



### **Irrigated Cotton Variety Test**

Kenny Gully Farm, 2012

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#### **Summary:**

Fourteen cotton varieties were compared under similar growing conditions to determine which cotton varieties consistently have higher yields and favorable fiber qualities. Americot 1550 B2RF, Deltapine 0935 B2RF, and Deltapine 1359 B2RF topped this test in Total Gross Returns (\$/acre), of \$458.01 per acre, \$456.39 per acre, and \$454.36 per acre, respectively. Producers should keep in mind that these results can change under different field conditions, soil fertility and irrigation practices, it is suggested that you look at the better cultivars on your farm to determine if they are compatible with your management style.

#### **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:**

Fourteen cotton varieties were planted using an eight row John Deere Maxi-Merge planter in a randomized block design using eight planted row plots replicated three times in the Eola farming community. The following is a list of materials and methods used in this test:

Planting Date: May 23, 2012  
 Planting Rate: 50,000 Seeds/Acre  
 Row Width: 40" centers  
 Rows Planted: 8 row plots replicated 3 times across the field (rows were 1950 ft. long)  
 Planting Pattern: Every Row  
 Last Year's Crop: Wheat  
 Irrigated: Yes-SSI  
 Soil Moisture: Very Good  
 Fertilizer: 300 lbs. 17-17-0 S pre-plant  
 Fungicide: TopGuard 1 qt./acre 10 gallons  
 Harvest Date: November 20, 2012  
 Harvest Aides: Defoliated October 29, 2012 Dessicated November 10, 2012

Variety	Plant Stand Avg. #/10 ft. 3 <sup>rd</sup> - 4 <sup>th</sup> True Leaf Stage
All-Tex 65207 B2RF	41
All-Tex Dinero B2RF	29
All-Tex Nitro 44 B2RF	26
NexGen 1511 B2RF	29
Americot 1550 B2RF	36
Deltapine 0935 B2RF	31
Deltapine 1359 B2RF	36
Deltapine 1219 B2RF	36
FiberMax 1944 GLB2	33
FiberMax 2484 B2F	32
FiberMax 2989 GLB2	33
Phytogen 367 WRF	37
Phytogen 375 WRF	36
Phytogen 499 WRF	35

Average plant populations were determined from three different locations within each plot at each growth stage.

### Results and Discussion:

Typically this cotton field will yield well above two bales per acre each year. Due to extreme heat and drought conditions, irrigation wells were pumped to the point where they

had to be cut off due to low water tables. Approximately nine inches of water were put on this cotton field during the early part of the growing season. No irrigation capabilities during the critical blooming period caused lint yields to drop significantly. This was a common situation throughout this area during 2012.

Table 1 contains the yield and fiber quality information for each of the fourteen cotton varieties evaluated in this test. Americot 1550 B2RF, Deltapine 0935 B2RF, and Deltapine 1359 B2RF topped this test in Total Gross Returns (\$/acre) of \$458.01 per acre, \$456.39 per acre, and \$454.36 per acre, respectively. Deltapine 1219 B2RF, All-Tex Nitro 44 B2RF, and All-Tex Dinero B2RF performed equally as well with Total Gross Returns (\$/acre) of \$441.91 per acre, \$418.20 per acre and \$415.46 per acre, respectively. All cotton varieties were planted on 40 inch centers across the field and stripper-harvested using a John Deere eight row cotton stripper. Each cotton variety consisted of eight planted rows per plot replicated three times across the field. Plots were individually harvested and weights were determined using a weigh wagon. Fiber quality analysis were determined by the Fiber & Biopolymer Research Institute in Lubbock.

