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## Lee County Ag Newsletter

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Second Week of May 2023, Volume 23, Number 4

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### **Entomology** Mark Abney, UGA

June is typically a pretty quiet month in terms of insect pressure in Georgia peanut, but growers need to be watching for potential problems that could cost them yield at the end of the season. Lesser cornstalk borer (LCB) is almost always found in SW Georgia peanut fields in late May, and this year is no exception. Whether or not LCB populations reach damaging levels and require treatment will depend mostly on temperature and precipitation over the next several weeks. Hot, dry conditions will favor LCB development, while cool and/or wet conditions will hinder populations. What should we be watching most closely? If we see a hot, dry start to June, keep an eye on sandy fields...especially ones with skippy stands. These will be at the highest risk for infestation.

Under heavy pressure, no field is immune to LCB infestation. Irrigated fields are much less likely to reach threshold once the vines lap the row middles, but we cannot irrigate enough to make LCB go away before the vines lap. Our research last year clearly showed the benefit of an insecticide application in June when thresholds are reached. There are two critical parts of the previous statement: 1. Benefit of insecticide and 2. When thresholds are reached. Spraying preventatively for LCB is not a good idea. Effective treatments are not cheap, and not every field will need to be sprayed even in an "outbreak" year. Likewise, not treating when the threshold is reached is a bad idea. A UGA on-farm trial in 2022 showed a significant yield loss when the LCB threshold was reached in early June, and the pest was not treated. The bottom line for LCB is simple: scout and treat when the threshold is reached.

It has been a while since early season tobacco budworm (TBW) infestations have occurred over a large area in Georgia, but we should be keeping an eye on our peanuts for this pest in June. A couple weeks of "not paying attention" when peanuts are 30-60 days old can result in a field of stems if TBW is present. Peanut has an extraordinary ability to compensate for early season defoliation, but I don't like to see them get stripped just as they are starting to peg.

The name of the game for effective insect management in peanut is "scout". If all goes well, June will be nice and quiet, and we can all rest up and get ready for the circus that is probably coming to town in July and August.

### Spraying Tips

- Simer Virk, UGA and Eric Prostko, UGA

Timely and effective pesticide applications in peanut production are important to stay on top of weed, insect and disease control throughout the growing season. Achieving both desired spray coverage and efficacy while keeping off-target movement of pesticides to a minimum is a challenging but an important task. Several factors during spray applications can influence the coverage and efficacy required for proper pest and disease management in peanut. Below are several spray considerations to maximize the effectiveness of pesticide applications with boom sprayers:

**Timeliness:** Being timely with pesticide applications is the most important factor in determining the success of any pest management program. Late applications usually will require higher use rates or split applications and are more often than not, less effective.

**Nozzle Selection:** Check pesticide labels carefully for recommended spray volume, droplet size, and any other conditions needed to maximize pesticide efficacy. Based on the application type and pesticide mode of action, select the nozzle that provides both the desired output (in gallons per acre or GPA) and the droplet size. Nozzle selection will also depend on the ground speed and pressure required to achieve the desired GPA.

**Spray Pressure:** Spray pattern and droplet size changes with spray pressure. Lower pressures result in larger droplets whereas higher pressures produce smaller droplets for a given nozzle size. Based on the application type, consider selecting a nozzle that provides the required droplet size in the 30 – 50 PSI pressure range. Both medium and coarser droplets are effective for herbicide applications whereas fungicide applications generally require medium to finer droplets for increased coverage and efficacy.

**Ground Speed:** Application speed plays an important role in achieving the desired application rate. A higher travel speed will require a higher nozzle flow rate to achieve the given application rate and viceversa. Spray at ground speeds of or less than 10 mph to obtain consistent and more uniform coverage across the field. Faster speeds also cause excessive boom bounce and spray inversion sending finer droplets higher in the air and increasing drift potential.

**Boom Height:** Boom height influences overlap and uniformity of spray application at a selected nozzle spacing and spray angle. Lower boom height (20 to 24 inches from the target) is recommended for maintaining a proper spray overlap and application uniformity across the boom. Make sure to use nozzles that have a 110° angle to allow spraying at lower boom heights without effecting spray coverage.

**Environment:** Weather conditions such as wind speed and temperature also play a role in achieving the desired spray coverage and on-target application. Avoid spraying when wind speeds are more than 10 mph to reduce off-target movement of pesticides. Wind direction should be also considered to avoid spraying towards sensitive crops, homes, etc. Avoid spraying when the conditions for temperature inversions are favorable – from later in the day until early in the morning.

