



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



Georgia Cotton

February 8, 2009

www.ugacotton.com

Five questions on the UGA Micro Gin	1
Yield and Quality of the 2008 Georgia Cotton Crop	3
2008 Georgia Quality Cotton Award Winners	4
2008 Farm Bill Issues	

Five Questions on the UGA Micro Gin. (*Changying Li, Andy Knowlton*). The University of Georgia Micro Gin ginned its first samples in 2004. It was built under the leadership of the UGA Extension Cotton Team and support from the Georgia Cotton Commission. During the past five years since its completion, the UGA Micro Gin has ginned cotton samples from 11 states across cotton belt with 8015 samples, 303 bales, totaling 80,109 lbs of lint. It plays an important role in cotton research both in Georgia and across the cotton belt, and also exerts its influence to the sustainability of the cotton industry in the long run. Starting from this issue, we will present a series of articles to introduce the UGA Micro Gin to our cotton community, ranging from fundamentals to an in-depth study to report its ginning performance. We start this issue with five questions and answers.

What is a UGA Micro Gin? The UGA Micro Gin is a scaled down model of a commercial gin. All machine parts in the UGA Micro Gin are around 1 foot inside width compared to 8-10 feet wide in commercial gins. It was built to simulate a commercial gin while being able to handle small size cotton samples. It is located on the Animal and Dairy Science Farm which is part of the University of Georgia Tifton Campus.



Figure 1. The University of Georgia Micro Gin

Why did UGA need a Micro Gin? Cotton researchers generally use small research plot trials to evaluate the fiber quality from certain varieties, different treatments, as well as various growing

conditions. These small research plots cannot generate enough cotton for a commercial gin to separate the lint from seeds, which is a necessary step for fiber lint quality evaluation. Thus, a gin which can handle small size cotton samples is needed.

Why can we not use a laboratory gin? Yes, we can. Actually, researchers have been using Laboratory gins to gin the small amount of cotton samples for many years. However, the lab gin usually has a totally different design from the commercial gin: first, it does not have seed cotton cleaning and lint cleaning, which are standard procedures in any commercial gin; second, the lab gin can only gin a small amount of cotton from the plot, not the complete research plot. This leads to large variation due to different methods used to draw cotton samples from the research plot. The UGA Micro Gin provides an opportunity for researchers to gin research size cotton samples (up to 2500 lbs) and enables the ginning of cotton samples from a whole research plot.

How does UGA Micro Gin work? As mentioned above, the UGA Micro Gin uses the same equipment used in commercial gin but in a one foot wide version. The equipment is arranged in the standard configuration for spindle picked cotton. Unlike the laboratory gin, the UGA Micro Gin provides full drying as well as seed cotton and lint cleaning. Seed cotton cleaning is accomplished in two stages (two six cylinder incline cleaner, one stick machine, and one Trashmaster cleaner). Either of the two stages can be bypassed if needed. The cleaned seed cotton then enters the extractor feeder and a 24 saw gin stand. The lint is then cleaned at two stages: an air jet type cleaner, and two saw type lint cleaners. Either of these two stages can be bypassed based on the need of researchers. All samples ginned at the UGA Micro Gin are processed using a set standard operating procedure which consist of conditioning, weighing, ginning, and fiber sample collection. The final fiber samples are sent to the USDA Classing Office for testing.

Why should I care about the UGA Micro Gin? As a cotton researcher or extension specialist, it is apparent that the UGA Micro Gin is a valuable research tool to evaluate varieties and different treatments. As a cotton producer, you should also care about the UGA Micro Gin for the simple reason that your variety selection and culture practices recommended by researchers and extension specialists rely on the cotton fiber quality data ginned at the UGA Micro Gin. In a word, even if you cannot see it directly, the UGA Micro Gin is a critical linkage in the whole chain that determines the profitability of your cotton.

Yield and Quality of the 2008 Georgia Cotton Crop. (Shurley) Georgia cotton producers have enjoyed 4 consecutive good years in yield. This years crop is estimated at 840 lbs per acre—only 9 lbs per acre short of the record yield set in 2005. The state average yield over the past 4 crops has been 827 pounds per acre. These yields have been due to timely late-season rainfall when needed, good late-season weather conditions allowing for a long growing season to mature late bolls, good boll opening and picking, and good management.

Georgia fiber quality has also been good. Producers often complain they do not get paid for quality and it's true that most contracts, unfortunately, specify "no ups" for quality. But the cash (spot) market does pay for quality and, of course, the Loan has quality premiums and discounts. The cash premium for a Color 31-Leaf 3-Staple 35 bale is currently 150 points or 1.5 cents per lb

compared to the standard of 41-4-34 (USDA-AMS, Macon). The premium for strength of better than 29.5 is 25 to 50 points. The premium for Uniformity of 82.5 or better is 20 to 50 points.

