UNIVERSITY OF GEORGIA EXTENSION

UGA Cotton Team Newsletter
June 2023

Articles in this month's issue include:

1. June Mid-Season Irrigation Update (*Phillip Edwards, David Hall, Daniel Lyon, Jason Mallard, and Wes Porter*)
2. From the Closed Furrow to the First White Bloom: Diseases, Nematodes, and Cotton (*Bob Kemerait*)
3. Post-planting and Spraying Considerations (*Simer Virk*)
4. Cotton Aphids and Tarnished Plant Bugs (*Phillip Roberts*)
5. Managing Late Planted Cotton (*Wade Parker*)
6. Recent Questions: Replants, Four Legged Menaces, and Early PGR Applications (*Camp Hand*)
7. Climate Outlook for June and Beyond (*Pam Knox*)
8. Staging the Cotton Crop – Continued (*John Snider, Camp Hand, and Josh Lee*)
9. Wild Radish – Are You Paying Attention?? (*Stanley Culpepper and Jenna Vance*)

June Mid-Season Irrigation Update (*Phillip Edwards, David Hall, Daniel Lyon, Jason Mallard, and Wes Porter*): The only thing that we can count on from season to season is that there are no two seasons that follow the same pattern. May of 2022 brought us some very hot and dry weather, while May of 2023 had some warm dry weather at the beginning, it actually turned cool and wet towards the end of the month. While we still have some areas in SW GA that are listed as Abnormally Dry by the U.S. Drought Monitor, we are in much better shape than we were at the same time last year. Some of the rainfall towards the end of May slowed planting in some regions, but the cooler temperatures and moisture are welcome compared to past hot and dry conditions during this time of year.

Earlier planted cotton will be moving closer to first flower by the end of June. Thus, staying on top of water requirements will become critical throughout the month of June and into July for all of the crop. Additionally, even later planted cotton may need some irrigation to ensure there is enough soil moisture available for the crop. Remember, that if there is no rainfall, the water requirements need to come from somewhere, in this case irrigation. Our Irrigation Reference Guide for Corn, Cotton, Peanuts, and Soybeans | UGA Cooperative Extension shows estimated water requirements in both days after planting and estimated growth stage, based on the physiological progression of the crop it may be better to look at the growth stage and not the DAP. Now is a good time to review the cotton irrigation schedule, determine where you currently are and decide what your water requirements are.

Cotton Irrigation Schedule				
Growth Stage	**DAP**	**Weeks after Planting**	**Inches/Week**	**Inches/Day**
Emergence	1 - 7	1	0.04	0.01

Emergence to First Square	8 - 14	2	0.18	0.03
	15 - 21	3	0.29	0.04
	22 - 28	4	0.41	0.06
	29 - 35	5	0.56	0.08
First Square to First Flower	36 - 42	6	0.71	0.10
	43 - 49	7	0.85	0.12
	50 - 56	8	1.08	0.15
First Flower to First Open Boll	57 - 63	9	1.28	0.18
	64 - 70	10	1.47	0.21
	71 - 77	11	1.52	0.22
	78 - 84	12	1.48	0.21
	85 - 91	13	1.42	0.20
	92 - 98	14	1.30	0.19
	99 - 105	15	1.16	0.17
	106 - 112	16	0.88	0.13
	113 - 119	17	0.69	0.10
First open boll to >60% Open Bolls	120 - 126	18	0.51	0.07
	127 - 133	19	0.35	0.05
	134 - 140	20	0.22	0.03
	141 - 147	21	0.12	0.02
	148 - 154	22	0.05	0.01
	155 - 161	23	0.02	0.00
Harvest	162 - 168	24	0.00	0.00
	169 - 175	25	0.00	0.00

Based on planting observations and where most of the crop is, most farmers should fall within the first square to first flower stage (or the yellow highlighted area) throughout the month of June. If you were unfortunate and did not get your cotton planted until later May or early June then you will fall into the emergence to first square stage (highlighted in red). Crop water requirements increase dramatically from squaring and flowering. From 30 days to 50 days after planting, water consumption almost doubles. Keep