**Table 1. Agronomic Data from Kenny Gully's Irrigated Cotton Variety Test (Concho County, 2012)**

Variety <sup>1</sup>	Fiber Quality <sup>2</sup>													
	Yield Per Acre				-----						CCC Loan	Lint Gross Return	Seed Gross Return <sup>4</sup>	Total Gross Return
	In Pounds		Turnout		Color- Leaf <sup>3</sup>	Fiber Length (inches)	Mic	Strength (gram/tex)	Uniformity					
	Lint	Seed	Lint	Seed										
AM 1550 B2RF	661*	933	0.34	0.49	42-2	1.01	4.7	26.3	80.7	\$48.15	\$318.06	\$139.96	\$458.01	
DP 0935 B2RF	635*	987	0.31	0.48	41-2	1.01	4.5	28.0	79.5	\$48.55	\$308.31	\$148.08	\$456.39	
DP 1359 B2RF	606*	896	0.33	0.48	41-1	1.07	4.6	30.0	80.6	\$52.80	\$319.89	\$134.47	\$454.36	
DP 1219 B2RF	590*	903	0.31	0.47	41-2	1.07	4.6	30.2	78.0	\$51.95	\$306.46	\$135.46	\$441.91	
ATX Nitro 44 B2RF	551	912	0.29	0.49	41-5	1.09	4.0	33.0	80.8	\$51.10	\$281.44	\$136.76	\$418.20	
ATX Dinero B2RF	534	919	0.31	0.53	41-3	1.06	4.6	28.1	79.4	\$52.00	\$277.66	\$137.80	\$415.46	
FM 2484 B2F	538	834	0.31	0.48	41-3	1.10	4.1	30.0	80.7	\$53.90	\$289.79	\$125.04	\$414.83	
NG 1511 B2RF	571*	819	0.30	0.43	41-5	1.02	4.5	31.4	80.6	\$49.15	\$280.64	\$122.84	\$403.48	
FM 1944 B2F	523	839	0.30	0.48	31-3	1.07	4.7	27.1	79.7	\$53.00	\$277.33	\$125.89	\$403.22	
PHY 499 WRF	567*	737	0.31	0.45	42-3	1.05	4.3	30.5	79.8	\$50.25	\$285.15	\$110.61	\$395.76	
PHY 367 WRF	551	824	0.32	0.47	42-4	0.99	4.4	28.1	80.5	\$47.55	\$262.19	\$123.55	\$385.74	
FM 2989 GLB2	498	786	0.30	0.47	41-2	1.08	4.6	29.2	80.1	\$53.55	\$266.94	\$117.86	\$384.80	
PHY 375 WRF	497	639	0.31	0.45	41-3	1.02	4.7	28.8	79.9	\$50.00	\$248.48	\$95.85	\$344.33	
ATX 65207 B2RF	445	724	0.28	0.46	42-4	1.01	4.4	28.7	80.1	\$47.55	\$211.37	\$108.62	\$319.99	
Average	555	839	0.31	0.48	-	1.05	4.5	29.2	80.3	\$50.68	\$280.98	\$125.91	\$406.89	
P>(F) <sup>5</sup>	0.096	0.132	-	-	-	-	-	-	-	-	-	-	-	
Lsd (0.05 or 0.10)	101	n.s.	-	-	-	-	-	-	-	-	-	-	-	
C.V.	13.2	15.2	-	-	-	-	-	-	-	-	-	-	-	

<sup>1</sup> Values for varieties shaded in yellow or marked with (\*) are not significantly different than the highest treatment in the column

<sup>2</sup> Fiber quality analysis conducted by sending a single ginned fiber subsample for HVI at the Fiber and biopolymer Research Institute, Texas Tech University, Lubbock, TX

<sup>3</sup> color and leaf grade based on a single sample.

<sup>4</sup> Gross Seed Return based on \$300/ton

<sup>5</sup> The statistical analysis indicates a general overview of the uniformity or variability of the test conditions, such as soil type, cultural practices, insect damage, etc. Trial locations with large least significant differences (LSD's) and CVs indicate a higher degree of variability. The smaller the LSD, the more precise are the test results and higher likelihood of identifying differences among varieties Differences between varieties that are greater than the LSD indicate a significant difference between the them for the measurement in a column. n.s. indicates no statistical difference among the treatments for that particular measurement/column

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Delta and Pine Land Company who provided Deltapine 0935 B2RF, Deltapine 1359 B2RF, Deltapine 1219 B2RF

All-Tex Seed Company who provided All-Tex Nitro 44 B2RF, All-Tex Dinero B2RF and All-Tex 65207 B2RF

Americot Inc. who provided NexGen 1511 B2RF and Americot 1550 B2RF

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