UNIVERSITY OF GEORGIA EXTENSION

UGA Cotton Team Newsletter
July 2023

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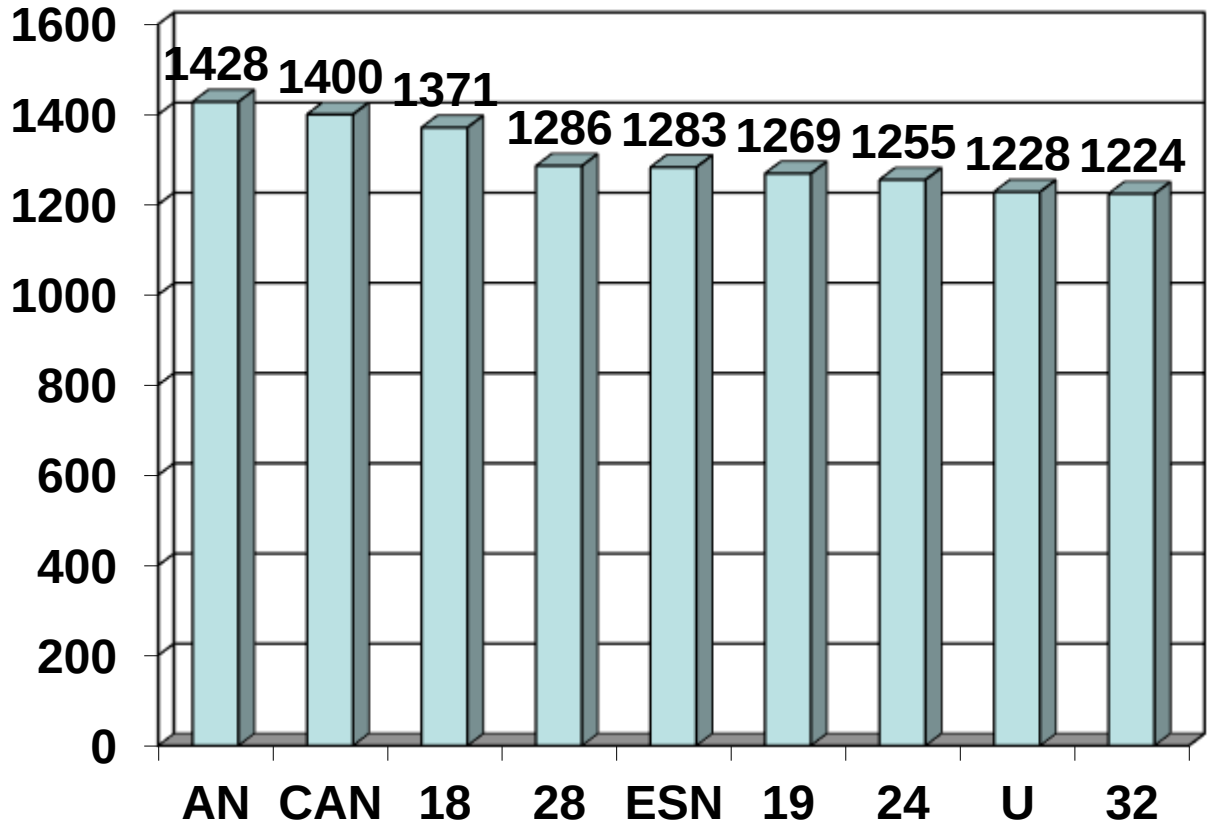
Replacing Nitrogen and Potassium after the June "Red Rains" (*Glen Harris*): You may have seen an article I wrote in late June for the Georgia Cotton Commission (you can still find it under "news" on their website georgiacottoncommisssion.org). I talked about the heavy "red rains" we got in June and how to approach sidedressing with nitrogen and the need (or lack of need in this case) of replacing potassium. Now here we are a week and half later and the rains have let up for the most part. A lot of cotton looks still looks "yella" (translation = yellow colored leaves) though. Do I replace some nitrogen and potassium that may have leached out ? Good question. And just as an agronomist should answer any question, the answer is "it depends". How sandy is your subsoil? How much rain did you get? What kind of rain did you get? A fast "runoff" rain or a slow "leaching rain"? How much nitrogen and potash did you apply preplant?