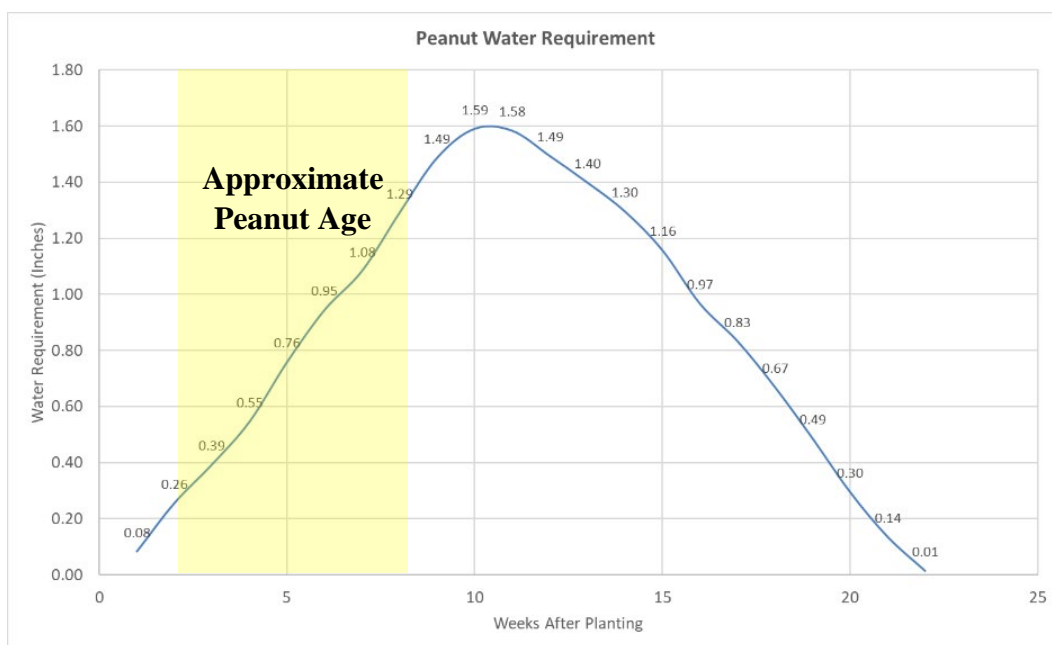
**Sprayer Calibration:** Proper sprayer calibration is important to verify the desired spray volume (GPA) based on the selected ground speed and nozzle spacing. During calibration, make sure to check the spray volume at multiple locations across the boom and perform a thorough sprayer inspection to ensure proper functioning of all sprayer components.

**Spray Technology:** Consider using spray technologies such as a rate controller and section or individual nozzle control which helps in maintaining application accuracy across the whole field by minimizing offtarget applications. Advanced technologies such as pulse width modulation (PWM) technology and automatic boom height control systems are also currently available to utilize on boom sprayers for improving precision and accuracy of pesticide applications.

## Early to Mid-Season Irrigation for Peanuts

- Phillip Edwards, UGA
- David Hall, UGA
- Daniel Lyon, UGA
- Jason Mallard, UGA
- Wesley Porter, UGA

Luckily unlike May of 2022 which was very hot and dry, we have had some cooler weather and rainfall across most of the state during the end of May. This has put most of the state into a no drought status, but we do still have part of the southwestern portion of the state in the abnormally dry category according to the U.S. Drought Monitor. Keep track of the graph below or use our [Irrigation Reference Guide for Corn, Cotton, Peanuts, and Soybeans | UGA Cooperative Extension](#) in the field throughout the month of June, stay on top of your irrigation requirements. Contact your local Extension office if you need a copy of the irrigation reference guide. If you planted your peanuts during late April or early May, most of these earlier planted peanuts will be beginning to bloom, so expect water usage to gradually increase. Peanuts will begin flowering on average around 40 days after planting.



Remember the water requirement is IRRIGATION and RAINFALL! Also consider irrigation efficiency especially on hot dry days. A typical pivot is 85% efficient, so don't under-irrigate, but at the same time don't over-irrigate either as research has shown reductions in yield just as significant for over-irrigating as for under-irrigating. The problem with over irrigation is that it brings a larger loss in profitability due to the additional cost of non-needed irrigation. Good record keeping and a sound irrigation scheduling strategy can aid significantly in increasing profitability in multiple ways, including reductions in irrigation applications, correlating to reductions in energy requirements, and potentially increases in yield.

A couple of quick reminders regarding irrigation of peanuts. Early irrigation applications can tell you very valuable information regarding your water application uniformity. If a Mobile Irrigation Lab test was not conducted, pay close attention to the way your soils dry out after an irrigation application. If your peanuts were planted into conventional

tillage, this will be easy to see especially prior to full canopy closure. Visible bands drying out quickly or bands staying wet for longer periods are signs of poor uniformity. Go to these areas of your pivot and address them now. As the peanut canopy develops and laps, the obvious signs will not be visible. Hot dry weather makes it easy to see if your pivot was working properly due to the extreme heat and drought. The under applying nozzles are easy to see by the evidence presented as stressed crops in bands under the pivot. Doing the same thing twice expecting different results is never good.

