



### **Runnels County Dryland Cotton Variety Evaluation**

Gary Jacob Farm, 2006

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#### **Summary:**

Eleven cotton varieties were compared under similar growing conditions to determine which cotton varieties consistently have higher yields and favorable fiber qualities. FiberMax 800 B2R, Phytogen 370 WR and Deltapine 488 BR topped this test with gross returns of \$311.74 per acre, \$308.62 per acre and \$294.71 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:

Eleven 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 Winters farming community. The following is a list of materials and methods used in this test.

Planting Date: June 4, 2006  
Seeding Rate: One seed every 3.7 inches  
Planting Pattern: 2 planted 1 out on 40 inch rows  
Soil Type: Portales Clay Loam with a pH of 8.2  
Previous Crop: Wheat  
Herbicides: one quart of Roundup® applied per acre at the fifth true leaf stage  
Fertilizer: 100 pounds of liquid 17-0-4 per acre  
Insecticides: None  
Harvest Date: November 16, 2006

Variety	Plant Stand Avg. # per foot 5 <sup>th</sup> True Leaf Stage	Average Number of Plants Per Acre
Stoneville 5007 B2RF	2.7	35,284
Stoneville 4357 B2RF	1.9	24,829
Stoneville 4554 B2RF	3.0	39,465
Deltapine 117 B2RF	1.3	17,511
Deltapine 488 B2R	1.6	20,517
Deltapine 445 BR	1.7	22,738
FiberMax 800 B2R	2.1	27,704
FiberMax 960 B2R	1.3	16,335
FiberMax 9068 F	2.4	31,233
Phytogen 370 WR	1.2	15,551
Phytogen 470 WR	2.5	32,278
Phytogen 425 F	2.3	29,795

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

## Results and Discussion:

This test shows the importance of selecting cotton varieties which not only yields well but also has good fiber characteristics. Phytogen 370 WR had a lint yield of 490 lbs. compared to FiberMax 800 B2R with a lint yield of 440 lbs. per acre. Although there was a difference of 50 lbs. in lint yields, FiberMax 800 B2R topped the test in gross returns due to its excellent fiber quality. Phytogen 425F harvest information was lost due to pre-mature harvest and therefore no harvest data is available.

Table 1 contains the yield and fiber quality information for each of the eleven cotton varieties evaluated in this test. FiberMax 800 B2R, Phytogen 370 WR and Deltapine 488 BR topped this test with gross returns of \$311.74 per acre, \$308.62 per acre and \$294.71 per acre, respectively.

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 1. Agronomic Data from Gary Jacob'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			CCC					
	Lint	Seed	Lint	Seed		Length (staple)	Mic	Strength (gram/tex)		Uniformity				
FiberMax 800 B2R	440	717	30.1	49.0	112	36	4.9	27.2	80.2	59.00	259.73	52.02	311.74	
Phytogen 370 WR	490	680	33.0	45.8	212	33	4.9	30.1	84.1	52.90	259.32	49.30	308.62	
Deltapine 488 BR	434	592	33.0	45.0	112	35	4.7	29.3	82.6	58.00	251.80	42.91	294.71	
Deltapine 117 B2RF	431	628	31.9	46.4	112	35	4.6	27.8	80.2	57.75	249.03	45.51	294.54	
Stoneville 4554 B2RF	425	655	30.9	47.6	212	35	4.6	28.9	81.7	57.75	245.21	47.46	292.67	
FiberMax 9068 F	441	632	32.5	46.6	112	34	4.9	31.1	82.5	55.65	245.30	45.81	291.11	
Deltapine 445 B2R	410	659	30.0	48.2	112	36	4.6	30.3	81.6	59.00	241.86	47.76	289.62	
FiberMax 960 B2R	405	662	29.8	48.6	112	36	4.6	31.5	82.7	59.25	240.14	48.01	288.15	
Stoneville 5007 B2RF	373	642	29.0	49.9	112	35	4.5	26.7	80.6	57.75	215.51	46.53	262.04	
Stoneville 4357 B2RF	374	588	30.5	47.9	212	34	4.9	27.5	83	55.65	208.01	42.63	250.64	
Phytogen 470 WR	408	552	33.8	45.8	112	32	4.9	25.4	81.6	50.95	207.68	40.03	247.72	

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

## **Acknowledgments:**

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Bayer CropScience who provided the FiberMax 800 B2R, FiberMax 9068 F and FiberMax 960 B2R

Dow Agrosiences who provided Phytogen 370 WR and Phytogen 470 WR

Delta and Pine Land Company who provided Deltapine 488 BR, Deltapine 117 B2RF and Deltapine 445 BR

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

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