I believe a lot of this "yella cotton" is still recovering from being waterlogged or saturated. If you sidedressed before all the big rains in June then you might consider replacing about 30 pounds of nitrogen per acre now, especially on your sandiest land (and as long as you soil apply it prior to the third week of bloom). And what is the best source of nitrogen to sidedress cotton with under our current conditions? ? Are liquids better than solids? I get these questions all the time and there is not a real clear answer. It reminds me of cotton varieties, i.e. we have a lot of good ones but overall some may be better than others. Also, what works the best in one area or operation may not work the best in another. I included the graph below in an article here in 2018. I think the data is still relevant today. The two comments I usually get when I show this data set are 1) did 32% do poorly because it has no sulfur? The answer is no, I balanced the study with sulfur (so all plots got sulfur) and 2) did urea do poorly due to volatilization? The answer is no, we irrigated soon after the sources were applied. However, I will say that in other trials urea ended up in the middle of the pack and sometimes even more toward the top of the list.

Cotton Yield (lb lint/a) **4 "Site Year" Average (2013-2014)**



What about sidedressing with potassium? If the full amount of potassium as recommended by soil testing was anytime around planting, then sidedressing K with N should not be necessary. Despite what you may have heard, potassium is not as mobile in soil as nitrogen. Yes, it may have moved down in the profile and we might not have a good deep root system. And again, on my sandiest land with a sandy subsoil or my "deep sands" I would consider replacing some K that may have leached. But on a good "Tifton pebbly loam" I believe that the potassium you put on at planting is still in reach of your cotton roots and they will still be able to get it. Also remember, if it looks like we are coming up short on potassium around peak bloom (4th week of bloom) we can still foliar feed K during the 5th, 6th, 7th and even as late as the 8th week of bloom (that's' my cutoff though, after 8th week of bloom no more foliar).

And finally, don't forget about boron. Our official UGA recommendation is to apply 0.5 lb B/a as foliar between first square and first bloom (the same window for sidedressing N). There are a number of products that recommend a lot less boron than this. For example, 6 oz/a of a 5 % B material only gives you 0.025 lb B/a. This would be fine if it was 10 or 20 times better than other products. But it is not. In recent field trials its effectiveness is very close to the untreated check. There are also many things added

to boron fertilizers with claims they make the B get in the plant faster. Actually, this may be true in some cases. However, boron by itself gets into the plant very well on its own, thank you.

The Flowering Phase of Crop Development (*John Snider, Camp Hand, and Josh Lee*): Sometime between now and when the next newsletter comes out, the majority of cotton in the state will be flowering. As noted in the previous newsletter, the floral bud expands rapidly the day prior to flower opening and resembles a lit candle protruding beyond the bracts (The candle phase). On the day of flowering, the bloom will open as a white flower within the first few hours after sunrise. Inside the flower there are the "male" portions of the flower called stamens and the "female" portion of the flower called the pistil. The stamens contain anthers that house pollen, and the pistil contains the stigma, style and ovary. For seeds to be properly formed, the pollen grains must first land on a receptive stigma, the pollen tube must grow through the style, and eventually deposit its sperm nuclei in the ovule. From the time the pollen is first deposited on the stigma surface to the time the ovules are successfully fertilized ranges from 12 to 24 h. The day after flowering, petals transition from white to red as the floral tissues senesce (Figure 1). The post-fertilization ovary is called a boll, and the fertilized ovules will eventually develop into seeds. Seed, with their seed coat-associated fibers, are the most basic components of yield.

If an insufficient number of seed are fertilized, the boll may abort or the number of seed produced per boll may be very low. Both outcomes could result in reductions in yield. If environmental stress limits pollen or ovule formation (during squaring) or pollen germination and tube growth (on the day of flowering), seed set can be reduced. The cotton physiology lab has been documenting yield component responses in cotton for about the last ten growing seasons, and last year was characterized by some of the lowest seed numbers per boll we've ever documented. For example, we've observed between 25 and 30 seed per boll in nearly every growing season since 2013. Last year, we saw average seed numbers as low as 20 seed per boll (at least a 20% reduction from previous years). We also experienced an extreme heat wave event in the three weeks prior to flowering that could easily explain the low seed numbers since high temperature during pollen formation is known to decrease seed set. So how did we get the second highest cotton yields in Georgia history? The answer is that we had incredibly high fruit retention, which allowed the crop to produce more harvestable bolls per unit land area than we had seen in previous years. While we can only speculate on the cause of the high fruit retention rates, we know that cloudy weather can induce fruit abscission, whereas sunny weather promotes fruit retention. The heat wave event I mentioned previously was also associated with low rainfall and presumably, low cloud cover until early flowering. As a result, my best guess is that low cloud cover for an extended period of time going into flowering promoted high fruit retention rates, which offset reductions in seed number per boll. What this all means is that reproduction and yield formation in cotton are complicated, and no two growing seasons are ever alike. An additional layer of complexity associated with cotton is that it is an indeterminate crop, so different fruiting sites will flower at different times during the growing season and experience different conditions. Regardless of this complexity, we commonly use white flowers as key indicators of crop development.