Granted, some of these premiums look small—but, not exactly insignificant when you multiply them over hundreds or thousands of bales. Also worth considering is that with the reduced acreage across the US and particularly the decline in the Mid-South (Arkansas, Louisiana, Mississippi, Missouri, and Tennessee) Georgia’s role and importance in the US cotton industry is now even greater than it already was. With over 70% of US cotton being exported, we have to now be even more mindful of meeting the demands of foreign mills.

Summary of 2008 Georgia Cotton Quality and Comparisons to 2006 and 2007.

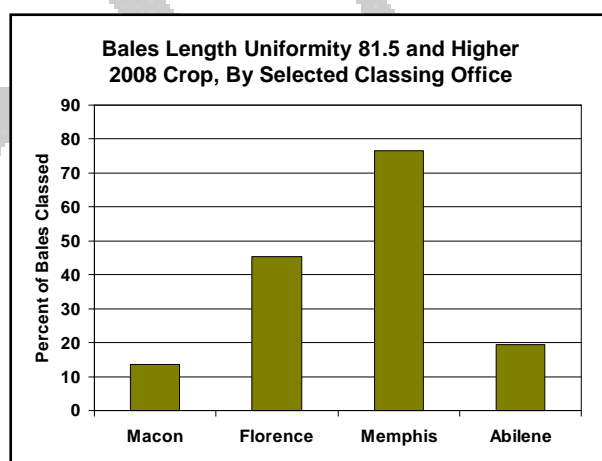
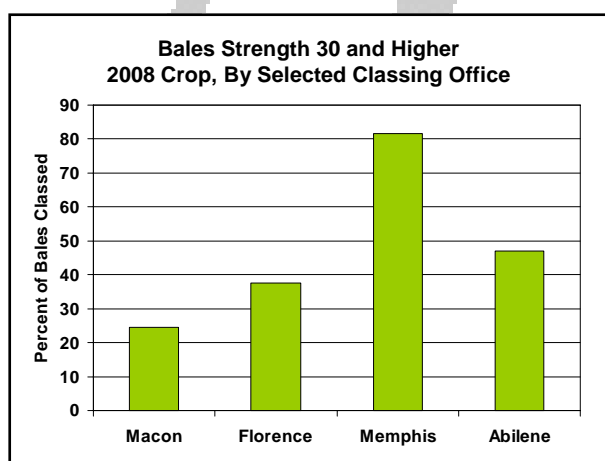
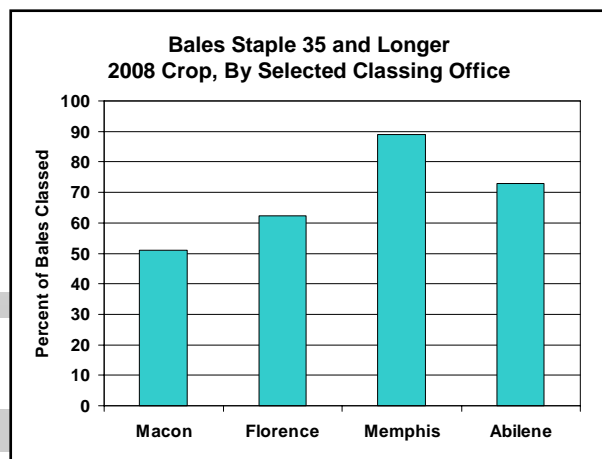
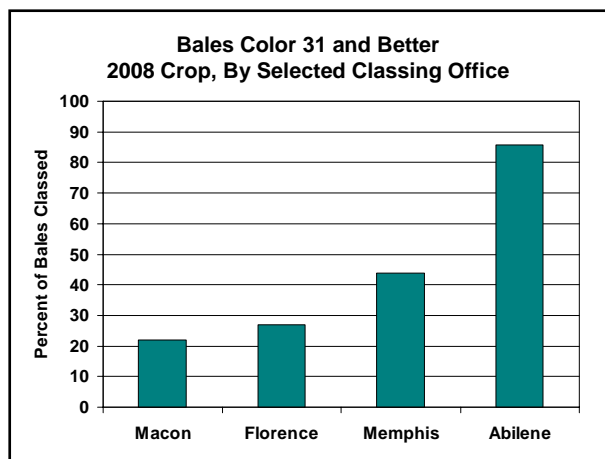
	2006	2007	2008 *
Percent of Bales Color 31 and Better	49.3	38.7	22.1
Percent of Bales Discounted For Color and Leaf	4.8	7.0	13.1
Average Staple	34.4	34.4	34.5
Percent of Bales Staple 35 and Longer	45.4	45.9	51.1
Percent of Bales Staple 33 and Shorter	20.4	21.0	16.3
Average Strength	28.4	28.6	28.6
Percent of Bales Strength 30 and Higher	20.4	29.0	24.6
Average Uniformity	80.4	80.1	80.3
Percent of Bales Uniformity 81.5 and Higher	17.1	11.8	13.7
Percent of Bales Uniformity Less Than 79.5	21.7	29.7	25.5
Average Micronaire	4.7	4.7	4.5
Percent of Bales Discounted For Micronaire	22.2	19.9	10.2

