

**DP 0912 B2RF: A NEW EARLY MATURING CLASS OF 2009 B2RF VARIETY
FROM DELTA AND PINE LAND**

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Abstract

DP 0912 B2RF is an early maturity variety with excellent yield potential that will be released for commercial sales in the 2009 growing season. The variety has semi-smooth leaf pubescence, medium plant height and a bushy plant type. The average fiber properties of DP 0912 B2RF are ~35 staple, 4.81 micronaire, and 28.3 g/tex fiber strength. The node of the first fruiting branch averages 6.1 nodes. DP 0912 B2RF was developed from the Monsanto cotton breeding program using elite genetics. As a result of these breeding techniques high yields have been reported for several of the new tested varieties including DP 0912 B2RF.

The yield performance of DP 0912 B2RF is improved compared to ST 4554 B2RF in Beltwide comparisons and FM 9180 B2RF in the W. Texas region. DP 0912 B2RF has improved lint yield and gin turnout over ST 4554 B2RF, and FM 9180 B2RF. The regional performance of DP 0912 B2RF showed the best performance in N. Southeast, N. Delta, and S. Delta, with strong performance in other full-season markets (S. Southeast, E. Texas, W. Texas, and Arizona/California).

Introduction

Deltapine brand is releasing for commercial introduction in 2009, a new early maturity variety that contains both the Bollgard II and Roundup Ready Flex traits: DP 0912 B2RF. The characteristics describing DP 0912 B2RF are summarized in Table 1. DP 0912 B2RF was developed by Doug Shoemaker and Robert McGowen at the Monsanto Cotton Breeding site in Scott, MS. The highlights of P 0912 B2RF characteristics are improved yield and gin turnout compared previous Deltapine brand varieties and competitive check varieties.

Table 1. DP 0912 B2RF Characteristics and Fiber quality

Trait	Description
Maturity	Early
Leaf Pubescence	Semi-Smooth
Plant Height	Medium
Seed Size	4400 - 4800 seed / lb
Verticillium Tolerance	Good
Micronaire	4.81
Staple	~35
Strength	28.3 g/tex
Node First Fruiting Branch	6.1

Materials and Methods

The data describing DP 0912 B2RF (along with internal and competitive check varieties) was obtained from the following sources: Monsanto breeder trials (2007), Monsanto on-farm trials (2008). Plant growth, fruiting, and maturity comparisons were made by plant mapping a subset of the Monsanto on-farm trials when approximately 50% of the bolls were open. All available yield, fiber quality and plant mapping data were queried on the dates

Results and Discussion

Variety	Crop Value (\$/acre)	Lint Yield (lb/acre)	% Gin Turnout	Staple (32 nd 's inch)	Micronaire	Fiber Strength (g/tex)	Uniformity Index	Loan Value (cents/lb)
DP 0912B2RF	619	1130	35.5	35.4	4.51	28.2	81.9	54.39
FM 9180B2RF	567	1013	33.6	37.4	4.20	30.0	81.9	55.75

Notes: W. Texas data, 2008 testing, 16 locations.
Loan Value = \$0.52/lb +/- premiums or discounts according to 2007 USDA Loan Chart, assuming 31 Color and 3 leaf grade. Data available as of 12.03.08

Regional Yield and Crop Value Performance

The regional yield (lb lint/acre) and crop value (\$/acre) of DP 0912 B2RF was compared to ST 4554 B2RF to calculate the % difference within each data region listed below (Figure 1). In all regions N. Southeast, S. Southeast, N. Delta, S. Delta, E. Texas, W. Texas, and Arizona/California both the lint yield and crop value were greater than ST 4554 B2RF regional performance.

In the N. Southeast region, the percent yield difference was greatest for DP 0912 B2RF with over a 24.6% difference when compared to ST4554 B2RF with also a 22.2% crop value difference. Results were most similar in the S. Delta region with DP 0912 B2RF at 4.3% increase in yield difference and 0.9% increase in crop value over ST 4544 B2RF.

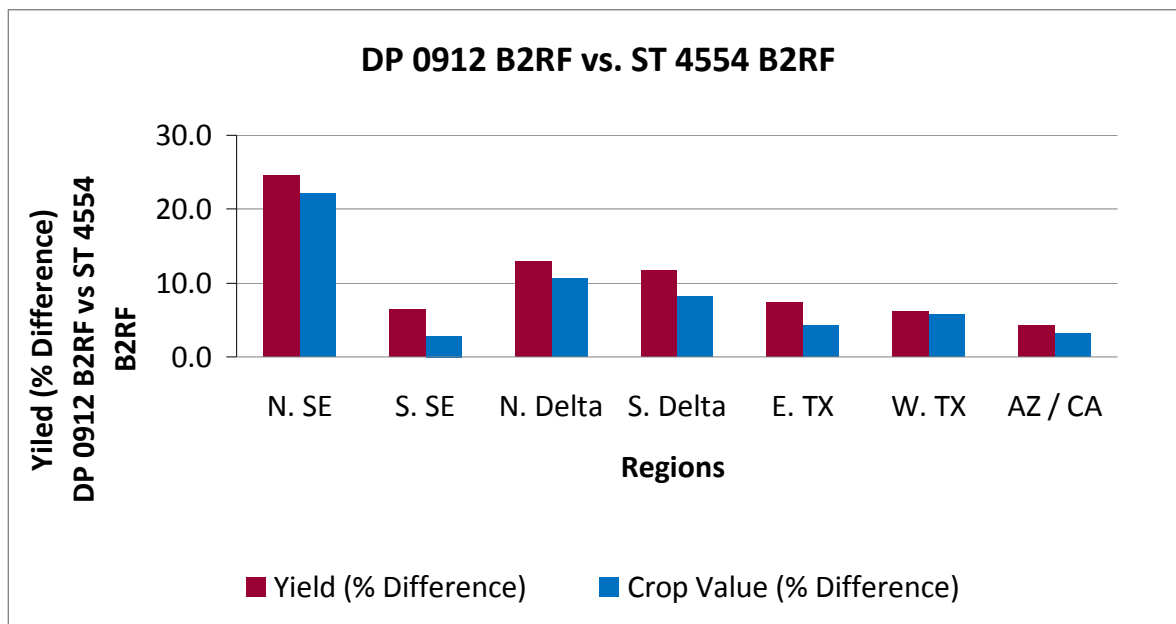


Figure 1. DP 0912 B2RF regional yield and crop value performance expressed as % difference when compared to ST 4554 B2RF in 2008 testing. Regions: N. SE (N. Southeast), S. SE (S. Southeast), N. Delta, S. Delta, E. TX (E. Texas), W. TX (W. Texas) and AZ/CA (Arizona/California). Data available as of 12.03.08

Summary

DP 0912 B2RF was found to have greater yield performance to ST 4554 B2RF Beltwide (+ 11.5%) and FM 9180 B2RF (+11.5%) in W. Texas. Crop value (\$/acre) and gin turnout of DP 0912 B2RF was improved compared to ST 4554 overall in Beltwide comparisons and compared to FM 9180 B2RF in W. Texas comparisons. The regional performance of DP 0912 B2RF showed increases in both yield and crop value differences when compared to ST 4554 B2RF in all major growing regions.