



Tom Green County Irrigated Cotton Variety Evaluation

Kevin and Brent Niehues Farm, 2006

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Summary:

Sixteen cotton varieties were compared under similar growing conditions to determine which cotton varieties consistently have higher yields and favorable fiber qualities. Stoneville 4554 B2RF, PhytoGen 370 WR and PhytoGen 485 WRF topped this test with gross returns of \$707.96 per acre, \$694.23 per acre and \$687.15 per acre, respectively. 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:

Commercial cotton varieties require testing each year for determinations of consistency of yield and fiber quality. 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:

Sixteen cotton varieties were planted using an eight row John Deere Maxi-Merge planter in a strip test fashion using 4 planted row plots in the Eola farming community. The following is a list of materials and methods used in this test.

Planting Date: May 31, 2006
Seeding Rate: 52,600 seeds per acre
Planting Pattern: Planted every row on 40" centers
Soil Type: Angelo Clay Loam
Previous Crop: Corn
Herbicides: 1 qt. RoundUp at 5th true leaf stage
Fertilizer: 10 tons of manure pre-plant; 120 lbs. N during the season through the tape
Insecticides: Intruder® at 0.6 ounce per acre at matchhead square stage
Harvest Date: November 8, 2006

Variety	Plant Stand Avg. # per foot 2nd True Leaf Stage	Plant Stand Avg. # per foot 2nd True Leaf Stage
FiberMax 800 B2R	1.1	1.4
Stoneville 6611 B2RF	2.0	2.6
Deltapine 117 B2RF	2.3	2.5
Stoneville 4357 B2RF	2.6	2.6
Deltapine 445 BR	2.3	2.0
Phytogen 470 WR	3.3	2.8
Deltapine 143 B2RF	2.2	2.0
FiberMax 9063 B2F	2.8	2.5
FiberMax 960 B2R	2.1	2.4
Stoneville 4700 B2RF	2.2	1.9
Phytogen 370 WR	2.9	3.2
Deltapine 164 B2RF	2.6	3.0
Stoneville 5007 B2RF	2.3	2.0
Phytogen 485 WRF	2.4	2.6
Phytogen 745 WRF	2.1	2.2
Stoneville 4554 B2RF	2.1	2.0

Average populations were determined from three different plant stand counts within each variety at each listed growth stage.

Results and Discussion:

Table 1 contains the yield and fiber quality information for each of the sixteen cotton varieties evaluated in this test. Stoneville 4554 B2RF, Phytogen 370 WR and Phytogen 485 WRF topped this test in gross returns of \$707.96 per acre, \$694.23 per acre and \$687.15 per acre, respectively.

Planting conditions were not favorable and final plant stands were not ideal. FiberMax 800 B2R had a final plant stand of 1.4 plants per foot of row and many large skips throughout the two replications. The low plant stand contributed significantly to its low lint yield.

All cotton varieties were planted in an every row pattern across the field and stripper-harvested using a John Deere eight row cotton stripper. Each cotton variety consisted of 4 planted rows. Weights were determined using a boll buggy. Fiber quality analysis was determined by the Texas Tech Textile Center in Lubbock.

Table 1. Agronomic Data from Kevin and Brent Niehues' Irrigated Cotton Variety Test (Tom Green County, 2006)

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						
Stoneville 4554 B2RF	1039	1408	32.9	44.5	312	36	4.9	29.0	84.1	58.30	605.86	102.10	707.96
Phytogen 370 WR	1035	1349	33.7	43.9	312	35	4.2	29.4	83.8	57.60	596.42	97.81	694.23
Phytogen 485 WRF	998	1454	31.6	46.0	312	36	4.3	30.6	84.0	58.30	581.76	105.38	687.15
Deltapine 164 B2RF	962	1500	30.2	47.1	312	37	4.2	29.7	84.2	58.70	564.59	108.72	673.31
Deltapine 445 BR	974	1278	33.4	43.9	312	36	4.0	27.6	82.8	58.40	568.57	92.68	661.25
Stoneville 4357 B2RF	921	1506	29.7	48.6	312	36	3.7	25.0	81.8	58.15	535.39	109.21	644.60
Phytogen 470 WRF	952	1330	32.3	45.1	312	35	4.6	25.5	83.4	57.30	545.44	96.46	641.90
Deltapine 117 B2RF	917	1326	32.3	46.7	312	37	4.4	32.5	85.1	58.60	537.63	96.13	633.77
Stoneville 5007 B2RF	856	1526	28.0	49.9	312	38	4.4	27.2	85.1	58.60	501.34	110.64	611.98
Stoneville 6611 B2RF	797	1351	28.7	48.6	312	36	3.6	29.5	84.0	58.30	464.54	97.96	562.50
Stoneville 4700 B2RF	827	1161	32.1	45.1	312	35	4.7	25.6	84.6	57.50	475.29	84.17	559.46
FiberMax 960 B2R	780	1214	30.6	47.6	312	39	4.0	34.7	85.2	58.80	458.47	88.00	546.47
Deltapine 143 B2RF	760	1135	31.5	47.0	312	39	4.1	28.2	83.8	58.70	445.99	82.25	528.24
Phytogen 745 WRF	725	1009	32.8	45.7	312	36	4.2	31.0	84.6	58.60	424.98	73.15	498.13
FiberMax 9063 B2F	647	1147	28.4	50.3	212	37	4.1	32.2	84.7	59.80	387.18	83.17	470.35
FiberMax 800 B2R	482	762	30.1	47.5	312	39	3.5	32.0	85.9	58.70	283.14	55.26	338.40

Seed income calculated using a price of \$145 per ton.

Acknowledgments:

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Stoneville Pedigreed Seed owned by Monsanto who provided Stoneville ST 4554 B2RF, Stoneville ST 4357 B2RF, Stoneville ST 5007 B2RF, Stoneville ST 6611 and Stoneville ST 4700 B2RF

Dow Agrosciences who provided Phytogen 370 WR, Phytogen 485 WRF, Phytogen 470 WR, and Phytogen 745 WRF

Delta and Pine Land Company who provided Deltapine 164 B2RF, Deltapine 445 BR, Deltapine 117 B2RF and Deltapine 143 B2RF

Bayer CropScience who provided the FiberMax 960 B2R, FiberMax 9063 B2F and FiberMax 800 B2R

Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.