this in mind as we move into middle and late June, and into early-July. Don't fall behind on your irrigation once the crop reaches squaring and into flowering. As a reminder, typically as water use increases is in late-June through July, usually so does very hot and dry weather, so bear this in mind and stay on top of your irrigation applications. Conversely, don't over-irrigate the crop as there are yield penalties for doing so. If you have been using soil moisture sensors be sure you are utilizing sensors on the probe according to how the root system has developed the root system reflect current crop water use in the profile. Root growth and water usage will dramatically increase at deeper depths as the cotton moves through squaring and into bloom during mid to late June and early July. As we move through the season we will need to be more balanced as the season progresses and root growth increases. One last consideration, top dressing all cotton and our first dose of growth regulator on aggressive irrigated growing cotton will soon or has already taken placed. Don't go into this stage with the mindset of "I'm going to hold back on the water now because I don't want it to take off". If proper growth regulator is applied, it will prevent vegetative growth as it should. If rain chances are low, irrigation will be required to get the fertilizer in the plant by irrigating it in and allowing the plant to uptake the nutrients. For further questions about mid-season cotton irrigation management contact your local county Extension Agent.

From the Closed Furrow to the First White Bloom: Diseases, Nematodes, and Cotton (*Bob Kemerait*): Weather over the past month has been cooler than expected and also frequently overcast. Both of these conditions can slow seed germination and growth development of the seedlings. Anything that reduces vigorous growth will increase the likelihood of damage from seedling diseases, particularly from *Rhizoctonia solani*. The young, succulent seedling is especially susceptible to damage from this pathogen; however, as the seedling matures the pathogen is less able to infect it. Low vigor and slow growth of the seedling unfortunately increases the window of opportunity for *R. solani* to damage and kill. Short of replanting a crop where severe stand loss has occurred, there is nothing to do to further protect the cotton crop once the furrow is closed.

As we enter June, much of Georgia's cotton crop is in that period somewhere between seedling stage and squaring. Traditionally most disease and management opportunities for cotton growers occur before the furrow is closed and once the crop approaches first bloom. Best management practices for seedling disease, Fusarium wilt, and management of plant-parasitic nematodes require that decisions are made at, or prior to, planting. More recently, growers have opportunity to manage target spot and areolate mildew with fungicide applications made at first-bloom and beyond. Often considered a "quiet time" for disease and nematode management, the period between planting and first-bloom offers opportunity improved control of both. Below are opportunities for our cotton growers:

1. **Use of oxamyl (Vydate CLV, Return XL, Vy-King 42) for additional protection from nematodes.** When cotton is between the 5th and 7th true-leaf stage, these products (17 fl oz/A) can be applied to supplement (not replace) earlier use of in-furrow nematicides. Though results from UGA studies are variable, application of one of these products is the only option for growers once the furrow is closed.

2. **Management of potassium.** *Stemphylium* and *Cercospora* leaf spot diseases cause significant yield loss in many cotton fields across Georgia each year. As Dr. Glen Harris will tell you, the secret behind management of these diseases is not additional use of fungicides (fungicides won't work for management of either disease) but by maintaining good soil fertility, especially with regards to potassium. Potassium deficiencies in a cotton plant make it much more susceptible to both diseases. *Stemphylium* and *Cercospora* leaf spots commonly occur in sandy areas of a field where potassium is more prone to leaching and where plant-parasitic nematodes are a problem. Damage from nematodes can affect uptake of potassium and other nutrients by the plant. These diseases are also more severe in non-irrigated fields during periods of drought as insufficient potassium is delivered to the plant.

3. **Early-detection of nematodes and Fusarium wilt helps for next season**. While there is very little that can be done at this point in time (other than application of Vydate CLV or Return XL as noted above), growers still have the opportunity to identify areas of poor growth in their fields and to test for both nematodes and Fusarium wilt. Careful attention early in the season allows growers to make best-management decisions in future seasons.

Diseases and plant-parasitic nematodes cost growers each season in terms of lost yield and in cost of management. Taking note from the period after the furrow is closed and until first bloom can allow growers to better protect yield and profit now and in the future. As growers look ahead, they should be prepared to decide on the possible benefit for use of fungicides to fight foliar diseases.

Post-planting and Spraying Considerations (*Simer Virk*): As we approach the end of planting across the state and shift gears towards crop management, here are few considerations for planting and spraying that can be used to maximize the utilization of ag technology and perform effective pesticide applications.

- When troubleshooting any cotton emergence issues, don't forget about the as-applied map from the seed monitor/display. Most planters today have a seed monitor capable of by-row population (and also singulation for newer monitors) feedback during planting as well as which can be accessed later. This is a valuable data that can help understand if the emergence issues are related to the planter or something else that might have occurred after planting. Also make sure to download and create a backup of your planting data as it will again be useful when analyzing and comparing yield maps at the end of the year.