Lastly, if you are using soil moisture sensors there are a few things to consider early on. Many times, sensors are “soaked in or wetted up” during installation and require a little time for moisture levels around the sensor to return to field conditions. Keep in mind that we begin to use the individual sensors on the probe as the roots reach the particular depths, therefore sensor readings should be weighted in making decisions early during the season. If you have “weighted” the sensors, be sure to adjust accordingly as the root systems develop. Consider using other tools in conjunction with your moisture sensors. Irrigator Pro (<https://irrigatorpro.org/>) integrated with a soil moisture sensor system through UGA trials has repeatedly shown higher yields than the Checkbook method. For more assistance and information on Irrigator Pro usage or any other irrigation scheduling tool for peanuts, contact your local UGA Extension ANR Agent.

## Climate outlook for June and beyond

- Pam Knox, Agricultural Climatologist

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.

## Delayed Early Peanut Growth

- R. Scott Tubbs, UGA

The peanut planting season has been cooler than average in South Georgia in 2023. In Tifton, GA from April 22 to May 6, daily high temps did not go above 81 F with low temps typically in the mid- to upper 50's including below 50 F from May 2-4. While temps rebounded for most of the primary planting window during the first 3 weeks of May, another unseasonable dip occurred from May 22 to May 28 when the high temp did not even reach 80 F for an entire week. These temps caused delays in emergence for many peanuts, or very slow growth for young emerged peanuts in most fields.

With that said, the measured radiation (or amount of direct sunlight) received during May 2023 was relatively average. Thus, the drops in temperature were not as a result of cloudy/overcast/rainy days for the most part, it was just cooler-than-normal sunny days. The decreased heat units and delayed emergence should cause a resultant delay in blooming, which could cause peanut maturity to be delayed this year.

As a frame of reference, since 2017, only two years had average maximum daily temperatures below 84 F and average minimum daily temperatures below 61 F. In both of those years, the majority of my research plots planted before May 15 were dug at 150-154 days after planting on average, based mostly on the peanut maturity profile board (but

adjusted around weather). In the other four years during that span when temperatures were 84+ for a max and 61+ for a min, my early research plots were on average dug at 145-148 days after planting. Hence, the early season trend is that peanut maturity could be one to two columns (3-7 days) behind in maturity, with respect to the peanut maturity profile board.

There's a long way to go and a lot can happen between now and harvest. But be sure to track maturity closely heading into harvest season this year, as the leading edge of the peanut maturity profile is likely behind this year compared to the average. For growers that typically pull the trigger on digging based on an average number of days after planting will most likely dig peanuts that have not reached full maturity and will lose both yield and grade that could be gained by leaving them in the ground a little longer than usual.

## June Peanut Pointers

- Scott Monfort, UGA

The planting season has been a little crazy with the cool weather and seed quality issues (Seed Vigor). The good news is a majority of the crop is up and looking good so far. There are several things to note with the crop at this point – 1.) Several fields had a tough time reaching adequate stands due to low vigor seed and cool wet weather. In the first part of May I would say weather caused most of the issues but as we moved into late May poor seed quality (seed vigor) became more evident; 2.) The cool weather also slowed the growth and delayed blooming across most of Georgia.; and the cool wet weather also delayed planting by 1-2 weeks causing a majority of the plantings to be in mid to late May with about 15-20 % being planted in June. Please keep these delays in mind as we go through the season as maturity will be impacted. Also, remind your growers that yield potential of peanuts planted in June will be reduced 10-15% depending on the weather in September and October. June Planted peanut will need a very warm fall to maximize yield potential.

One new addition to the seed treatments this year has been the liquid polymer seed treatment. At first, it looked like the liquid polymers were causing the skins to come off leaving a bare peanut and/or causing an increase in splits. Based on the conversations I have had and what I have observed, I am leaning more to a seed issue and not the liquid polymer treatment. We observed loose skins across both liquid polymer products and with the dry formulation. I will keep you posted as I learn more information.