The **first flower** stage of crop development is when 50% of the plants in a given field have produced their first white flower (~60 days after planting). The timing of first flower is heavily governed

by cultivar, but high temperatures can produce an earlier first flower date, and low temperatures can delay first flower. Once the plant starts flowering, it will direct resources into new boll development, which prevents root growth. As a result, efforts to "stress" the plant into growing deeper roots are misguided when directed at post-flowering growth stages. Additionally, the number of mainstem nodes above the uppermost, first position white flower (NAWF) at first flower can be predictive of growth potential. For example, if a plant has a low number of NAWF (i.e. 3 to 5) at first flower, it has limited potential for new growth. Tracking NAWF after first flower can also be informative. For example, a steady decline in NAWF after first flower is indicative of high fruit retention., whereas high and stable NAWF after first flower would likely be due to poor fruit retention.

Peak bloom is just what it sounds like. This is when the rate of white flower production per day is at its peak. This typically happens in the two to four weeks following first flower. The exact timing of peak bloom will be governed by the growth potential of the crop. Plants with more aggressive growth will reach peak bloom later than plants with limited growth potential due to stress or those that are managed more aggressively with PGRs. As a result, the timing of peak bloom would be more strongly governed by production practices and production environment than the timing of first flower. Since peak bloom also corresponds to the period of peak demand for resources (nutrients, water, carbohydrates, etc.), water and nutrient deficiencies can appear rapidly during this growth stage. See other articles on nutrient and water management in this newsletter, and respond accordingly. Since the cotton crop naturally sheds nearly 60% of its fruit, and bolls are most likely to shed in the days immediately following flowering, one can expect to see peak boll shed soon after peak bloom. This occurs even in the absence of stress, but can be exacerbated when combined with additional stresses, so hopefully growers have taken efforts to mitigate stresses before peak bloom hits. In the next newsletter, we'll discuss boll development in more detail and discuss cutout.

Figure 1. Image showing reproductive structures ranging from the pinhead square stage to a post-anthesis boll with the capsule wall removed (Photo by Josh Lee).

Calibrating Nitrogen Side-Dress Applicators (*Simer Virk*): Considering where we are in the season, most growers are already applying or getting ready to side-dress nitrogen in cotton. Nitrogen is one of the important nutrients in cotton and therefore one of the important points I would like to emphasize is to properly calibrate the application equipment – whether using boom sprayer or side-dress applicator – to verify that the correct nitrogen rate is being applied. Calibrating nitrogen applicator is very similar to calibrating a boom sprayer but we have to account for the density difference between the water and the fertilizer solution. Liquid fertilizers are typically heavier than water so the actual application rate (gallons per acre, GPA) in case of liquid fertilizer applications can vary greatly, especially at higher flow rates. Therefore, we need to use an adjustment factor when using water to calibrate liquid fertilizer applicators. Adjustment factors for some commonly used nitrogen sources and how to use them for calibrating a liquid fertilizer applicator was recently covered in a blog post, which can be accessed here: https://site.extension.uga.edu/precisionag/2023/06/calibrating-liquid-fertilizer-applicators-using-water/

There was also a question about if spot-on meter can be used for calibrating nitrogen side-dress equipment. Yes, spot-on meter can be used to calibrate any liquid fertilizer application equipment, given the target flow rate (which can be calculated using the sprayer calibration formula provided below) is within the measuring range of the meter. Model SC-1 spot-on meter is good for flow rates up to 1 GPM and model SC-2 is best for flow rates up to 2.25 GPM. For nitrogen applicators with single drop per row, the nozzle spacing will be equal to the row spacing (i.e. 36 or 38 inches) and for two drops per row, the nozzle spacing will be half of the row spacing (i.e. 18 or 19 inches) in the formula below. Detailed procedure for using a spot-on meter can be found here: https://extension.uga.edu/publications/detail.html?number=C1252

$$Flow\ Rate\ (GPM) = \frac{Application\ Rate\ (GPM)\ \times Speed\ (mph) \times Nozzle\ Spacing\ (in.)}{5940}$$

Pesticide Applications with Spray Drones (*Simer Virk*): Given the significant amount of rain we have had in the last few weeks, there have been some queries about using spray drones for post-emergence herbicide or plant growth regulator (pix) applications in cotton. Here are few points to remember and consider if planning to use a spray drone for pesticide application in cotton:

- First and foremost, I hope you have all the licenses and certifications in check to legally fly and apply pesticides with the spray drone. Detailed information about these can be found at https://www.faa.gov/uas/advanced_operations/dispensing_chemicals.