* 1.6 million bales classed at Macon as of January 29, 2009.

The percent of the Georgia crop grading Color 31 and better has improved the past few years due to good harvest conditions. Color grade was down this year and the percent of bales discounted for Color and/or Leaf was up. There were a lot of 51 Color bales and 4 and 5 Leaf grades that we typically do not see. These conditions are typically related to harvest weather and could be attributable to the early freeze and cold temps.

Staple continues to improve and fiber strength has also improved over the years. Micronaire has improved. Only 10% of this year’s crop was discounted for high or low micronaire. High mike is typically due to drought conditions. Uniformity continues to be a challenge for us.

Approximately 86% of Georgia acreage is planted to one variety—DP555BR. This variety is high-yielding but not exactly known for it’s fiber quality attributes. Single-gene Bt technology expires after this 2009 crop season. Beginning in 2010, producers wishing to plant insect-management varieties will have to switch to Bollgard II® or Widestrike®. Fiber quality may improve but the big question remains yield impact.



These graphics compare 2008 Georgia cotton to selected other large markets—Florence (another Southeast area), Memphis (the traditional Mid-South standard), and Abilene (a mix of picker and stripper harvested cotton but probably more comparable to Georgia than other Texas locations).

Color was down this year but had Color been similar to 2006 and 2007, Georgia would have been much more comparable to other locations. Staple is not too far behind these other locations with exception of the Mid-South (Memphis). Although Strength has improved, Georgia was similar to Florence (another Southeast location) but still behind the other locations. Uniformity is still a challenge—similar to Abilene in 2008 but well behind Florence and Memphis.

2008 Georgia Quality Cotton Award Winners. (Shurley and Roberts) Congratulations to the following producers and gins receiving 2008 Georgia Quality Cotton Awards. Awards were received and the producers, gins, and County Extension Agents recognized at the Awards Banquet on January 27, 2009 at Tifton. Thanks to these producers, gins, and Agents for what they do to improve the quality of Georgia cotton.

These Awards began in 2005 and are sponsored by Bayer CropScience and the Georgia Cotton Commission and administered by the UGA Cotton Team, Bayer CropScience, Georgia Cotton Commission, and Southeastern Ginners Association. Awards are given for three acreage

categories (acres of cotton produced) in each of four regions of the state. The Award is based on the average Loan Value per pound of lint for all cotton produced.

2008 Georgia Quality Cotton Awards Winners

Less Than 500 Acres

	Grower	County	Gin	County Agent	Loan Value Cents Per Lb
Region 1	Dan King	Turner County	Worth Gin	Scott Utley	55.37
Region 2	Mark Bryant	Jefferson County	Farmers Gin	Jim Crawford	53.69
Region 3	Dennis Purvis	Cook County	BCT Gin	Ben Tucker	55.33
Region 4	Walter Powell	Colquitt County	The Cotton Gin	Scott Brown	56.51

500 to 1,000 Acres

	Grower	County	Gin	County Agent	Loan Value Cents Per Lb
Region 1	Steven Metcalf	Turner County	Sconyers Gin	Scott Utley	53.13
Region 2	Charles Smith, Jr.	Jefferson County	Farmers Gin	Jim Crawford	55.16
Region 3	Riverbottom Farms	Lanier County	BCT Gin	Elvin Andrews	55.30
Region 4	Jeff Croom	Seminole County	Clover Leaf Gin	Rome Ethredge	55.80

Over 1,000 Acres

	Grower	County	Gin	County Agent	Loan Value Cents Per Lb
Region 1	Hobby Farms	Turner County	Sconyers Gin	Scott Utley	51.29
Region 2					
Region 3	Dewitt Farms	Brooks County	BCT Gin	Johnny Whiddon	54.60
Region 4	Mims Farms	Seminole County	Clover Leaf Gin	Rome Ethredge	55.05

2008 Farm Bill Issues. (*Shurley*) Although not becoming law until halfway through the calendar year, a new farm bill became effective with the 2008 crop year and will cover 2008-2012 production. With the 2009 crop planting season approaching and most information now known, the following is a brief discussion and summary.

