

#### **Alabama Cotton Shorts**

February 17, 2020



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**Situation.** Ginning has all but concluded in the state. The final numbers are likely to wind up at about 978,000 Alabama bales assessed in the USDA Classing Offices in Macon, GA, and Memphis, TN. Since the average ginned bale weight is between 490 and 495 lbs per bale, that calculates to a statewide yield of about 940 lb per acre. Below are the summary reports from the USDA Macon and Memphis Classing Offices.

USDA Macon Classing Offi	ce 603,12	2 bales (2/14) 16 Gins	
Color Grade 31 or better	38.2%	Avg Micronaire	4.48
Avg Leaf	3.24	Avg Strength, g/tex	29.80
Avg Staple	36.14	Avg Uniformity	81.09
Extraneous	Matter: Ba	rk 3.5% Grass 0.2%	
USDA Memphis Classing C	Office 368,	,371 bales (1/17) 13 Gins	
Color Grade 31 or better	41.3%	Avg Micronaire	4.21
Avg Leaf	3.43	Avg Strength, g/tex	29.54
Avg Staple	37.12	Avg Uniformity	81.07
Extra	neous Matt	er: Bark 0.6%	
USDA Macon, Memphis C	lassing Off	ices 977,044 bales (2/14)	29 Gins
Color Grade 31 or better	39.3%	Avg Micronaire	4.38
Avg Leaf	3.33	Avg Strength, g/tex	29.69
Avg Staple	36.51	Avg Uniformity	81.08
Extraneous	Matter: Ba	rk 2.6% Grass 0.1%	

The National Cotton Council recently released a survey of expected plantings for 2020. The U.S. total is 12.977 million acres. Alabama is projected at 513,000 acres. Alabama BWEP acres for 2019 was 510,347 ( Brown)

**2019 AU OVTs**. Results from the AU Experiments Station small plot trials are now available. The report can be accessed at:

https://aurora.auburn.edu/bitstream/handle/11200/49692/2019%20Performance %20of%20Cotton%20Varieties%20in%20Alabama.pdf?sequence=1&isAllowed =V

**2019 AU On-Farm Trial Results.** The official large scale, on-farm AU cotton plots are reported at the following link:

https://aurora.auburn.edu/bitstream/handle/11200/49700/Auburn-ACES-Onfarm%20Cotton%20Trial%20Results\_2019.pdf?sequence=1&isAllowed=y

**Beltwide DD-60 Trial**. Tyler Sandlin and I participated in a Beltwide experiment to re-examine the age-old accepted cotton growth and development calendar.

We conducted trials at Brewton, Shorter, and Belle Mina. Included at each were an early, mid, and full season variety, and we monitored growth progression on a regular basis. Below are the results.

Most interesting is the time frame from 1<sup>st</sup> bloom to cutout, the latter being defined as 4 NAWF (4 nodes above white flower). The concept of "cutout" suggests that the progression of fruiting and flowering is moving up the plant so rapidly that there will be few to no additional harvestable bolls set. Stated differently, at cutout the plant is about out of positions to set meaningful yield. The cutout date at Brewton was actually about 85 days rather than the measured 91. I missed a week of plant mapping. At 91 DAP (days after planting) the crop was 2 to 3 NAWF, so it was a few days beyond true cutout. Yields were quite good, particularly at Brewton. The point is that we made a very good crop with only 4 weeks of bloom.

At the Shorter location just before harvest, I counted possible fruiting sites and harvestable bolls in DP 1646 B2XF. The number of bolls to fruiting sites was only 43 percent and yet the yield was 1,399 lb/A. Prior to and until the first weeks of bloom, it is common to see high square and fruit retention, probably in the range of 95 percent (in the absence of plant bug damage). As the season progresses final retention falls off considerably in the upper plant canopy. In even the highest yielding situations in our environments, final boll retention is likely no more than 55 percent. (Brown)