### **Important Dates:**

Agent Field Day --- June 8<sup>th</sup> in Tifton

American Peanut Research and Education Society Meeting --- July 10-13<sup>th</sup> in Savannah, GA

SE Peanut Growers Conference – July 27-29<sup>th</sup> in Sandestin Resort in Miramar Beach, Florida

Midville Research Field Day – August 9<sup>th</sup>, Midville, GA

Cotton and Peanut Research Field Day – in Tifton on September 6<sup>th</sup>

Cotton Defoliation and Peanut Maturity -- Scheduled for September 6 and 7<sup>th</sup> but will likely need to be changed to the following week of September (TBD)

I wanted to express my thanks for all the agents that put in a variety trial this year. For many of the trials, I was able to provide the newest releases for you to evaluate in the counties. I am sharing the county and variety list planted in each county for your information. I would be up to doing a tour at some of these trials for the newer agents in the latter part of June or in July. Please let me know if a group of you are interested. **See Table Below.**

<b>Agent Name and County</b>	<b>Peanut Varieties</b>
Madison Warbington - Macon	Florun 331, AUNPL-17, GA-12Y, GA-16HO, GA-18RU, GA-06G
Jeremy Kichler - Colquitt	FloRun -T61, GA-21GR, TifNV-HG, GA-22MPR, GA-06G
Cody Powell - Miller	Florun-52N, TifNV-HG, GA-22MPR, GA-06G
Brian Cresswell - Early	FloRun-T61, GA-21GR, GA 22MPR, FloRun 52N, GA-06G, TIFNV-HG
Jay Porter - Pulaski	Aunpl-17, GA-16HO, GA-18RU, GA-06G, GA-12Y
Cole Moon - Bleckley & Twiggs	GA-06G, GA-20VHO, GA-18RU, AUNPL-17, GA-12Y
Bill Tyson - Bulloch	GA-16HO, Ga-06G, GA-21GR, TifNV HG
Derrick Bowen - Tattnall	GA-06G, GA-20VHO, GA-18RU, FR-331
Cale Cloud - Grady	GA-06G, GA-12Y, GA-18RU, AUNPL-17, TifNV-hiol
Ashley Smith - Coffee	FloRun T61, Aunpl-17, GA-20VHO, GA-21GR, TifNV-HG
Holly Anderson -Ben Hill	FloRun-T61, GA-16HO, AUNPL-17, GA-21GR, TifNV-HG, GA-06G, GA-12Y
Luke Crosson and Taylor McDaniel - Randolph County	GA-16HO, Florun -T61, AUNPL-17, GA-20VHO
Brian Hayes - Mitchell/Decatur	GA-06G, GA-16HO, AUNPL-17, GA-20VHO, and TifNV-hiol
Tucker Price. Cook.	GA-12Y, FloRun-331, FloRun-T61, GA-20VHO, and GA-18RU

Braxton Crews- Marion/Webster	FloRun 52N, TifNV-HG, GA-22MPR, TifNV-hiol
Wade Parker, Midville Station	Ga-06G, GA-12Y, Ga-16HO, Ga-18RU, GA-20VHO, GA-21GR, GA-22MPR, TiftNV-HG, FloRun-331, FloRun-T61, AUNPL-17, DGX0718, DGX0913, CP1, CP2, & CP7
Will Brown - Brooks	GA-06G, GA-16HO, GA-18RU, GA-12Y
Ben Reeves, Berrien	Ga-06G, GA-12Y, Ga-16HO, Ga-18RU, GA-21GR, GA-22MPR, CP1, CP7, TiftNV-HG, FloRun-331, FloRun-T61, and AUNPL-17 <b>All varieties with be tested with and without Apoge/Kudos</b>

**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
	8 - 14	2	0.18	0.03



<b>Emergence to First Square</b>	15 - 21	3	0.29	0.04
	22 - 28	4	0.41	0.06
	29 - 35	5	0.56	0.08
<b>First Square to First Flower</b>	36 - 42	6	0.71	0.10
	43 - 49	7	0.85	0.12
	50 - 56	8	1.08	0.15
<b>First Flower to First Open Boll</b>	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
<b>First open boll to &gt;60% Open Bolls</b>	113 - 119	17	0.69	0.10
	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
<b>Harvest</b>	155 - 161	23	0.02	0.00
	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 place. 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 5<sup>th</sup> and 7<sup>th</sup> 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 ( $\leq 10$  GPA) and/or larger droplet sizes. For new sprayers with autoboom 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 catchcan/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.

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

- 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 5<sup>th</sup>), 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 achieve 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 initiate 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!

**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  $6 \pm 1$ , 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.