- When you are finished planting, don't forget to take out the seed discs as you store the planter for rest of the year and until next season. Seed discs are more liable to get warped or sometimes damaged when left in the seed meters so it is generally a good practice to take them out and store them

properly. Some electrical hardware and/or harnesses on newer planters can also be taken out and stored properly inside until needed next year.

- For spraying, nozzle selection is one of the important components of pesticide applications in cotton. Check pesticide labels carefully for recommended minimum spray volume, droplet size and any other requirements needed to maximize pesticide efficacy. Generally, there are multiple nozzle options that meet the application requirements but try to select the one that provides the desired output and droplet size within the 30 to 50 PSI pressure range for optimal results.

- For sprayers equipped with a rate controller, remember that the rate controller adjusts flow by regulating pressure and it only works best within the operating pressure range of the selected nozzle (size and type). Avoid spraying at travel speeds which requires the selected nozzle to operate either below 30 PSI or above 60 PSI. If majority of the application is occurring below or above those ranges, go down or up a nozzle size.

- A low boom height of 20 to 24 inches from the target is desired for maintaining adequate spray overlap and application uniformity across the boom. Higher boom heights can cause streaking due to overlap issues which can even translate to reduced pesticide efficacy in some cases especially for applications at lower volumes (≤10 GPA) and/or larger droplet sizes. For new sprayers with auto-boom height control systems, adjust the system sensitivity accordingly so it doesn't cause sudden shifts in boom height with variations in soil surface or crop canopy.

- Despite the amount of technology present on the sprayer, proper calibration is important to verify nozzle output and functioning of different systems on the sprayer. Whether using traditional catch-can/jug method or a tool like "Spot-On" for calibration, make sure to catch and check multiple nozzles on the boom. Pressure differences are very common on longer booms which results in large variability in spray volume across the same boom. When possible, also try to measure pressure at multiple locations across the sprayer boom.

- Independent of the sprayer color, type, make or model, the general sprayer calibration formula provided below can be used to compute the required flow rate (gallons per minute, GPM) or spray volume (GPA) for the given nozzle spacing and application speed. This can also be used for both broadcast and banded applications, just replace the nozzle spacing with the band width.

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

- PWM sprayers are becoming more common for pesticide applications in cotton. Nozzle selection for new PWM sprayers is different from selecting a nozzle for application with traditional sprayers. Make

sure to use the nozzle selection guide or smartphone app provided by the manufacturer to find the correct PWM nozzle best suited for that application. Do not use any air-induction nozzles with PWM sprayers unless approved and stated otherwise by the nozzle manufacturer.

Cotton Aphids and Tarnished Plant Bugs (*Phillip Roberts*): Cotton aphids are a consistent inhabitant of Georgia cotton each year. 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.

Plant bugs are a sporadic and inconsistent pest of Georgia cotton. However, all fields should be scouted for tarnished plant bugs and square retention. Only treat fields for plant bugs if thresholds are exceeded, as many plant bug insecticides also disrupt beneficial insects. Sweep nets are a good tool for monitoring adult plant bugs prior to bloom. Ideally sweep nets should be used in addition to monitoring square retention. Our goal when managing plant bugs is to retain 80 percent of first positions when we enter bloom. After bloom, drop cloths are the preferred tool to monitor plant bug infestations. Drop cloths detect immature plant bugs much better than sweep nets. Black drop cloths are preferred over white as it is easier to see the immature plant bugs on the black cloth after shaking the plants. We have thresholds for both sweep nets and drop cloths as well as square retention (see Cotton Production Guide or Pest Management Handbook). 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 planted cotton, particularly when plants reach the 10-12 node stage. 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. Be aware of aphid populations when selecting an insecticide, if aphids are present consider using an insecticide which is active on both plant bugs and aphids.

Adult tarnished plant bug. Image by Russ Ottens, University of Georgia, Bugwood.org.

Managing Late Planted Cotton (*Wade Parker*): Each year, there are always acres that are considered "late planted." Everyone has their own opinion about what date actually constitutes a late planted crop. Although the actual date may vary depending up location in the state, cotton planted after the first week of June often creates the potential for reduced yields.

