



Runnels County Dryland Cotton Variety Evaluation

Dennis Minzenmayer Farm, 2006

Rick Minzenmayer, Extension Agent-IPM,

Marty Gibbs, County Extension Agent Agriculture and

Dr. Billy Warrick, Extension Agronomist

Summary:

Six cotton varieties were compared under similar growing conditions to determine which cotton varieties consistently have higher yields and favorable fiber qualities. PhytoGen 485 WRF, Stoneville 5007 B2RF and Deltapine 117B2RF topped this test with gross returns of \$354.70 per acre, \$321.79 per acre and \$307.04 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:

Six cotton varieties were planted using an eight row John Deere Maxi-Merge planter in a strip test fashion using 12 planted row plots in the Rowena farming community. The following is a list of materials and methods used in this test.

Planting Date:	May 24, 2006
Seeding Rate:	27,000 seeds per acre
Planting Pattern:	2 planted 1 out on 40 inch rows
Soil Type:	Rowena Tabosa with a pH of 8.3
Previous Crop:	Wheat
Herbicides:	1 quart of Roundup® applied prior to planting followed by three 1 quart applications during the growing season
Fertilizer:	234 pounds of 20-10-0 plus 5 pounds of sulphur applied at planting
Insecticides:	None
Harvest Date:	November 22, 2006

Table 1. Plant Stand Counts

Variety	Plant Stand Avg. # per foot 2 nd True Leaf Stage	Plant Stand Avg. # per foot 4 th True Leaf Stage
Stoneville 5007 B2RF	0.6	0.7
Phytogen 485 WRF	0.5	0.4
Deltapine 117 B2RF	0.8	1.8
Stoneville 4357 B2RF	0.7	1.0
FiberMax 9068 F	0.5	0.3
Deltapine 164 B2RF	0.7	0.6
Deltapine 143 B2RF	0.8	1.3

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

Results and Discussion:

Due to poor planting conditions, final plant populations were very low. Plant stand counts indicated an average of 0.8 plants per foot across all plots. Table 1 shows individual plant stand counts for each of the seven cotton varieties evaluated in this test. FiberMax 9068F was dropped from the test due to lack of plant stand (0.3 plants per foot).

Table 2 contains the yield and fiber quality information for each of the six cotton varieties evaluated in this test. Phytogen 485 WRF, Stoneville 5007 B2RF and Deltapine 117B2RF topped this test with gross returns of \$354.70 per acre, \$321.79 per acre and \$307.04 per acre, respectively.

This test shows the capability of the cotton plant to compensate for the poor plant stand. Cotton lint yields were still quite acceptable for the dry growing season we experienced in 2006.

All cotton varieties were planted in a two planted one out row pattern across the field and stripper-harvested using a John Deere eight row cotton stripper. Each cotton variety consisted of 12 planted rows. Weights were determined using a boll buggy. Fiber quality analysis was determined by the Texas Tech Textile Center in Lubbock.

Table 2. Agronomic Data from Dennis Minzenmayer's Dryland Cotton Variety Test (Runnels 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							
Phytogen 485 WRF	521	742	33.0	47.0	212	35	4.9	30.0	81.3	57.75	300.89	53.81	354.70	
Stoneville 5007 B2RF	441	822	28.2	52.5	112	37	4.6	29.0	83.5	59.50	262.20	59.59	321.79	
Deltapine 117 B2RF	451	642	33.3	47.4	212	35	4.9	27.7	80.3	57.75	260.47	46.56	307.04	
Stoneville 4357 B2RF	418	699	30.4	50.9	112	35	4.4	25.9	81.5	57.75	241.18	50.69	291.87	
Deltapine 164 B2RF	380	624	30.1	49.5	112	35	4.9	27.8	79.6	57.75	219.38	45.27	264.65	
Deltapine 143 B2RF	400	549	33.9	46.5	212	34	4.5	26.0	79.7	55.40	221.43	39.78	261.21	

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

Acknowledgments:

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Dow Agrosiences who provided Phytogen 485 WRF

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

Delta and Pine Land Company who provided Deltapine 117 B2RF, Deltapine 164 B2RF and Deltapine 143 B2F

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