



## **Result Demonstration/Applied Research Report**

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### **2005 JONES COUNTY DRYLAND COTTON VARIETY TEST**

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#### **SUMMARY**

Twelve cotton varieties were planted to compare fiber yield and quality characteristic under similar dryland production conditions. Deltapine 432 R and Associated Farmers Delinting AFD 3511R were the highest yielding varieties in this test. FiberMax 800 R had the highest loan value at 57.95 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. The primary fiber quality characteristics of interest to producers are higher strength and longer staple.

#### **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 is 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 plant. Also, it will provide area producers with the opportunity to examine differences in plant development between the old and new varieties.

## **MATERIALS AND METHODS**

Cooperator: Richard Newman and Terry White

County Precinct: five mile Northwest of of Anson, Texas in County Precint 1

Planting Date: May 21, 2005

Planting Rate: a spacing of 3.75 inches between seeds

Soil Moisture at Planting: Very marginal

Planting Pattern: Solid

Row Width: 40 inches

Previous Crop: Cotton

Irrigation: None

Fertilizer: 33 pounds of nitrogen, 33 pounds of phosphorus, 12 pounds of sulphur, and trace elements of copper, iron, manganese and zinc were applied per acre.

Herbicide: March 15, pre-plant incorporated one quart of Treflan per acre. Applied 22 ounces of Roundup Original Max per acre at the 4<sup>th</sup> true leaf stage.

Insecticide: June 23, applied 0.6 ounce of Intruder per acre. August 10, applied 0.6 ounce of Intruder plus 4 ounces of Mepichlor plus 3.9 ounces of Karate per acre. August 18, applied 4.3 ounces of Karate plus 1 ounce of Trimax plus 4 ounces of Pix per acre. August 27, applied 10 ounces of Pix per acre.

The test plots were stripper harvested to determine the yield per acre. The sample was large enough to gin at the Farmers Cooperative Gin in Stamford, Texas. Then samples for fiber quality were sent to the U.S.D.A. Cotton Classing Office. Yield and fiber quality information are summarized in Table 1.

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

As seen in Table 1, the yields in this test ranged from 673 pounds per acre to 1584 pounds per acre. Deltapine 432 R and Associated Farmers Delinting AFD 3511R were the highest yielding varieties in this test. FiberMax 800 R had the highest loan value at 57.95 cents per pound.

At harvest on November 1, the following notes were taken for boll tightness and other observable traits. AFD 3602 R, Stoneville NG3969 R and FiberMax 960 R had tight bolls. Cotton varieties BG 24 R, DP 432 R, AFD 3511 R appeared to have moderately tight bolls. Cotton was beginning to string out of the boll (moderately loose) in cotton varieties Stoneville 4686 R, Stoneville 5599 BR, Deltapine 434 R, Deltapine 494 R, and FiberMax 800 R. Phytogen 310 R had very loose cotton stringing out of the bolls.

Deltapine 434 R had open bolls all the way to the top of the plant. While AFD 3511 had green unopened bolls at the top of the plant, FiberMax 800 had very few bolls at the top of the plant.

Richard Newman's and Terry White's Dryland Cotton Variety Test  
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Table 1. Data from Richard Newman's and and Terry White's 2005 Dryland Cotton Variety Test (Jones County)

Variety	Yield Per Acre		Fiber Quality					CCC Loan Value	Lint Gross Return (\$/acre)	Seed Gross Return (\$/acre)	Total Gross Return (\$/acre)
	In Pounds		Color- Leaf	Fiber			Uniformity				
	Lint	Seed		Length (staple)	Mic	Strength (gram/tex)					
Deltapine 432 R	1584	2816	313	35	3.8	29.5	80.1	56.25	891.00	140.81	1031.81
AFD 3511 R	1355	2463	312	35	4.3	28.3	79.5	56.10	760.16	123.14	883.29
FiberMax 800 R	1345	1993	212	36	3.7	28.8	81.0	57.95	779.43	99.67	879.10
Stoneville ST 5599 BR	1348	2107	312	34	3.7	25.8	78.2	54.30	731.96	105.35	837.32
Deltapine 494 R	1076	1586	312	36	3.8	29.1	80.6	57.15	614.93	79.28	694.21
Phytogen 310 R	1131	1458	312	34	3.9	26.9	80.4	54.30	614.13	72.91	687.05
FiberMax 960 R	1057	1550	312	35	3.5	29.1	81.0	56.10	592.98	77.51	670.49
AFD 3602 R	956	1626	211	35	3.9	28.4	79.7	56.95	544.44	81.31	625.75
Stoneville ST 4686 R	962	1434	312	35	3.8	27.6	79.9	56.35	542.09	71.70	613.79
Deltapine 434 R	858	1256	312	35	3.6	29.1	80.6	56.10	481.34	62.79	544.13
Stoneville NG 3969 R	658	1036	212	36	3.3	29.5	81.7	55.80	367.16	51.78	418.94
BGC 24 R	673	1137	313	33	3.7	26.4	79	51.90	349.29	56.84	406.13

NOTE: Seed income was calculated using a cottonseed price of \$100 per ton

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A word of thanks to Rex Ford at the Farmers Cooperative Gin at Stamford, TX for ginning each cotton variety.

A word of appreciation is extended to the following seed companies for providing seed for this plot they include:

- ! Delta and Pineland Company who provided Deltapine 432 R, Deltapine 494 R and Deltapine 434 R
- ! Associated Farmers Delinting, Inc. Provided AFD 3511 R and AFD 3602 R now owned by Bayer CropScience
- ! Bayer CropScience provided the FiberMax 800 R and FiberMax 960 R
- ! Monsanto/Stoneville Pedigreed Seed who provided the Stoneville ST 5999 BR, Stoneville ST 4686 R and Stoneville NG 3969 R
- ! DowElanco/Phytogen Seed Company who provided the Phytogen 310 R
- ! Beltwide Cotton Genetics who provided the BCG 24

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.