The entire state experienced below average temperatures and some areas received large amounts of rain in May. These two weather scenarios have resulted in many acres still needing to be planted. With temperatures warming up, grounds drying, and the insurance deadline passed (June 5th), keep the planters rolling! However, once the first week of June has arrived, here are some management practices to remember that will help growers achieve acceptable cotton yields for late planted cotton. We can advise, and growers can do everything to be proactive, but weather will be the main variable that will affect the final outcome, specifically timely rain and date of first frost.

Stand Establishment and Pest Management

Getting a good productive stand is one of the most challenging aspects of growing cotton, even in good conditions. With later planted cotton, there is very little or no time once we realize a replant is needed. If irrigation is available, apply water to enhance stand establishment, either by irrigating prior to planting to ensure quick germination or irrigating to help seedlings break through the soil surface if crusting occurs (or both). Use of a rotary hoe is fine, as long as it is done shortly after planting (3 days after planting is a good general target), but be sure that the use of a rotary hoe is done in a timely manner to ensure it doesn't do more harm than good.

With regards to pest management, it is very important to eliminate as much weed pressure as possible, control thrips, and manage foliar diseases later in the season. Thrips pressure can delay maturity and could impact yields more directly in later planted cotton, typically thrips pressure is not as high later in the planting season, but take necessary steps to reduce the impact of thrips. Be sure to take steps to reduce weed pressure and reduce the need to apply herbicide mixtures that may burn seedling cotton (as topical burn may not directly impact yields, but can delay maturity). Any management practice which helps more bolls be set, developed and harvested lower in the plant canopy will be more important in late planted cotton.

Seeding Rates

In late planted cotton, there is often a benefit to higher seeding rates. During the normal planting window, the general goal for seeding rates is to shoot for 1.5 plants per foot of row, which can usually be accomplished with 2.0 seeds per foot of row. The logic behind increasing the seeding rate is that late planted cotton has less time to develop bolls on upper and outer fruiting positions, therefore, the thicker the stand, the better the chance for a higher yield. Adjusting seeding rates upwards to acheive 2 plants per row foot could benefit yields in these later planted situations.

Earlier Maturing Varieties

The topic of switching to an "early" maturing variety is often up for debate. Many years ago in cotton production, it was common for growers to switch to an earlier maturing variety later in the planting window. During those times, this strategy could improve yields since many widely planted varieties were

later maturing. Currently, the majority of our varieties are earlier in nature and all have a shorter and earlier fruiting period. Switching to an "early" variety may provide some benefits, but the difference is not as dramatic as in the past and most of our highest yielding varieties can produce high yields even in late planted situations. The use of other in-season strategies may have more impact than just planting and "early" variety.

Plant Growth Regulator (PGR's) and Nitrogen Management

While it is important to manage vegetative growth on all cotton, a more aggressive approach to PGR's is warranted for later planted cotton. With a shorter fruiting window, the initiation of fruiting does not need to be delayed, and more vegetative growth may not have time to give a return in lint yields. Be prepared to be timely with PGRs on late-planted cotton and intiate applications earlier than you would on May planted cotton. Increased rates and decreased time between applications can enhance earliness.

Cotton growth and development can also be managed by applying 2/3 of the recommended nitrogen to later planted cotton. If a grower was planning to apply 90 lbs./A of total nitrogen, 55-60 lbs./A could suffice; of course this can be adjusted for soil type and variety. A well-timed PGR program and reduced nitrogen will reduce overall vegetative growth and may help the plant retain and develop more earlier set fruit.

These are not all of the variables to remember when it comes time for late planted cotton, but hopefully it will give you a good guide and talking points as growers ask the most common questions this time of year, "Is it too late to plant cotton and what do I need to do make a crop this late?"

Recent Questions: Replants, Four Legged Menaces, and Early PGR Applications (*Camp Hand*):

May 2023 was different for Georgia growers compared to the last few years. Historically, it has gotten hot and dry towards the middle to end of May, and that did not happen this year. It stayed relatively cool and rainfall was more frequent than usual – good in some cases and unwanted in others. The frequent rainfall was just what the doctor ordered for a lot of people, but there were some that stayed wet and weren't able to get in the field. Because of the cool and wet conditions in May, our crop is off to a slower start than usual. However, with some heat and sunshine we will be off to the races.

