
BCG 24 RR	22
FiberMax 989 RR	27
Deltapine 5690 RR	23
FiberMax 989 BG/RR	20
Deltapine 458 BG/RR	29
FiberMax 819 RR	23
Deltapine 5415 RR	26
FiberMax 800 BG/RR	22
Stoneville 5599 BG/RR	22

Results and Discussion:

Table 1 contains the yield and fiber quality information for each of the ten cotton varieties evaluated in this test. Stoneville 5303 RR, Deltapine 5415 RR, BCG 24 RR and Stoneville 5599 BG/RR topped the test with total gross returns of \$284.57 per acre, \$260.19 per acre, \$260.16 per acre and \$259.26 per acre, respectively. If looking at lint yields only, Stoneville 5303 RR and Stoneville 5599 BG/RR topped the test with lint yields of 471 lbs. per acre and 437 lbs. per acre, respectively. Due to the lateness of the crop, the fiber quality of many of the cotton varieties had a negative impact on gross returns.

All cotton varieties are planted in four row plots across the field and stripper-harvested using a John Deere four row cotton stripper and weights were determined using a boll buggy. Fiber quality analysis was determined by the Texas Tech Textile Center in Lubbock.

Acknowledgments:

Sincere appreciation is expressed to Curtis Kalina for establishing and managing this test. Also a word of thanks to the seed companies that provided cottonseed, they include:

Stoneville Southwest, Inc. who provided the Stoneville ST 5303 RR and Stoneville ST 5599 BG/RR.

Delta and Pine Land Company who provided Deltapine 5415 RR, Deltapine 5690 RR, and Deltapine 458 BG/RR

Beltwide Cotton Genetics who provided the BCG 24 RR.

Bayer CropScience who provided the FiberMax 800 BG/RR, FiberMax 989 BG/RR, FiberMax 819 RR and FiberMax 989 RR.

Table 1. Agronomic Data from Marty Brooks' Cotton Variety Test (Howard County, 2003)

Variety	Yield Per Acre				Fiber Quality					CCC Loan Value	Lint Gross Return (\$/acre)	Seed Gross Return (\$/acre)	Total Gross Return (\$/acre)
	In Pounds		% Turnout		Color- Leaf	Fiber		Strength (gram/tex)	Uniformity				
	Lint	Seed	Lint	Seed		Length (staple)	Mic						
Deltapine 555 BG/RR	1696	2446	36.8	53.0	312	35	4.9	29.3	81.3	54.85	930.35	152.87	1083.22
FiberMax 991 BG/RR	1426	2395	32.7	55.0	411	36	4.6	34.4	82.7	54.50	776.91	149.71	926.62
Stoneville 5599 BG/RR	1508	2369	35.0	55.0	313	34	5.3	30.0	81.8	48.70	734.49	148.06	882.56
FiberMax 800 BG/RR	1340	2075	34.4	53.3	413	37	4.9	34.3	82.5	54.50	730.21	129.68	859.88
FiberMax 960 BG/RR	1387	2137	35.2	54.2	412	34	5.1	34.4	82.4	49.40	685.03	133.59	818.62
FiberMax 989 BG/RR	1233	2014	32.8	53.6	311	34	4.8	31.0	81.6	54.00	665.75	125.88	791.63
Stoneville 4892 BG/RR	1340	1976	36.6	54.0	413	34	5.0	28.8	82.3	48.55	650.34	123.50	773.84
Deltapine 655 BG/RR	1216	1974	35.5	57.7	412	34	4.8	30.0	80.6	52.65	640.31	123.40	763.70
Deltapine 458 BG/RR	1152	1937	34.4	57.9	411	35	4.9	30.0	81.7	53.90	620.88	121.06	741.93

Cottonseed income calculated using a price of \$125 per ton