- Regarding labels, at this time if a pesticide has been approved for an aerial application, it can be applied with a spray drone by following the similar application (spray volume and droplet size) requirements listed on the label. For most pesticide labels, remember that the minimum spray volume requirement for aerial application is 2 GPA.

- Most spray drones come equipped with standard flat-fan 01 or 015 XR nozzles that produce tremendous amount of fines at any pressure. One of the things I would highly recommend is to change them with air-induction or coarser-droplet nozzles (such AIXR or Airmix) to minimize spray drift concerns. If using newer drones like DJI T40 which has the option to select droplet size, consider selecting medium to coarser droplet sizes again to mitigate spray drift concerns and maximizing the potential for spray droplets to reach within the crop canopy.

- Make sure to perform some sort of swath testing to determine an effective swath for your drone type and model using the application parameters (height, volume, speed, etc.) that you are planning to use for most applications. Do not use the maximum swath, speed and height options just to cover more acres.

- Flying height is directly related to the spray swath but only up to a certain height. Note the optimal height range (usually 5 to 10 ft) provided by the drone manufacturer and try to remain within that. Do not fly too low (less than 5 ft) to avoid streaking and too high (more than 10 to 12 ft) to prevent spray drift.

- None of the spray drones available in the market today have any sort of agitation in the solution tank so be careful about tank-mixing any products that can possibly clog the nozzles or seize the pumps.

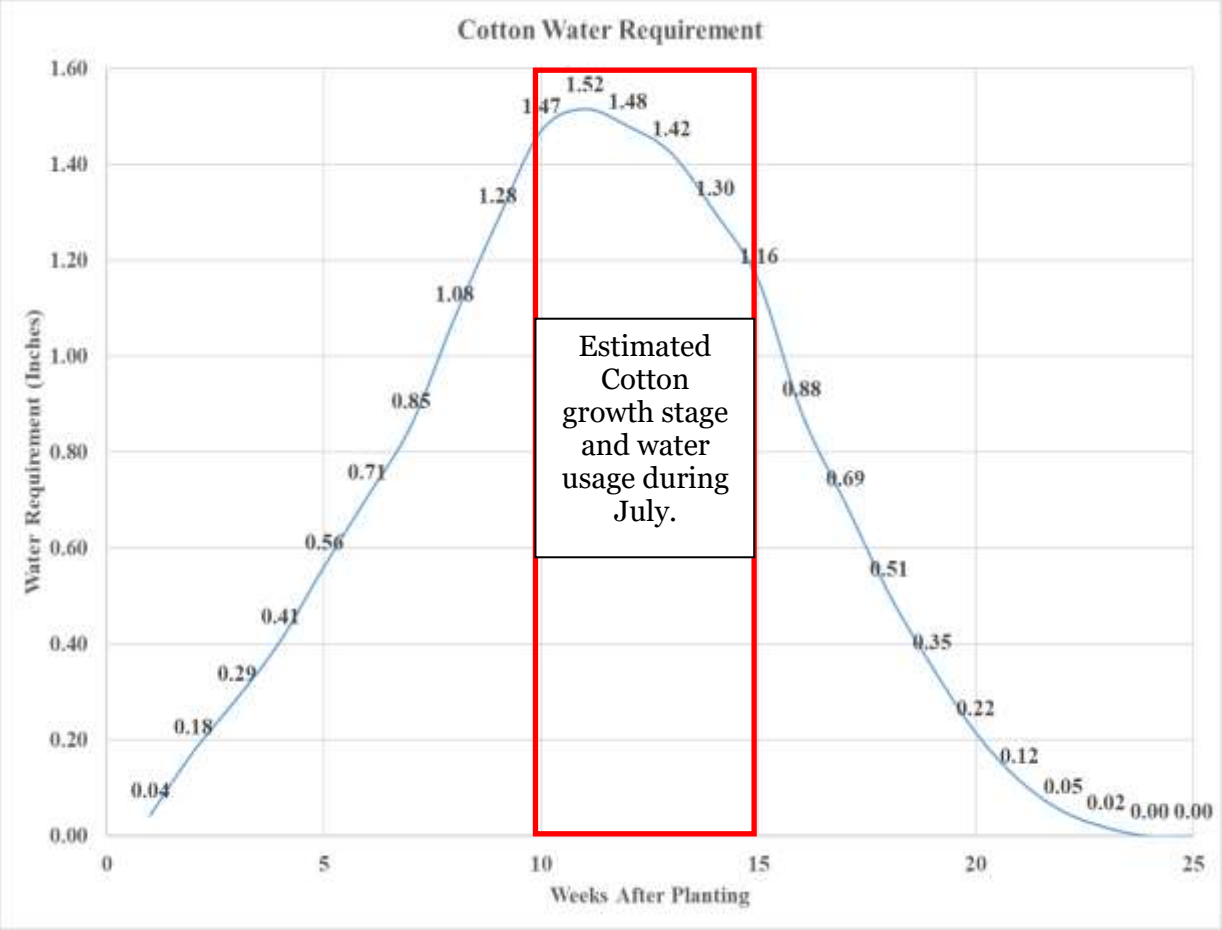
July Mid-Season Cotton Irrigation Considerations (*Jason Mallard, David Hall, Phillip Edwards, Daniel Lyon, Hannah Grubbs, and Wesley Porter*): Every year brings a significant challenge. We were cooler and wet throughout the early part of June. In some areas we received significant rainfall throughout the middle portion of June with storms that caused significant damage to crops and equipment. While, we felt like we were saturated, it has all of the sudden turned very hot. While, the cooler weather and rainfall are always welcome and appreciated, it kept some of our younger crops, specifically, cotton and peanut, in saturated conditions through most of June and very likely hindered deep rooting development. Now that we are getting hot and dry, and are moving into peak water demand for cotton and peanut we need to ensure we are staying on top of our irrigation requirements. Since we may not have as deep of a rooting system, we may need irrigation more frequently than we typically do. One tool to use is the UGA Weather stations to see data like daily evapotranspiration. The evapotranspiration rates during the end of June were amazingly high. Just pick a site and enter a timeline on the water balance tab. It should be noted that the weather station reported Evapotranspiration is not direct crop water usage. To obtain current crop water usage ET must be multiplied by the current crop coefficient. This is how the UGA Extension Checkbook method was developed and how the SmartIrrigation Scheduling Apps work in real time. The Checkbook was created based off historical ET rates and crop coefficients, therefore there is a good chance the water being applied may be insufficient or perhaps slightly excessive. Please keep this in mind when irrigating crops, especially during hot, high west winds and low humidity environments.