Belt	wide DD-60 Trial								
				DAP			% Open	147	DAP
Brewton	Variety	Emerge	1st Square	1st Bloom	Cutout	1st Crack B	126 DAP	Lint, %	Lint, lb/A
Planted 5/8	DP 1612 B2XF	5	37	54	91	111	54.5	38.6	1,721
Harvested 10/2	DP 1646 B2XF	5	37	58	91	111	69.8	44.1	2,175
	DP 1851 B3XF	5	42	58	91	119	51.0	41.2	1,966
Shorter							119 DAP	169 ]	DAP
Planted 5/29	DP 1612 B2XF	5	40	58	<b>7</b> 9	111	72.5	39.1	1,319
Harvested 11/14	DP 1646 B2XF	5	43	68	> 82	> 111	47.5	42.7	1,399
	DP 1851 B3XF	6	44	68	>82	> 111	47.5	42.7	1,578
Belle Mina							126 DAP	152 1	DAP
Planted 5/2	DP 1612 B2XF	8	33	67	96		65.0	41.5	1,529
Harvested 10/1	DP 1646 B2XF	13	33	67	96		60.0	44.6	1,539
	DP 1851 B3XF	13	33	68	96		32.5	46.3	1,568

Cotton Thrips Control for 2020. Thrips migrated from wild hosts unusually late in 2019 and in extremely high numbers. The peak movement into cotton occurred from mid-May to early June. This late movement was likely the result of an extended May to June drought that caused wild host plants to dry down rapidly following abundant moisture going into the spring season. In other words, a heavy buildup on wild hosts was followed by drought, which caused thrips to search for a better host. Seedling cotton was that host. Our later planted cotton encountered this heavy pressure and was at the most susceptible stage (1 to 5 true leaves) when the thrips migrated from wild hosts. Earlier planted cotton also had heavy thrips damage in some areas.

I visited earlier planted fields under extreme drought that received economic damage from thrips even at the 5<sup>th</sup> to 9<sup>th</sup> true leaf stage in 2019. Some fields required two or more foliar thrips sprays on top of an at-plant seed treatment. Seed treatments or in-furrow sprays are still wise investments, even though they have lost some of their effectiveness against thrips due to resistance. Multiple foliar sprays with acephate can aggravate spider mites, especially under hot, dry conditions as occurred in 2019. In the future, I would not advise more than one foliar application of acephate on seedling cotton, and that application should be timed prior to the 2<sup>nd</sup> or 3<sup>rd</sup> true leaf. Other options for foliar sprays

that should be less likely to aggravate mites are Bidrin, dimethoate, and Radiant.

Some growers may want to consider going back to the granular insecticide aldicarb (sold under the trade name Ag-Logic) on some acreage in 2020. This may be especially true where nematodes or spider mites have been a limiting problem in recent years. Aldicarb has always provided good to excellent control of spider mites. CNI (formerly ChemNut) has been the primary distributor for Ag-Logic in recent years, but it is my understanding that Helena will also be a supplier in 2020. The usage range for aldicarb on cotton in the past was 3 to 5 lbs of granules per acre. When used in this range it should perform as good as or better than seed treatments, which would not be needed when using aldicarb. In talking with consultants in Georgia who have used this product in recent years, they have been pleased with the 4 or 5 pound rates. Three pounds is adequate, but if there is a mistake in calibration there is no margin for error.

The thrips prediction model, developed by entomologists at North Carolina State University with input from other southeastern cotton entomologists, was highly accurate in predicting the late thrips pressure in 2019 and will help us be more prepared for this pest in future years. This predictive model can be accessed on the web by going to: https://climate.ncsu.edu/cottonTIP

To get a thrips prediction for your farm, just drop a pin on a location and give an expected planting date. The closer you are to the actual plant date, the more accurate this model is. Rather than selecting several field sites on a farm, I would access the model about once each week during the planting season for one location or field. The model will obtain your local weather conditions from the nearest weather station. By knowing the local rainfall and temperatures, the model can predict how fast the wild hosts are drying down and the growing conditions for the seedling cotton. This information may alert growers as to when a foliar overspray for thrips would be beneficial, even before the thrips damage and crinkled leaves are visible. (Smith)

**Auxin Trainings.** Below is the schedule for various Auxin Herbicide / Technology Trainings planned for the coming months. (Li)

## **2020 Auxin Trainings**

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18	Escambia	9:30am	Grace Fellowship
19	Dallas	1pm	Black Belt Research Station
21	Shelby	10am	Harpersville Community Center
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10	Autauga	9:30am	Autauga County Extension Office
11	Macon	10am	EV Smith Research and Extension Center
12	Henry	10am	Wiregrass Research and Extension Center
12	Geneva	6pm	Ketchem Restaurant
16	Pike	10am	Cattleman Building

## **UGA Data on Fruit Contribution by Node and Position – the Cotton Money**

**Tree**. Dr. Jared Whitaker, UGA Extension cotton agronomist, collected year-end data on DP 1646 B2XF from three experiment sites in South Georgia in 2019. Yields at the sites were approximately 800, 1,200, and 2,200 lb lint per acre. Dr. Phillip Roberts, UGA Extension Entomologist, compiled the data in pictorial form as presented below. This is exceptional work!