A few things I have been getting calls about lately:

1. Replants – Our conditions for stand establishment in May were as good as anyone could ask for. However, as we are entering the last bit of our planting window I am getting some questions about replanting for one reason or another. At this point, it's do or die time. In dryland, if you don't have sufficient moisture, I'd have a hard time suggesting someone chase moisture on a replant. For irrigated production, at this point it is a gut decision. However, identifying and remedying the reason for needing to replant prior to replanting is of the utmost importance prior to pulling the trigger. Which leads me to my next point…

2. Deer – I have gotten a lot of calls about deer damage in cotton this week, and I have even seen a lot in the cotton we have planted around Tifton. Deer have become a recurring issue in cotton fields, so if you are a deer hunter and are reading this, the bag limit on deer each season is 12 total, with the limit on antlered deer being 2. **If you are a deer hunter and are letting does walk in heavy production ag areas of Georgia, you should consider fulfilling your limit!!!** The calls this week have been around replanting due to deer damage. As long as the deer has not bitten the cotton off below the cotyledons, then we still have a chance. However, they will likely come back and keep eating what regrows. Additionally, if you replant due to deer eating your seedling cotton, they will likely come and eat the fresh seedlings a few weeks after emergence. So what can we do? I hear of a lot of deer repellents being utilized in cotton that are sprayed on the foliage, and my experience with these products is minimal. However, I have seen them buy some time for the cotton to get into bloom – now, these sprays were frequent and likely cost prohibitive, but deer damage was reduced… until we stopped spraying, and then the deer started eating again (yes, even at bloom). All that to say, I have seen some of the marketed deer repellents work – try them on a limited basis if you are having significant deer issues.

3. Early PGR applications – On some of our early planted cotton I have started receiving phone calls about PGR applications. Keep in mind as you make PGR decisions the field history and the responsiveness of the variety you planted. Some of our varieties are a little easier to reign in than others, but what is most important is the timing of application. I.e. if you need to apply 12 oz/acre of a 4.2% mepiquat chloride product today, and don't do it for another week, then it likely won't be as effective. The major benefits of mepiquat chloride are plant height reductions and hastened maturity. Thus, extremely aggressive programs should be reserved for later plantings (to hasten maturity). Keep this in mind for cotton planted this and next week, as Wade mentioned in his article.

I hope everyone finishes out planting without any trouble, and as always, if you have questions please reach out to your local UGA County Extension Agent. They, along with the UGA Cotton Team, are here to help!

Climate Outlook for June and Beyond (*Pam Knox*): We are starting June relatively dry with seasonal temperatures. Next week, I expect to see cooler and wetter than normal conditions. After that, a pattern shift is likely to bring warmer than normal temperatures for the rest of June and well into July. Rainfall will be variable but should increase by mid-June. So far there is no sign that a drought will occur, although of course there will be some dry periods. NOAA's prediction through the end of August is for the average temperature to be warmer than normal throughout the Southeast. Precipitation is also expected to be wetter than normal, which is good for plant growth but could increase the likelihood of some fungal diseases.

El Nino is not here officially yet, but appears to be coming on strong, and I expect to see it declared in the next month or two. Some climatologists are already pointing to the current pattern of high pressure in the northern states and an active storm pattern across the South as an El Nino signal, but that pattern is not likely to last, so I do not put too much credence in it. However, if the El Nino does become established soon, we are likely to see a wetter than usual fall, especially late in the season if the winter pattern becomes established early. This may impact your harvest activities. Make sure you are watching for dry periods to get your crops out. This is probably not going to be a year when you can leave your crops in the field for a long time without losing quality.

The tropics are expected to be near normal in number this year. The El Nino would normally suppress the development of storms, but very warm sea surface temperatures in much of the Gulf of Mexico and the Atlantic Ocean will provide ample energy for storms that do form to develop. They could spin up pretty quickly, so you will need to keep an eye on the tropics, especially in fall as harvest approaches. Hurricane Michael formed in a year when an El Nino was developing, although we are not likely to see a repeat of that storm anytime soon. We have already had an unnamed subtropical storm and TS Arlene, which developed in the Gulf but did not last long and did little other than drop some needed rain in southern Florida. Early and late storms often form in the Gulf in contrast to the storms that occur in late August through October which often start from tropical waves off of Africa.