While the Checkbook is a good tool, soil moisture sensors or apps are far superior in irrigation scheduling.

Cotton that was planted during May in Georgia should be squaring by now and approaching bloom, if it hasn't already began blooming. Bloom occurs roughly 9 weeks after planting and water requirements really ramp up and approach peak demand during this time. Irrigation requirements and demand are very critical during the "First flower to first open boll" period of development. This growth stage takes place during weeks 9-17 after planting. Thus, based on when your cotton was planted, you will probably enter peak demand during the month of July. During this stage, cotton may require up to 1.5 inches **per week** or 0.2 inches **per day**. Keep in mind that the Soil Water Holding Capacity of most of our soils is around 1.0 inches/foot of soil. The crop can only access water where it has roots and of this SWHC only about 50% of it is plant available. Thus, a cotton plant with an 18-inch rooting depth will have access to 0.75 inches of water at field capacity, meaning it will require irrigation every 3 to 4 days minimum based on rainfall and irrigation efficiency during this stage. It is important not to let your cotton crop experience water stress during the flowering stage, as stress during this stage can reduce plant growth which in return can reduce the number of fruiting sites that are initiated.

The main thing to keep in mind is that these water requirements are based on a historical average and that the crop may not necessarily need or use the amount of water as shown in the graph below. If you have cooler and cloudier or more humid days, your crop may not use nearly as much as it would if it would on a hot, sunny, and dry day. The graph below should give you a good idea of your weekly water requirements through the month of July **IF** you planted between mid-April and mid-May.

If you are using sensors for irrigation you will typically notice that during July, water usage occurring from the deeper sensor depths. This usually happens pretty rapidly and unexpectantly. The ramp up in water use will occur sometime during peak bloom, usually around weeks 3-6 of bloom. It is important to monitor the crop and soil moisture moving into this stage and make sure that you do not fall behind on irrigation putting the crop into potential stress during bloom. It is very hard to replenish deep soil moisture with irrigation alone. Thus, falling behind moving into peak water usage will make it very difficult to "catch-up". Additionally, over-irrigating cotton will cause yield reductions. Thus, it is important to follow a good irrigation scheduling strategy that recommends irrigation when it is needed. For more information on irrigation scheduling for cotton contact your local UGA County Extension Agent, general water use curves can be found at: Irrigation Reference Guide for Corn, Cotton, Peanuts, and Soybeans | UGA Cooperative Extension.