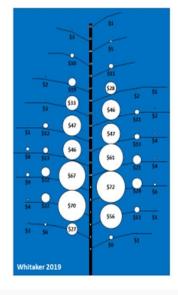
It's interesting to see the contribution of bolls at each node and position. Over 90 percent of the crop is harvested from nodes 15 and below, and bolls at the 1st and 2nd positions also contribute 90 percent of the final yield. These data should significantly affect our thinking about season-end management.

The comparison of fruiting patterns from 2005, research conducted by Dr. Craig Bednarz with DP 555 BGRR, and 2019 suggests that the current trend is to make fruit earlier. Clearly, DP 555 BGRR had capacity to fruit over a long period and was truly a full season cotton. That being stated, today's varieties have significant yield, quality, and technology advantages over a variety that was "king" in the early 2000s. (Brown)

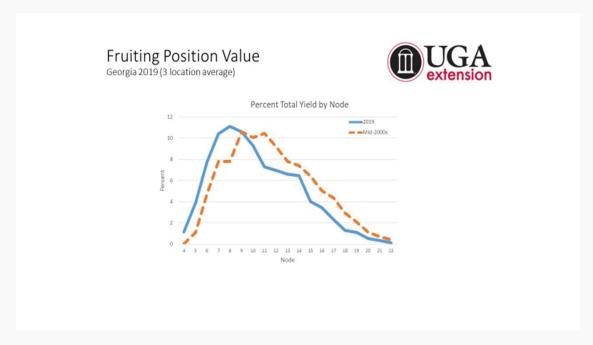
# Fruiting Position Value

Georgia 2019 (3 location average)

Fruiting Location	Value
1 <sup>st</sup> Positions	72%
2 <sup>nd</sup> Positions	18%
3 <sup>rd</sup> Positions	5%
Vegetative	5%
Vodes ≤10	60%
Nodes 11-15	31%
Nodes ≥ 16	9%







A Report about Hail Damage and Recovery. A severe hail storm devastated several hundred acres of cotton in Cherokee County in Northeast Alabama on June 27, 2019. The cotton plants were completely defoliated, most of the terminals were broken off, and stems were badly beaten and scarred. Growers had to make a decisions and make them quickly: Do we leave the cotton and hope for the best, or try to destroy the cotton and replant soybeans?

The decision on whether to destroy the cotton and replant soybeans after hail damage depends on several factors: the date of the storm; the severity of damage; type of insurance; whether the cotton is irrigated or non-irrigated; and where the grower is located. There are numerous "if's" and questions surrounding such decisions. If a grower has wind and hail insurance which cover losses and damage, the decision to abandon the cotton crop and plant soybeans is much easier. The earlier injury occurs, the more time for recovery. It's common to see considerable growth and recovery after 3 weeks or so. While such damage delays the crop, it has time to recover depending on the calendar and latitude. With shorter seasons in North Alabama, there is often less time to fully recover, again, depending on the date. Time for recovery and post-injury yields are greater in the more southerly parts of the state.

Assuming a late May or June storm that leaves sufficient bud and terminal growth, it has been our experience that generally it is more economic to leave cotton and not replant to soybeans. Even in North Alabama, cotton can commonly yield between 400 to 600 pounds per acre after a hail storm late into June if there are axillary buds for cotton plants to develop more new terminals and fruiting branches.

Cherokee County farmer Rich Lindsey left his hail-damaged cotton (see photos) and it yielded 673 pounds per acre with premium grades. The images were taken on June 28, July 15, and August 1. Those who replanted soybeans nearby experienced challenges eliminating the cotton (tillage is probably the surest way to destroy existing cotton), produced bean yields ranging from 17 to 13 bushels, and were no doubt disappointed.









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### **About the Alabama Cotton Shorts Newsletter**

Alabama Cotton Shorts is a newsletter designed to keep cotton producers in the know. From planting dates to crop inputs—there are many factors to consider. The Alabama Cooperative Extension System is dedicated to providing science-and research-based information, derived from field experience and observations. A team of Extension specialists are working to provide Alabama farmers with timely information throughout the growing and harvest seasons.

By subscribing to the newsletter you will receive pest updates, weed management suggestions, market updates, industry news, and other information. Specialists are making field observations and reporting their findings in hopes of helping producers make more informed choices in the field.

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