Staging the Cotton Crop – Continued (*John Snider, Camp Hand, and Josh Lee*): As discussed in the last cotton team newsletter, managing a cotton crop is all about timing. However, when we refer to "timing", it is not always useful to reference the number of days after planting. As discussed earlier in the year, DD60s can provide a better estimate of crop development than calendar days. For example, if a cotton crop averages 5 DD60s per day instead of 10 DD60s per day from planting to squaring, it would take twice as many days to reach the same developmental stage. This further delays the arrival of the first flower stage and all stages that follow. Furthermore, when the crop is exposed to chilling temperatures in the early season, development can be delayed even more than predicted from DD60s alone. For some of the cotton I planted in April, this has certainly been the case. Therefore, it is important to correctly stage the crop when making key management decisions. In the last newsletter, I described the emergence stage, and the early stages where plants are defined by the number of true leaves present on the main stem. In the current newsletter, I will focus on the squaring stage of crop development.

Squaring

Although we don't have a lot of cotton that's at the squaring stage currently, we were able to find a few plants with squares on them prior to writing this newsletter. First, it is important to define squares. Although it is somewhat cliché to state what so many of you have likely heard many times, I'm going to do it anyway. Squares are little, green floral buds encased in three large bracts, and they don't really look like squares at all. The three bracts (leaves that surround the floral bud) have jagged edges, and when they come together, they make the square look a little bit more like a green, jagged edged pyramid than a square. If one pulls the bracts back, the floral bud is exposed (Figure 1). In the very early stages of square development, you'll need to look near the very top of the plant to find them. As a general rule, the first fruiting branch can usually be found on node 6 ± 1, and will not look like much of a branch in the earliest

phases of squaring. The first squares will be in the very first position right next to the main stem. When the squares are just visible with the naked eye, the crop is in the pinhead square stage because the floral bud under the bracts is about the size of a pinhead. As the square gets a little bigger (1/3 of its final size), the term “match head stage” will be used because the floral bud is now approximately the size of a match head. Eventually, the square will reach what is called the candle stage, where the floral bud is visible as a light-colored protrusion beyond the bracts that looks something like a lit candle. The next day, the candle will become an open flower. The entire period of floral bud development from the pinhead square stage to the candle stage usually takes three weeks and is called the “squaring stage” of crop development. At the crop level, we typically say the crop has begun squaring when at least half the plants have produced the first visible squares.

Importance of the squaring stage

Just as emergence and early vegetative stages come with a unique set of challenges and management considerations, so does the squaring stage. For example, the start of squaring is an important stage from an insect scouting perspective as young squares can be fed on by multiple pest species. Side-dress applications of nitrogen should also occur in the squaring phase of crop development to ensure N availability prior to rapid crop growth and nutrient uptake by the crop. In the event that growth thresholds are met, the first PGR applications may also need to go out during this time frame. While there are likely other considerations I’m not thinking of at the moment, management practices are almost always tied to crop development, so knowing what to look for is key.