Tarnished Plant Bug Infestations Above Average (*Phillip Roberts*): Yes, this is a long article but you need to read it! Tarnished plant bug infestations are above average and it is imperative that growers are scouting for plant bugs and monitoring square retention. Many acres of squaring cotton have been treated (some twice), especially west on I-75. However, we were at the Southeast Research and Education Center near Midville on Thursday June 29th and observed plant bugs and low retention on early planted cotton. Both plant bug counts using sweep nets and square loss (retention) exceeded currently recommended thresholds and the cotton was being treated with insecticide as we left the station. This is the first time Anthony Black has ever treated plant bugs since he has been station superintendent at Midville. The main point here is that plant bugs are present statewide and all squaring cotton needs to be scouted for plant bugs and treated if thresholds are exceeded. As a whole our crop is late which means it will be less forgiving to excessive square loss.

Plant bug infestations in Georgia are the highest I have seen in my career since joining the University of Georgia in 1996. During 2021 over 30 percent of Georgia cotton was treated for plant bugs and it appears

2023 will be similar if not a higher percentage of acres needing treatment unless something changes. Similar observations are being made by Auburn Extension entomologists Drs. Scott Graham and Ron Smith in Alabama. Dr. Ron Smith said 2023 is the most widespread and highest plant bug pressure he has seen in 51 seasons! Not all fields in Georgia will need to be treated for plant bugs, but all fields need to be scouted and treated if thresholds are exceeded.

Tarnished Plant Bug adult (left) and immature in bloom (right). Images by Russ Ottens and Ron Smith, ipmimages.org.

Primary damage caused by plant bugs is feeding on small squares in plant terminals. However, plant bugs may also feed on larger squares and small bolls. Plant bugs insert their needle like piercing sucking mouthparts into fruiting forms and feed on the plant juices. After a pinhead square has been damaged, it turns yellow to brown or black and easily falls from the plant when disturbed. Healthy undamaged squares will be green and firmly attached to the plant. When the square is shed by the plant, an elliptical scar where the square was attached remains. No visible damage is apparent on the outer surface of squares damaged by plant bugs. Large squares which are injured by plant bugs will often remain on the plant, however when the square blooms the flower will have warty growths on the petals and localized discoloration on the anthers. This type of flower damage is referred to as a “dirty bloom”. When scouting fields be observant for dirty blooms which would suggest you have plant bugs in the field! If you see dirty blooms use a drop cloth to scout for immature plant bugs. Plant bugs may also feed on small bolls. Excessive feeding may cause boll shed, but most often localized lint and seed damage is the result. Callous warty growths on the inner surface of the boll wall will often form near the feeding site (appears very similar to stink bug damage). We will detect damage to small bolls when checking for internal feeding injury from stink bugs.

Square shedding due to tarnished plant bug feeding (left) and a dirty bloom resulting from tarnished plant bug feeding on a large square. Images by Ron Smith, Auburn University, Bugwood.org.

Plant bugs and damage should be monitored from the time plants begin squaring through bloom. Square retention counts are often used to detect problems with plant bugs on squaring cotton. Treatment is recommended when plants are retaining less than 80 percent of small squares and numerous plant bugs are observed. Sweep nets (15 inches in diameter) are also an effective tool to monitor adult plant bugs in squaring cotton. During the first 2 weeks of squaring the threshold is 8 plant bugs per 100 sweeps. Beginning the 3rd week of squaring the threshold is raised to 15 plant bugs per 100 sweeps. Ideally, we should be monitoring both retention and plant bug adults with sweep nets prior to bloom. Our goal should be to retain at least 80 percent of 1st position squares as we enter bloom. Plants with 80 percent retention at first bloom still have maximum yield potential.

It is important that we only treat plant bugs in fields where thresholds are exceeded. Some insecticides for plant bugs will decimate beneficial insects in the field (many of our predator insects such as bigeyed bugs begin colonizing fields as they begin to square). When treating plant bugs also consider aphid populations. If aphids are present it makes sense to use a plant bug insecticide which also has activity on aphids. Plant bug insecticides which also have activity on aphids include Transform, Centric, and imidacloprid. Transform is the most consistent performer on both plant bugs and aphids and is relatively "soft" on beneficial insects. Centric also provides good control of both plant bugs and aphids but is less consistent, especially on aphids. Imidacloprid provides only fair control on plant bugs and aphids. Bidrin and acephate provide good control of plant bugs but are "hard" on beneficial insects and we generally try to delay use of these products until later in the year. Additionally, Bidrin is not labeled on squaring cotton. I have had several questions related to the use of Diamond which is an insect growth regulator that has good activity on plant bug immatures (does not control adults). In areas of the Cotton Belt where immature plant bugs are a consistent and predictable pest, Diamond is often used. Ideally Diamond would be applied as immatures are hatching. If you observe immature plant bugs consideration should be given to adding Diamond to your plant bug management program. When we have observed immature plant bugs it often occurs near first bloom. Black drop cloths are the best tool to detect immature plant bugs. During bloom our drop cloth threshold is 3 plant bugs per 6 row feet.