Direct and Countercyclical Payment Program. The DCP program is the cornerstone of the income “safety net” begun with the 2002 farm. This program is modified slightly in the 2008 farm bill but continues in large part as was under the ‘02 bill.

- Signup for the DCP program for 2009 has already begun and continues through June 1.

- Base Acres and Payment Yields on the farm are unchanged.
- There are no changes in Direct Payment (DP) rates. The DP on cotton, for example, remains at 6.67 cents per pound for the life of the new bill.
- Some Target Prices have been changed—some increased, some decreased. An increase raises the Countercyclical Payment (CCP) compared to what would have been received under the '02 bill. A decrease in the Target Price reduces the potential CCP. The Target Price for cotton is lowered 1.15 cents from 72.4 to 71.25 cents per pound. The Target Price on peanuts is unchanged. The Target Price for soybeans and wheat is increased, corn is unchanged.
- DCP payments are received on Base Acres. Under the 2002 farm bill, payments were made on 85% of Base Acres. Under the 2008 bill, DCP will be received on 85% of Base for 2008 and 2012 crops but 83.3% for 2009-2011 crops.
- A farm must have at least 10 acres of Base to be eligible for payments. This was to begin with the 2008 crop year but due to late passage of the new bill, was delayed until the 2009 crop. This “10 acre rule” does not apply, however, to limited resource and socially disadvantaged producers.
- DCP payments limits are unchanged. The limit on DP is \$40,000 per person or entity total for all crops except peanuts. The limit on CCP is \$65,000 per person or entity total for all crops except peanuts. Peanuts maintain separate \$40,000 and \$65,000 limits.
- Under the 2002 farm bill, the limit on LDP and Loan Gains was \$75,000 per person or entity. This limit could be effectively by-passed, however, by use of market certificates. Under the 2008 farm bill, there is no longer a limit on LDP and Loan Gains.
- A 22% partial payment of DP can be received in December prior to the crop harvest year. The remainder is received in October of the harvest year. A 40% advance/partial payment of projected CCP is received not earlier than 180 days after the beginning of the marketing year. The remainder is received in October of the year after harvest.

Direct Attribution. As just discussed, provisions of the DCP program are tweaked somewhat but largely the same as under the '02 farm bill. The most significant change from 2002 is not in the program itself or Payment Limitations. The most significant change regards the guidelines for payment eligibility.

Under the 2002 farm bill, payment limits could effectively be doubled using the “3-entity” and “spouse” rules. These provisions have been eliminated.

Eligibility for payments is now determined by “direct attribution”—meaning that a person or entity receiving payments must qualify by having a contribution in production and/or management of the farm.

Persons or entities must complete the necessary paperwork to document their attribution before they will be allowed to enroll in the DCP program and receive payments. Persons or entities are encouraged to begin this process as soon as possible.

Adjusted Gross Income (AGI). For Marketing Loan and DCP payments, a person or entity is ineligible if the average AGI from farming is greater than \$750,000 or if the average non-farm AGI is greater than \$500,000. For 2009 benefits, AGI will be the average of 2005-2007. As with Direct Attribution, the AGI test must be determined before payments can be received.

ACRE. The Average Crop Revenue Election (ACRE) is an alternative to the DCP program. Essentially, this program offers a “safety net” based on planted acres rather than Base Acres. ACRE payments are determined by both price and yield and the income guarantee is based on state level yields, the farms historical average yields, and national average price.

This program was not designed for the Southeast and was promoted by farmers and legislators from the mid-West. We do not think it will fit most Georgia farms with cotton and peanuts but it may fit some and may be worth consideration. We have shifted acres into corn and soybeans in recent years and some producers are currently planting crops significantly different than crops for which they have Base.

Analysis will be conducted and information released as it becomes available. Regulations and guidelines on some provisions of ACRE have not been released yet. Signup will not likely begin until sometime this Spring. Farms already enrolled in DCP for 2009 would likely be allowed to enroll in ACRE instead if they wish.

ACRE is a one-time election for 2009-2012, 2010-2012, 2011-2012, or 2012.

Contributions by:

Don Shurley, Extension Economist

Phillip Roberts, Extension Entomologist

Changying Li and Andy Knowlton, Biological and Agricultural Engineering

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

Edited by: A. Stanley Culpepper, Extension Agronomist-Weed Science

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.