



The University of Georgia  
**Cooperative Extension**  
College of Agricultural and Environmental Sciences



# Georgia Cotton

February 21, 2011

[www.ugacotton.com](http://www.ugacotton.com)

UGA Uniform Cotton Variety Performance Evaluation Program Results	1
UGA Cotton Variety Performance Calculator	3


## UGA Uniform Cotton Variety Performance Evaluation Program Results (Collins and Whitaker)

The UGA Cotton Variety Performance Evaluation Program was a huge success in 2010, with nearly 20 individual trials throughout Georgia's cotton belt, and additional trials outside of the scope of this program. The success of this program was largely attributable to the dedication of our UGA County Extension Agents, our industry leaders (Bayer CropScience, Dow AgroSciences, and Monsanto Company), the Georgia Cotton Commission, and cooperating growers. The implementation of this program has undoubtedly helped to address a current need of Georgia cotton growers and will make an incalculable impact in the 2011 growing season and beyond. A special thanks to all who participated in, or contributed to, this program including all cooperating growers!

**Description of Program:** As the 2010 season approached, it became difficult to effectively evaluate dryland variety performance due to the abnormally wet weather that was experienced throughout most of Georgia during 2009. As variety selection was drastically becoming much more important, due to the loss of DP 555 BR beyond 2010, the UGA Extension Cotton Agronomists decided to establish this variety testing program in 2010. Our industry leaders (Bayer CropScience, Dow AgroSciences, and Monsanto Company) were asked to provide three of their commercially available cotton varieties that were their best-adapted varieties for dryland environments in Georgia. This uniform list of CORE varieties were planted in replicated trials in growers fields throughout Georgia's cotton belt, as arranged by the county agents. Additional non-commercially available varieties (potentially future releases) were also included in smaller set of trials. The trials were replicated and managed/maintained by the grower with the assistance of participating county extension agents, in order to achieve realistic and statistically sound results. A seed cotton sample of each variety was collected at harvest and ginned at the UGA Microgin to provide a more realistic value for lint percentage and fiber quality. Additionally, the design of this program allowed for a much broader assessment of variety performance across a wide range of environments, ranging from 400 to over 1300 lbs/A yield environments in 2010 alone. This was a "first-ever" approach, in that it illustrates how variety performance can change across a range of environments, which provides information on how to place varieties in environments where they will likely perform their best. The full report of the 2010 program can be on the UGA Cotton Webpage ([www.ugacotton.com](http://www.ugacotton.com)).

## UGA Cotton Variety Performance Calculator (*Collins and Whitaker*)

To assist in variety selection, the UGA Cotton Variety Performance Calculator has been updated to include all trials which have been conducted in 2009 and 2010. This calculator can be found on the UGA Cotton Webpage ([www.ugacotton.com](http://www.ugacotton.com)). A screen shot of the calculator is below:

 THE UNIVERSITY OF GEORGIA  
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES

### UGA Cotton Variety Performance Calculator

(February 2011)

Developed by Jared Whitaker and Guy Collins

Variety selection is one of the most important decisions and significant investments a cotton producer has to make each year. The UGA CAES Statewide Variety Testing program conducts annual cotton variety performance tests across the state to provide producers with information critical to making these decisions. In addition to this program, more information on variety performance is gathered from numerous large plot on-farm cotton variety trials conducted by UGA Cooperative Extension personnel.

The UGA Cotton Variety Performance Calculator allows users compare performance of multiple varieties from information produced by both the Statewide Variety Testing program (OVT) and large plot on-farm trials. The intention of this calculator is to allow a user to compare variety performance by using data only from trials in which ALL varieties of interest were tested. This allows for fair comparisons to be made across a wide range of environmental conditions and production practices. These results only represent performance, and do not intend to predict variety performance in 2011 and beyond.

The following UGA Extension and Research personnel made significant contributions to the database of trials which this calculator utilizes:

Statewide Variety Testing (OVT): Don Day and Larry Thompson

On-Farm Large Plot Trials: Brent Allen, Anthony Black, Scott Brown, R.J. Byrne, Scott Carlson, Don Clark, Brian Cresswell, Shane Curry, Jim Crawford, Mike Dollar, Phillip Edwards, Tim Flanders, Mark Frye, Buster Haddock, Rusty Harris, Ed Harrison, Ray Hicks, Wade Green, James Jacobs, Gordon Lee, Mitchell May, Tim Moore, Eddie McGriff, Wade Parker, Peyton Sapp, David Spaid, Tim Varndore, Bill Tyson, Chris Tyson, and Mark Von Waldner

Cooperation of the aforementioned individuals, producer cooperators, and numerous seed company representatives was essential in adequately evaluating variety performance in Georgia.