During recent years we have observed that early planted cotton is at greater risk of plant bugs than later planted cotton. It is especially important you scout April and early May planted cotton. Perhaps plant bugs congregate on early squaring cotton and then diffuse across more acres as more fields begin squaring. Also, be aware of surrounding habitats bordering the field. For example, we have observed higher plant bug infestations near sources of plant bugs such as watermelon plantings. Bottom line, scout and treat if thresholds are exceeded.

Cotton Aphid Management (*Phillip Roberts*): Cotton aphids are building in many areas but in general populations are behind in terms of development. I expect aphids to increase rapidly in the coming days and the naturally occurring fungus should crash populations shortly thereafter. Aphids feed on plant juices and excrete "honeydew", a sugary liquid. The loss of moisture and nutrients by the plants could have an adverse effect on plant growth. Although this stress factor can be reduced with the use of an aphid insecticide, research in Georgia rarely shows a significant yield response to aphid control. Undoubtedly there are fields each year which would benefit from aphid control, however these are rare and the decision to treat would need to be made on a field by field basis based on infestation levels and plant stress. If you decide to treat aphids be sure there is no indication of the naturally occurring fungus (gray fuzzy aphid cadavers) which will cause populations to crash within a week once observed.

Cotton aphid fungus present and aphids are crashing. Note the gray fuzzy aphids which is indicative of the fungus. Also note the aphid cast skins which are white in color; aphids molt or shed their exoskeleton (skin) as they grow.

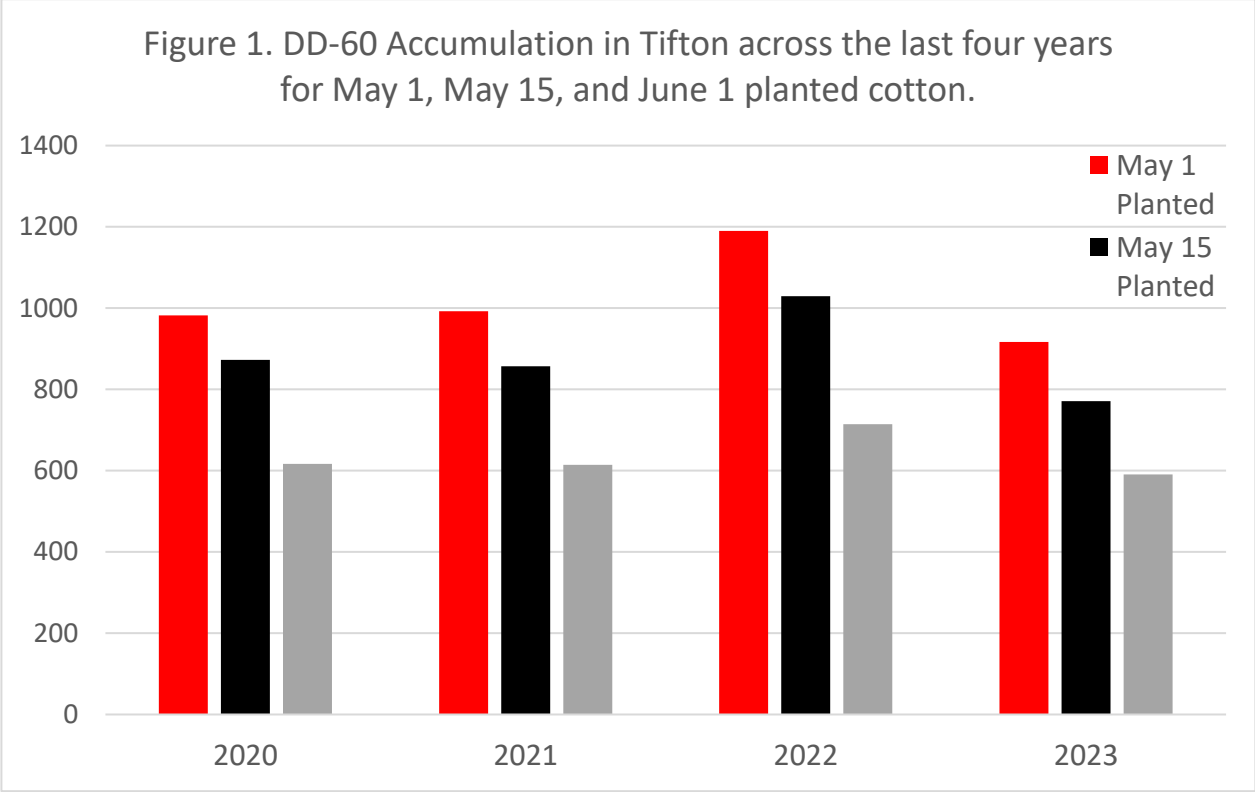
Earliness and PGR Considerations for 2023 (*Camp Hand*): A couple of weeks ago I wrote a newsletter article for the Georgia Cotton Commission that can be found on their website. A lot has changed since I wrote that, so below are my thoughts on our current situation.