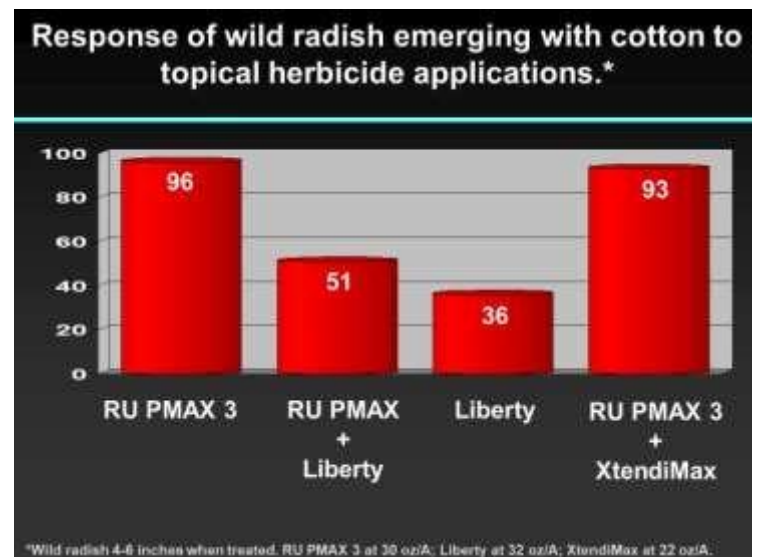
**Figure 1.** Pinhead square with the bracts removed to show the floral bud (A), and a side-by side image of a pinhead square (left) and a match head square (right) with bracts still covering the floral bud (B).

**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*

## **Soil-Applied Dicamba and Peanuts - Uh-Oh! (Prostko)**

In the past week, I have been involved with 3 field situations where dicamba was inadvertently applied to peanut prior to planting. The results were not good. **Dicamba is NOT labeled for preplant use in peanut.** With that said, here is all I know about how peanuts respond to soil-applied dicamba.

1) This is what soil-applied dicamba injury on peanut looks like. I had to pinch hit that day for Bill "Bob Never Gave Me a Cool Nickname" Starr. I cannot remember for sure but I think Bill was hunting Sasquatch in Montana or Wyoming????



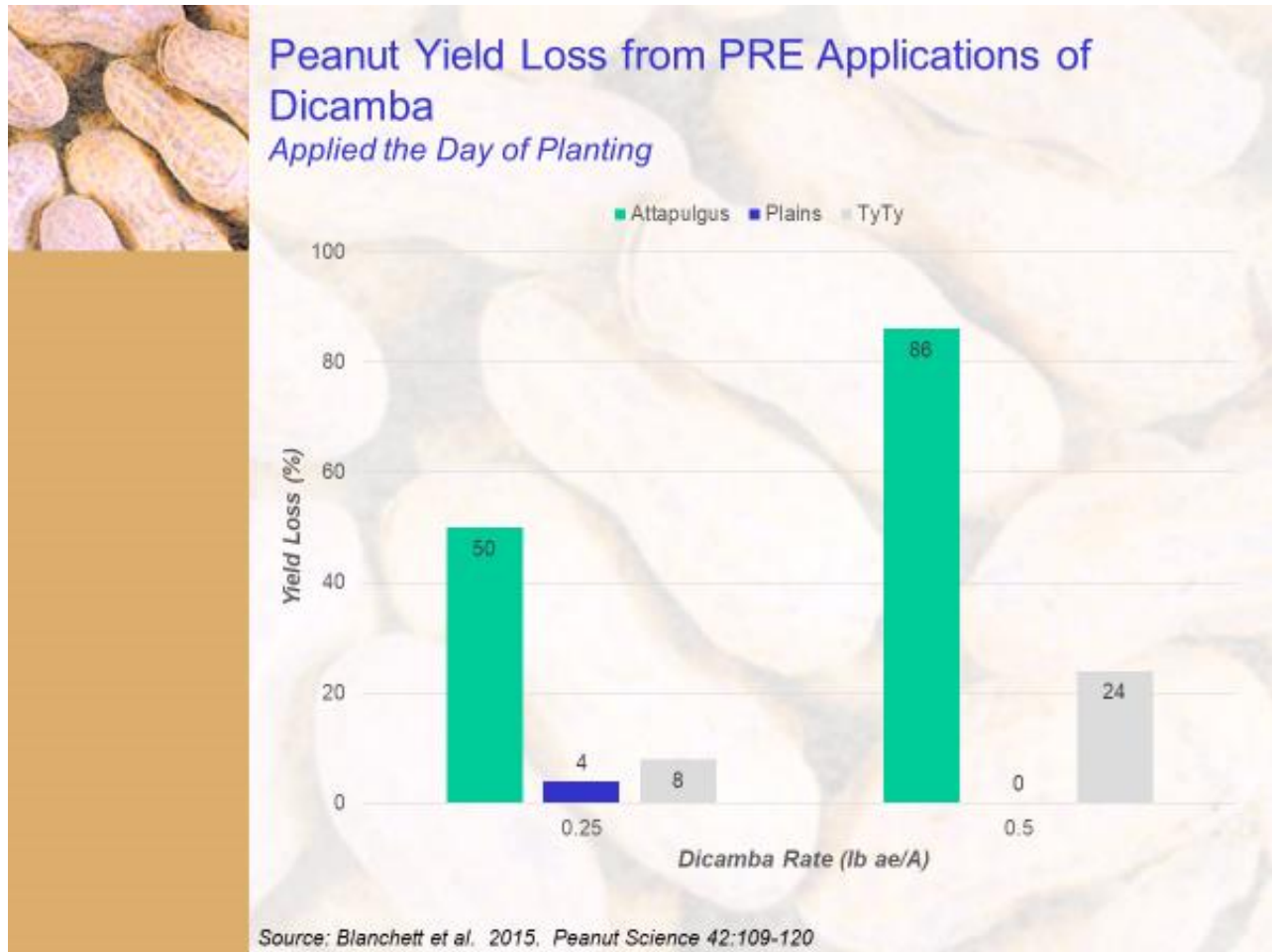
2) Field studies that I and several others conducted with preplant applications of dicamba way back in the early 2000's indicated the following:

a) Dicamba at 0.25 lb ae/A (i.e. Clarity @ 8 oz/A or Engenia @ 6.4 oz/A or Xtendimax @ 11 oz/A) applied 7, or 15, or 30 days before planting (DBP) had no effect on yield in 7/7 trials.

b) Dicamba at 0.25 lb ae/A applied 0 DBP (i.e. PRE) caused significant peanut losses in 2/7 field trials. Peanut yield losses in those 2 trials ranged between 36%-76%.

c) Source: Prostko, E.P., T.L. Grey, W.C. Johnson III, D.L. Jordan, W.J. Grichar, B.A. Besler, K.D. Brewer, and E.F. Eastin. 2003. Influence of preplant applications of 2,4-D, dicamba, tribenuron, and tribenuron plus thifensulfuron on peanut. Peanut Science 30:18-22.

3) From Blanchett, B.H., T.L. Grey, E.P. Prostko, and T.W Webster. 2015. The effect of dicamba on peanut when applied during vegetative growth stages. Peanut Science 42:109-120.



4) The most important factors that influence how peanuts will respond to soil-applied dicamba are application rate, soil type, the time interval between application and planting, and irrigation/rainfall. Based upon my experiences with dicamba on peanuts and soybeans, peanuts could be safely planted 14 days + 1" rainfall/irrigation (0.25 lb ae/A) or 28 days +1" irrigation/rainfall (0.5 lb ae/A) after a preplant application of dicamba. **But, I need to stress again the fact that dicamba is NOT labeled for preplant use in peanut!**

### **Peanut POST's (Prostko)**

Here are a couple of quick pics/comments about POST weed control in peanuts based upon research plots that were rated earlier today (June 6). FYI, I did not get any activating moisture for the PRE herbicides for 8-9 days after planting (DAP) due to irrigation system problems. PRE treatments that included Valor still performed very well in this scenario.

**Picture #1:**



Comments about this picture:

- 1) No "cracking" herbicides were applied. I prefer to get Cadre out around 30 DAP. Not sand-bagging "cracking" treatments. Gramoxone (paraquat) should be used when needed.
- 2) My original intention in this test was to just apply Cadre + 2,4-DB + Dual Magnum POST but the lack of a PRE activating moisture event forced me to add some Cobra, especially when PRE's did not include Valor.
- 3) If a grower has pigweed and is not sure if it is ALS-resistant or not (*most likely will be*), it would be a good idea to add either Cobra or Ultra Blazer to the Cadre + DB + Dual Magnum tank-mixture. Other than price (*Cobra is more expensive by about ~\$5-10/A*), no difference between Cobra or Ultra Blazer when pigweeds are small (<3"). But, Cobra would be preferred if pigweeds are bigger.
- 4) Growers can also use Anthem Flex, Outlook, Warrant, or Zidua instead of Dual Magnum. Anthem Flex will cause more leaf burn because it contains a small amount of Aim (carfentrazone). Here is what that looks like 12 DAT.



