Result Demonstration/Applied Research Report

2003 Cotton Variety Test

Cooperator: Todd Coker
Fisher County

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Summary

Four varieties of cotton were planted June 8, 2003 by Todd Coker on his farm 5 miles south of Roby. All varieties in the test were resistant to Roundup. This test was established to monitor yield and turnout rates on newer varieties of genetically modified cotton.

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.

A field test was established in southern Fisher County with varieties of cotton that were Roundup resistant. 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: Todd Coker
Plot Location: State Highway 70, 5 miles south of Roby

Crop Production Information:

Planting Date:	June 8, 2003
Planting Rate:	13 pounds per acre
Planting Pattern:	2 X 1, 40" spacing
Herbicide Applied:	Prowl, at the rate of 1 pt/acre was applied during planting. In early July, Roundup Ultra Max was applied broadcast at a 24 oz. per acre rate.
Insecticides Applied:	None
Fertilizer Applied:	None

Results and Discussion

The cotton variety test established by Todd Coker 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 application of Roundup at the fourth true leaf stage resulted in the control of the emerged weeds. The application controlled Pigweed, Johnsongrass, Morningglory and stunted Silverleaf Nightshade.

Table 1. Agronomic Data from Todd Coker's Cotton Variety Test (Fisher County, 2003)

	Yield Per Acre				Fiber Quality								
	In Pounds		% Turnout							CCC	Lint	Seed	Total
					Color-	Fiber Length		Strength		Loan	Gross Return	Gross Return	Gross Return
Variety	Lint	Seed	Lint	Seed	Leaf	(staple)	Mic	(gram/tex)	Uniformity	Value	($/acre)	($/acre)	($/acre)
Deltapine 555 BG/RR	754	1128	29.8	44.6	311	34	4.0	27.9	79.9	53.35	402.31	70.48	472.79
FiberMax 989 BG/RR	629	1048	26.0	43.3	311	37	4.1	30.8	82.6	56.40	354.52	65.48	420.00
FiberMax 960 BG/RR	498	869	25.9	45.1	311	37	3.9	33.1	82.9	56.55	281.88	54.29	336.17
Stoneville 5599 BG/RR	358	552	30.4	46.8	412	35	3.9	29.6	81.6	54.20	194.27	34.50	228.77

N0TE: 1) Yield was determined by hand sampling three areas in each variety
2) Gross return per acre for cottonseed was based on a sale price of $125 per ton

Economic Analysis

Let me stress that looking at the total gross return can be deceiving is selecting varieties from one test. Year to year variation and differences in plots and production practices make a difference. The variability between the samples collected showed significant difference in yield only between the top and bottom variety. 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 Todd Coker 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
- Stoneville Southwest, Inc.
- Bayer CropScience