



Result Demonstration/Applied Research Report

2006 Roundup Ready and Roundup Flex Dryland Cotton Variety Test

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Fisher County

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Summary

Eight varieties of cotton were planted May 26, 2006 by Jeff Upshaw on his farm 3 miles west of Roby, Texas. All varieties in the test contained the gene trait of either Roundup Ready or Roundup Flex. This test was established to monitor yield and quality traits on newer varieties of genetically modified cotton. Due to lack of rainfall during the growing season the yields in this test were low.

Objective

Due to the increased interest in genetically modified cotton, primarily for the control of problem weeds, field tests are needed to determine the production potential of the available varieties. A field test established in Fisher County would allow producers the opportunity of observing the growth and development patterns of the cotton through the growing season. Taking the plots to harvest would provide producers information on yield and fiber quality. This test provided the additional potential to see if the increased cost of the genetically modified cotton could be offset by additional lint production.

Materials and Methods

Cooperators: Jeff Upshaw

Plot Location: 3 miles west of Roby

Soil Moisture: Moderate soil moisture at planting

Crop Production Information:

Planting Date: May 26, 2006
 Planting Pattern: 2-in-1-out-2-in-2-out, 40" spacing
 Planting Rate: 10 lbs per acre
 Herbicide Applied: 1 pint Prowl H20 per acre at planting followed by 22 ounces of Roundup Weather Max per acre applied over the top at the fifth true leaf stage and another 22 ounces of Roundup Weather Max per acre applied in early-September using a hooded sprayer.
 Insecticides Applied: None
 Fertilizer Applied: 90 pounds of 15-6-0-2 plus zinc
 Previous Crop: Cotton
 Harvest Aids: Hand harvested on December 4, 2006

Results and Discussion

The cotton variety test established by Jeff Upshaw provided very useful information to producers. The desired cotton emergence was achieved in seven days after planting. Weed competition was kept to a minimum by the herbicide program used by the producer. The two applications of Roundup resulted in excellent weed control for the entire growing season.

Table 1. Agronomic Data from Jeff Upshaw's Cotton Variety Test (Fisher County, 2006)

Variety	% Turnout		Fiber Quality					CCC Loan Value
	Lint	Seed	Color- Leaf	Fiber Length (staple)	Mic	Strength (gram/tex)	Uniformity	
Deltapine 494 R	24.4	52.6	112	36	4.6	33.0	83.5	59.35
FiberMax 960 R	24.6	52.8	112	36	4.2	30.4	83.4	59.20
Deltapine 434 R	29.3	47.7	112	36	4.5	30.2	84.9	59.20
Deltapine 167 RF	26.5	51.7	112	36	4.9	25.8	81.9	58.50
Stoneville 4664 RF	28.1	46.8	212	35	4.7	27.4	82.9	57.50
Deltapine 147 RF	27.3	51.4	112	37	4.5	25.2	82.2	57.50
AFD 3074 RF	23.3	53.5	112	35	4.2	28.9	82.2	57.45
FiberMax 989 R	24.7	53.1	112	34	4.9	28.0	84.3	55.25

As you look at Table 1, most of the varieties planted had excellent fiber qualities. The length, strength and fiber uniformity of many of these varieties meet the standards required by spinners. 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.

Economic Analysis

Year to year variation certainly was apparent between 2005 and 2006. Due to low yields many acres were not harvested in the county. The variability in lint yield in this test was enough to make harvest questionable. The hand harvested samples provided the opportunity to determine the value of the lint based on quality. It is recommended that producers look at tests conducted in the region for the last 2 to 3 years and from ten or more field tests and find a variety that is in the upper third. Those selected varieties can then be tested on your farm under your production practices to determined if increased acreage of that variety is justified. Most of the varieties in this test have a fiber quality that is desired by the buyers with high strength, length, and uniformity.

Acknowledgements:

I want to take this opportunity to thank Jeff Upshaw for establishing and managing this cotton variety test.

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 494 R, Deltapine 434 R, Deltapine 167 RF and Deltapine 147 RF
- ! Bayer CropScience provided the FiberMax 960 R, AFD 3074 RF and FiberMax 989 R
- ! Monsanto/Stoneville Pedigreed Seed who provided the Stoneville ST 4664 RF

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