Cadre (4 oz/A) + Anthem Flex (3 oz/A) +  
Cobra (12.5 oz/A) + 2,4-DB (16 oz/A) +  
Induce (0.25% v/v)



PE-15-23  
June 6  
12 DAT

Picture #3



# Peanut Weed Control - 2023



NTC

PE-15-23  
June 6  
34 DAP



Prowl H<sub>2</sub>O 3.8SC @ 32 oz/A  
Valor EZ 4SC @ 3 oz/A  
PRE (1 DAP)  
Cadre 2AS @ 4 oz/A  
Anthem Flex 4SE @ 3 oz/A  
2,4-DB 2SL @ 16 oz/A  
Induce @ 0.25% v/v  
POST (28 DAP)



Prowl H<sub>2</sub>O 3.8SC @ 32 oz/A  
Valor EZ 4SC @ 3 oz/A  
PRE (1 DAP)  
Cadre 2AS @ 4 oz/A  
Dual Magnum 7.62EC @ 16 oz/A  
2,4-DB 2SL @ 16 oz/A  
Induce @ 0.25% v/v  
POST (28 DAP)

Comments about this picture:

- 1) Despite the lack of a timely rainfall/irrigation event, Valor performed very well.
- 2) No "cracking" herbicides were applied. I prefer to get Cadre out around 30 DAP. Not sand-bagging "cracking" treatments. Gramoxone (paraquat) should be used when needed.
- 3) Really no need for an NIS with Dual Magnum or Outlook (EC formulations). But, need NIS when using Anthem Flex or Warrant.
- 4) Here is what Cadre + Anthem Flex + 2,4-DB + Induce looks like at 6 DAT.





Cadre (4 oz/A) + Anthem Flex (3 oz/A) + 2,4-DB (16 oz/A) + Induce (0.25% v/v)



PE-15-23  
June 6  
6 DAT

Picture #4



## Spreading Dayflower in Peanut - 2023



Gramoxone 2SL @ 12 oz/A  
Broadloom @ 8 oz/A  
Dual Magnum @ 16 oz/A



Gramoxone 2SL @ 12 oz/A  
Ultra Blazer @ 16 oz/A  
Broadloom @ 8 oz/A  
Dual Magnum @ 16 oz/A

B. Reeves  
Berrien Co.  
June 5 - 3 DAT

Comments about this picture:

1) Gentle Ben and I (+ Nick Shay, PhD graduate student) put out a quick and dirty test for the control of what we think (?) is spreading dayflower (*Commelina diffusa*). We will confirm the exact species (with RC from VSU) when we can collect some plants with flowers.

2) These "cracking" treatments looked great at 3 DAT.

3) Did you know that in Georgia there are 6 species of *Commelina* and 2 species of *Murdannia* that look very similar?

*Commelina benghalensis* - Benghal dayflower (formerly tropical spiderwort)

*Commelina caroliniana* - Carolina dayflower

*Commelina communis* - Asiatic dayflower

*Commelina diffusa* - spreading dayflower

*Commelina erecta* - erect dayflower

*Commelina virginica* - Virginia dayflower

*Murdannia keisak* - marsh dayflower

*Murdannia nudiflora* - doveweed

## **Peanut "Cracking" Time Reminders Again (Prostko)**

It's that time of year again! Another friendly reminder about peanut "cracking" applications on peanut (a semi-repeat of previous blogs but with 2023 pics).