---

**Step 1. Select up to five cotton varieties from the drop-down menu to compare performance in terms of lint yield.**

DP 1050 B2RF ▼    DP 1048 B2RF ▼    ST 5458 B2RF ▼    Select Variety 4 ▼    Select Variety 5 ▼

**Step 2: Select irrigation option:**

All Locations ▼

**Step 3: Select trial year(s):**

All Years ▼

**Step 4: Select trial type:**

All Types ▼

Next    Reset Form

To access performance information about particular cotton varieties, select varieties of interest in Step 1 (up to five varieties can be compared). Steps 2-4, allow for “narrowing” of results of interest. Step 2 allows for results to be obtained from dryland trials, irrigated trials, or all trials. Step 3 allows for selection of years in which the trials were conducted: 2009, 2010, or all years. Step 4 allows for selection of trial type in which results are desired: official variety trials (small-plot replicated trials conducted by the OVT program), or county trials (large-plot replicated trials conducted by county agents) or both. The default options on steps 2-4 are to include all options. To proceed, click the “Next” button.

As an example, varieties DP 555 BR and DP 1050 B2RF have been chosen for comparison and information from all trials has been selected. In Step 5, you can continue to narrow the number of trials of which information is used to compile data. **IN THIS CALCULATOR, INFORMATION IS COMPILED FROM TRIALS IN WHICH ALL SELECTED VARIETIES ARE TESTED.** This step allows for more regionalized information to be used, instead of data across the state. Below is a screenshot of the step 5.

**Step 5: Pick which trials to be included in calculation:**

Check All

- Berrien - Dryland 2010
- Burke - Irrigated 2010
- Candler - Dryland 2010
- Colquit - Dryland 2010
- Colquit - Irrigated 2010
- Colquitt - Dryland 2009
- Colquitt Comparison A 2009
- Decatur / Grady - Dryland 2010
- Effingham - Dryland 2010
- Evans - Dryland 2010
- Evans - Irrigated 2010
- Jeff Davis - Dryland 2010
- Jeff Davis - Irrigated 2010
- Jefferson - Brett 2010
- Jefferson - Godowns 2010
- Johnson - Dryland 2010
- Randolph - Dryland 2010
- Screven - Dryland 2010
- Twiggs - Dryland 2010
- Wayne - Dryland 2010
- Worth - Dryland 2010

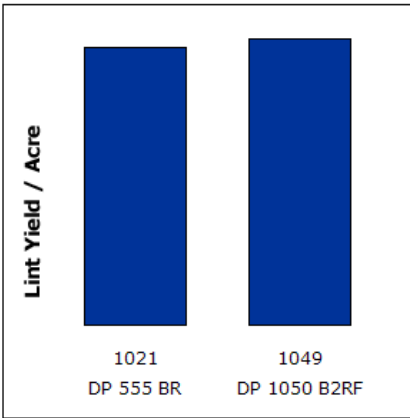
Calculate

return

Once Step 5 is completed, a results page will appear. In this page, average lint yields from the selected varieties across all locations selected are presented. The total number of trials used for comparison is identified along with the number of irrigated and dryland trials utilized. Below the lint yield averages, are “yield stability” percentages. These percentages represent the percent yield of a particular variety compared to all varieties tested in each of trials in which a variety was tested, not just comparison varieties. These percentages are either positive or negative and are calculated from all trials, irrigated trials, and dryland trials. Below is a screenshot of this page.

## UGA Cotton Variety Performance Calculator

In the lint yields below, data was combined ONLY from locations in which ALL variety selections were tested.



<b>Number of trials Used for Comparison:</b>	<b>21</b>
Number of Irrigated Trials:	5
Number of Dryland Trials:	16

<b>Yield Stability of Selected Varieties</b>		
<b>Represented as Percentage of Yield Compared to the Trial Average</b>		
<b>(number of trials tested in parentheses)</b>		
	DP 555 BR	DP 1050 B2RF
All Trials	+4 (49)	+8 (42)
Irrigated	+3 (21)	+6 (18)
Dryland	+5 (28)	+9 (24)

Contributions by:

**Guy Collins**, Extension Cotton Agronomist

**Jared Whitaker**, Extension Agronomist

*Your local County Extension Agent is a source of more information on these subjects.*

Edited by: Guy Collins, Extension Cotton Agronomist

Putting knowledge to work

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES, COLLEGE OF FAMILY AND CONSUMER  
SCIENCES, WARNELL SCHOOL OF FOREST RESOURCES, COLLEGE OF VETERINARY SCIENCES

The University of Georgia and Fort Valley State University, the U. S. Department of Agriculture and counties of the state cooperating, The Cooperative Extension Service offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability. An equal opportunity/affirmative action organization committed to a diverse work force.

