



## Result Demonstration/Applied Research Report

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### 2005 EL PASO COUNTY STACKED COTTON VARIETY DEMONSTRATION

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### **SUMMARY**

Seven cotton varieties were planted to compare fiber yield and quality characteristic under similar irrigated production conditions. Deltapine 448 BR and Deltapine 444 BR were the highest yielding varieties in this test. FiberMax Deltapine 445 BR had the highest loan value at 57.18 cents per pound. This is only one years result and continued testing is recommended before making a significant switch to a new variety.

### **PROBLEMS**

Several new varieties of cotton become available each year and when combined with the varieties already available makes planting seed selection increasingly difficult. Producers need local data to help in selecting adapted high yielding varieties with desirable fiber quality traits. Higher strength and longer staple are the primary fiber quality characteristics they are looking for.

### **OBJECTIVE**

With improved varieties being introduced each season, testing is a necessary part of any farming operation. This field test was established to compare new and traditional varieties. The main focus will be to find those varieties that provide high lint yield with desirable fiber traits. Since some varieties have a limited success within a narrow range of production conditions, local testing is necessary and justified. This test will allow area producers to determine if new varieties being introduced are more productive than what they currently planting. Also, it will provide area producers with the opportunity to examine the differences in plant development between the old and new varieties.

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## **MATERIALS AND METHODS**

Cooperator: Ramon Tirres

County Precinct: 3

Planting Date: May 5, 2005

Planting Rate: 13 pounds per acre

Planting Pattern: Solid on 40 inch rows

Previous Crop: Cotton

Irrigation: furrow applied preplant plus 3 during the season

Fertilizer: applied 160 units of nitrogen prior to planting plus 100 pounds of 18-46-0 during the growing season

Herbicide: Prowl and Staple

Insecticide: None

Soil Type: Silt Clay Loam

Harvest Date: November 2, 2005

Two to three weeks after planting the varieties were visually rated for vigor. At the one- to four-leaf stage stand counts were made within each plot. Fields were monitored on a weekly basis through the IPM scouting program to document plant growth and insect activity.

The test plots were stripper harvested to determine the yield per acre. A five pound sample of seed cotton was ginned at the Texas Agricultural Experiment Station in Lubbock to determine the percent turnout of lint and seed. A sample of the ginned cotton was taken to the International Textile Center in Lubbock to have fiber properties determined using a HVI classing machine.

## **RESULTS, DISCUSSION AND ECONOMIC ANALYSIS**

The lint yields in this test ranged from 1149 to 1571 pounds per acre. Deltapine 448 BR had the highest gross return per acre. Most varieties had significantly more lint production than Phytogen 410 R. Deltapine 445 BR had the highest loan value at 57.18 cents per pound.

As you look at Table 1 on the next page, you will see that no variety topped all categories which would have made it easy to select the top variety. However, several varieties performed well in most categories and would be worth testing on a five acre plot on the farm to see how it performs under your management. Remember that this is only one years result and continued testing is recommended before making a significant switch to a new variety.

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Table 1. Data from Ramon Tirres' 2005 Irrigated Cotton Variety Test (El Paso County)

Variety	Fiber Quality										CCC Loan Value	Lint Gross Return (\$/acre)	Seed Gross Return (\$/acre)	Total Gross Return (\$/acre)				
	Yield Per Acre																	
	In Pounds		% Turnout		Color- Leaf	Fiber Length (staple)	Mic	Strength (gram/tex)	Uniformity									
Variety	Lint	Seed	Lint	Seed	Color- Leaf	Fiber Length (staple)	Mic	Strength (gram/tex)	Uniformity	CCC Loan Value	Lint Gross Return (\$/acre)	Seed Gross Return (\$/acre)	Total Gross Return (\$/acre)					
Deltapine 448 BR	1571 a	2358 a	36.0	54.0	311	35	4.6	27.5 a	81.7 c	55.23	868.10	117.91	986.02					
Deltapine 444 BR	1546 a	2117 abc	36.9	50.5	311	35	4.3	27.8 a	82.9 ab	55.70	861.51	105.86	967.37					
Deltapine 445 BR	1453 a	1949 bc	36.2	48.6	312	36	4.5	27.4 a	83.1 ab	57.18	831.14	97.43	928.57					
Deltapine 424 BR	1461 a	2305 ab	34.0	53.7	312	35	4.6	25.5 b	82.3 bc	55.43	809.95	115.24	925.19					
Phylogen 470 WR	1416 ab	2124 abc	35.2	52.8	312	35	4.3	26.6 ab	82.9 ab	56.40	798.52	106.18	904.70					
Phylogen 480 WR	1405 ab	2036 abc	33.6	50.1	312	36	4.5	27.8 a	83.5 a	56.87	798.61	101.82	900.43					
Phylogen 410 R	1149 b	1819 c	34.4	54.3	312	35	4.4	27.8 a	83.4 ab	55.82	640.72	90.96	731.68					

- Note: 1) A cottonseed price of \$100 per ton was used for income calculation.  
 2) In Table 1 the individual or combination of letter a, b, c or d shown below the number are to indicate statistical significance. There is no statistical difference between numbers that have the same letter (even when there appears to be a large difference in results between the varieties).

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