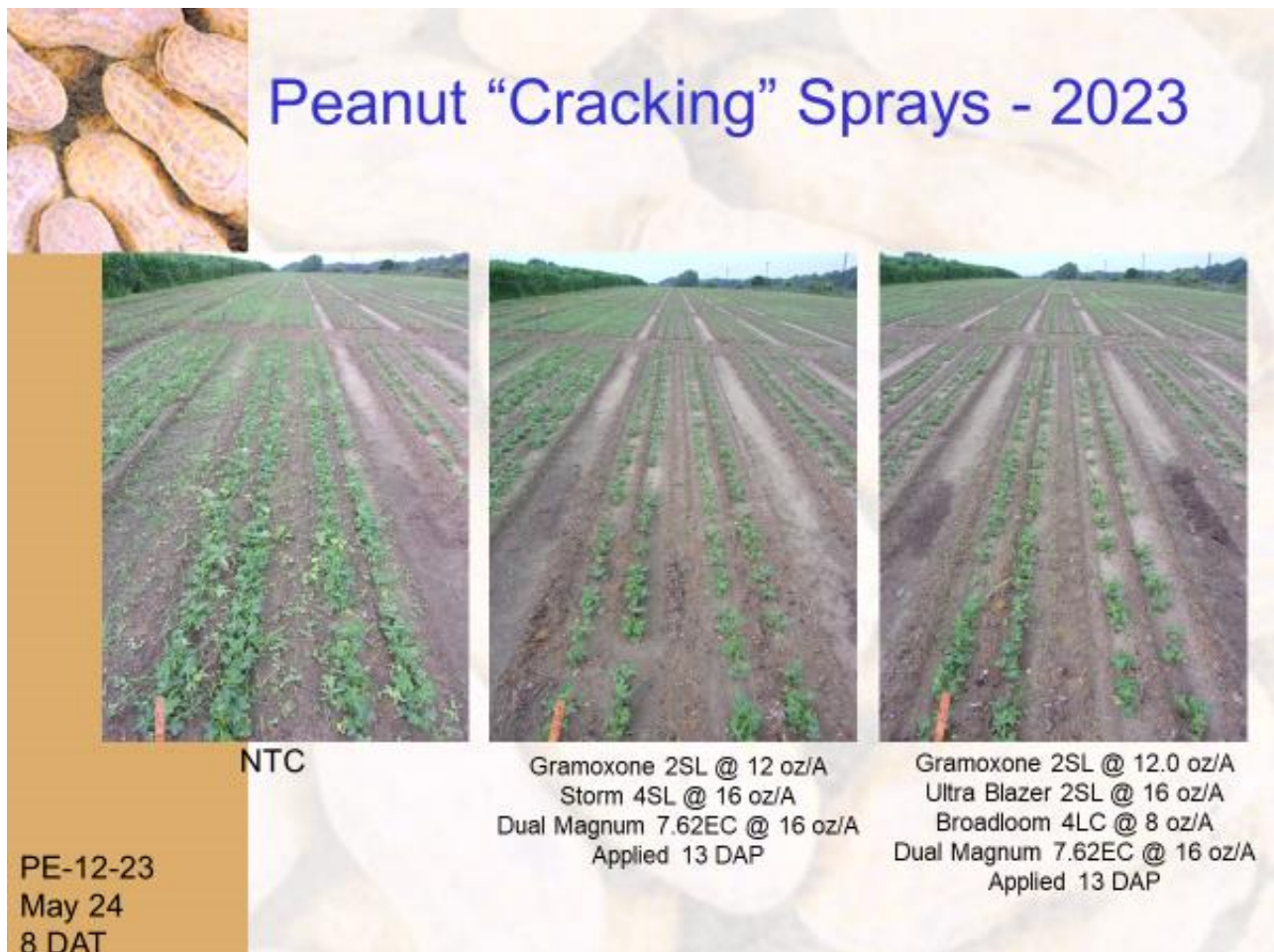
1) Gramoxone 2SL @ 12 oz/A or Gramoxone 3SL @ 8 oz/A + Storm 4SL @ 16 oz/A + growers' choice of a Group 15 herbicide (i.e. Anthem Flex, Dual Magnum, Outlook, Warrant, Zidua) + NIS @ 0.25% v/v.

2) No need for NIS when either Dual Magnum or Outlook are used.

3) If growers want to make their own Storm, I would suggest Ultra Blazer 2SL @ 16 oz/A + Basagran/Broadloom 4LC @ 8 oz/A. In case you are wondering, Storm 4SL @ 16 oz/A is equivalent to 11 oz/A each of Ultra Blazer and Basagran/Broadloom. So my mix is slightly different (hotter).

4) POST applications no later than 28 days after peanut cracking.

5) Check out 2023 field plots below.



The image is a composite graphic titled "Peanut 'Cracking' Sprays - 2023". It features a top-left inset of peanuts, a central title, and three side-by-side photographs of peanut field plots. The first plot is labeled "NTC" (No Treatment Control). The second plot is treated with Gramoxone 2SL @ 12 oz/A, Storm 4SL @ 16 oz/A, and Dual Magnum 7.62EC @ 16 oz/A, applied 13 days after planting (DAP). The third plot is treated with Gramoxone 2SL @ 12.0 oz/A, Ultra Blazer 2SL @ 16 oz/A, Broadloom 4LC @ 8 oz/A, and Dual Magnum 7.62EC @ 16 oz/A, also applied 13 DAP. A date stamp in the bottom-left corner reads "PE-12-23 May 24 8 DAT".

### Peanut "Cracking" Sprays - 2023

NTC

Gramoxone 2SL @ 12 oz/A  
Storm 4SL @ 16 oz/A  
Dual Magnum 7.62EC @ 16 oz/A  
Applied 13 DAP

Gramoxone 2SL @ 12.0 oz/A  
Ultra Blazer 2SL @ 16 oz/A  
Broadloom 4LC @ 8 oz/A  
Dual Magnum 7.62EC @ 16 oz/A  
Applied 13 DAP

PE-12-23  
May 24  
8 DAT

## **Rapid Growth Syndrome-Doug Collins**

We have experienced rapid growth syndrome in Lee County. Symptoms of this include a bent or twisted whorl or the leaf that has just emerged from the whorl being yellow (see photo on the next page).

Rapid growth syndrome is usually associated with a rapid warming from cooler to warmer temperatures. Leaves grow rapidly in the whorl and are unable to emerge from the whorl. Some corn hybrids are more prone to this than others.



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