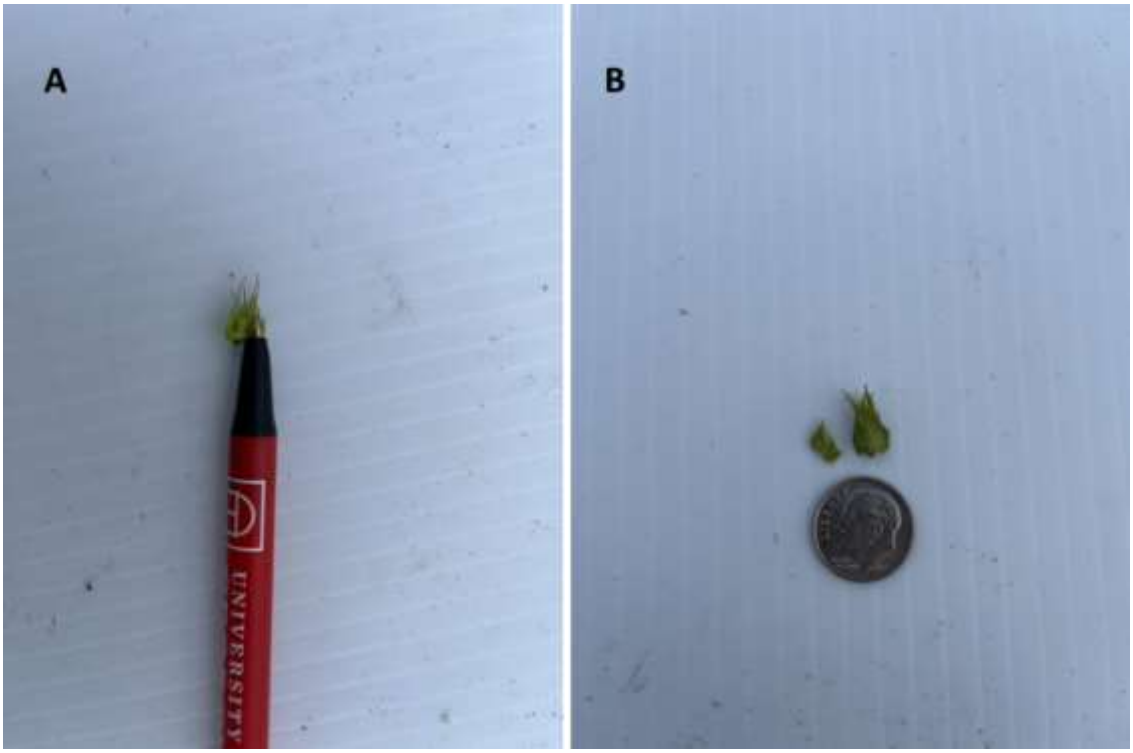
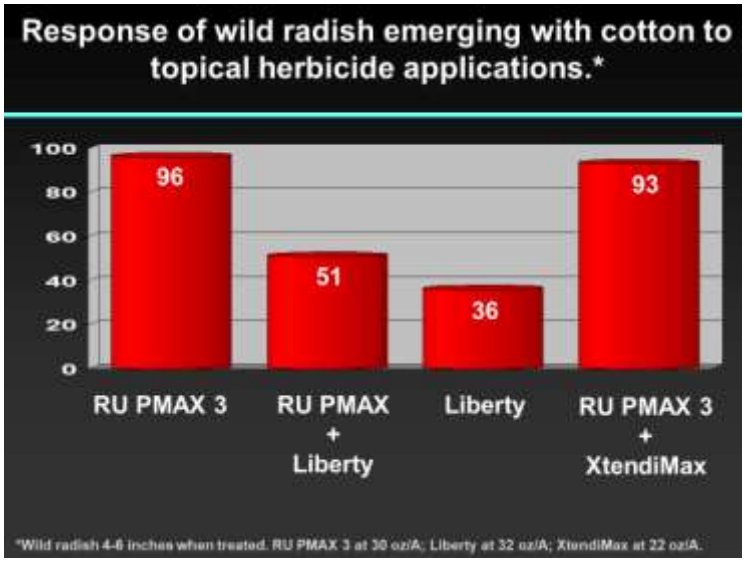


Figure 1. Pinhead square with the bracts removed to show the floral bud (A), and a side-by side image of a pinhead square (left) and a match head square (right) with bracts still covering the floral bud (B).

Wild Radish – Are You Paying Attention?? (*Stanley Culpepper and Jenna Vance*): Wild radish, a member of the mustard family, has historically been a challenge for the cotton grower at burndown prior to planting the crop, as it has traditionally behaved like a winter annual, emerging in the fall and growing throughout the winter. Recently, however, if you have been paying attention, this weed is emerging approximately 11 months out of the year including during the time when our cotton is being planted.

Obviously, the weed does not warrant the status of Palmer amaranth or tropical spiderwort but it is a dynamic plant and one to watch. Wild radish is our number one broadleaf weed infesting small grains as well as numerous winter vegetable crops including onions, greens, and cole crops. Although radish has not traditionally been an issue infesting summer crops, things appear to be changing rapidly. In Australia, the weed is a major pest with resistance developed in six herbicide mechanisms of action which include some very important herbicides such as 2,4-D, atrazine, glyphosate, and many more.

Residual activity of herbicides such as Treflan, Warrant, and Dual provide little benefit in controlling this weed, while Reflex is extremely effective providing both residual control and removing small emerged plants. Neither Liberty nor dicamba are effective controlling 4 to 6 inch plants. Roundup is an excellent tool to control young plants just after cotton emergence. However, your choice of tank mix partner will influence Roundup's activity. A study conducted this spring noted 96% control with Roundup alone while control was only 51% with Roundup + Liberty and 36% with Liberty alone. Although dicamba is not effective on this weed, mixing it with Roundup did not negatively influence activity of the Roundup in this study.



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