As we sit here in the first week of July, looking back on this season it already seems like a whirlwind. We have gone from ideal planting conditions, to severe weather (tornadoes/hail), to too wet, and now to too

dry. I always wonder what people mean when they talk about a “normal year”, but I can assure you that this isn’t one of them.

Last week I was recording a podcast about PGRs with the one and only Dr. Steve Brown at Auburn University, and we began talking about the benefits of PGR applications in cotton. The two main ones that everyone mentioned were that PGRs reduce plant height, and encourage earliness. I mentioned the same ones, but Dr. Brown said, “Camp, I thought earliness was a bad word in Georgia?” In most cases I would agree with him – I want to capitalize on the long season we have and use it to our advantage. However, based on how this season has gone so far, I think we need to talk about using PGRs to encourage earliness in our 2023 cotton crop.

In Figure 1 below are DD-60 accumulation up to July 5 over the last four years for multiple planting dates in Tifton (trends are the same statewide). 2022 was definitely above average with respect to DD-60 accumulation, which led to an earlier than normal crop. 2020 and 2021 were similar years with respect to DD-60 accumulation, but in 2023 we have been lacking degree days for cotton. This should come as no shock to anyone in Georgia, as it has been extremely cool up until recently, and with all of the rain we had in June, our crop has generally been slow to grow. All of that to say for the most part, **I believe the cotton crop in Georgia is behind schedule**.



In my plot work across the state over the last three years, I have never seen a yield benefit to being extremely aggressive with PGRs. This year, with our crop being behind, it might be worth being a little more aggressive. In some research conducted by Dr. John Snider and his graduate students, they have demonstrated that an aggressive PGR strategy can help a cotton crop reach cutout about a week earlier than a more moderate PGR strategy. In a year where we are already behind, a week could make or break a cotton crop.

Another reason to consider being more aggressive with PGR applications is because of the plant bug situation across our state this year. Dr. Phillip Roberts said in his newsletter that it has been the worst and most widespread year for tarnished plant bugs in his career, and I believe him. This is the first year I've ever sprayed tarnished plant bugs in my plots, and I hope it's the last. However, if you have had plant bugs knocking fruit off of your cotton crop, you should be thinking about a more aggressive PGR management strategy. Research from the Mid-South has demonstrated that fruit loss, for plant bugs or any other reason, can result in taller plants and delayed maturity, thus leading to the need for more aggressive PGR strategies to maintain optimal plant height and still be able to finish the crop out.

Between the two points I have mentioned here, we have little room for error from here on in dealing with a late crop. I believe based on the unique situations we are facing this year, more aggressive PGR strategies may be warranted across the board. Along with the things I have mentioned here, keep in mind all of the standard decision procedures with respect to PGR applications: length of the fourth internode, variety, fertility, planting date, and if the field has a history of producing rank growth. Let the crop tell you what it needs, and be timely! As always, if you have questions, please don't hesitate to reach out to your local UGA County Extension Agent or myself.

Important Dates:

Georgia Cotton Commission Mid-Year Meeting - Statesboro, GA – July 26, 2023
Southeast Research and Education Center Field Day – Midville, GA – August 9, 2023
Southwest Research and Education Center Field Day – Plains, GA – August 16, 2023
Cotton and Peanut Research Field Day – Tifton, GA – September 6, 2023
J. Phil Campbell Sr. Research and Education Center Cotton Field Day – September 27, 2023
Georgia Cotton Commission Annual Meeting and UGA Cotton Production Workshop - Tifton, GA – January 31, 2024