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

Lee County Ag Newsletter

June 2022, Volume 22, Number 7

Georgia Grain News 6-17-22

Corn

Important to keep Southern Rust in check as we're seeing it reported in more counties and earlier than ever and this heat drives it on.

Lots of stink bug reports. When they attack it very early we get ear damage and often curling of ears.

Later damage is kernel by kernel.

Importance of irrigation during this heat can't be stressed enough. We could see poor pollination during Silking (R1) and kernel abortion as in photo below during Blister(R2) and Milk(R3) stages and lighter kernels during Dough (R4) and Dent (R5) stages due to this heat especially in the absence of sufficient water.

Below are corn Growth Stages and what can happen during them. Part of below image from " Corn Growth and Development" Iowa State University.

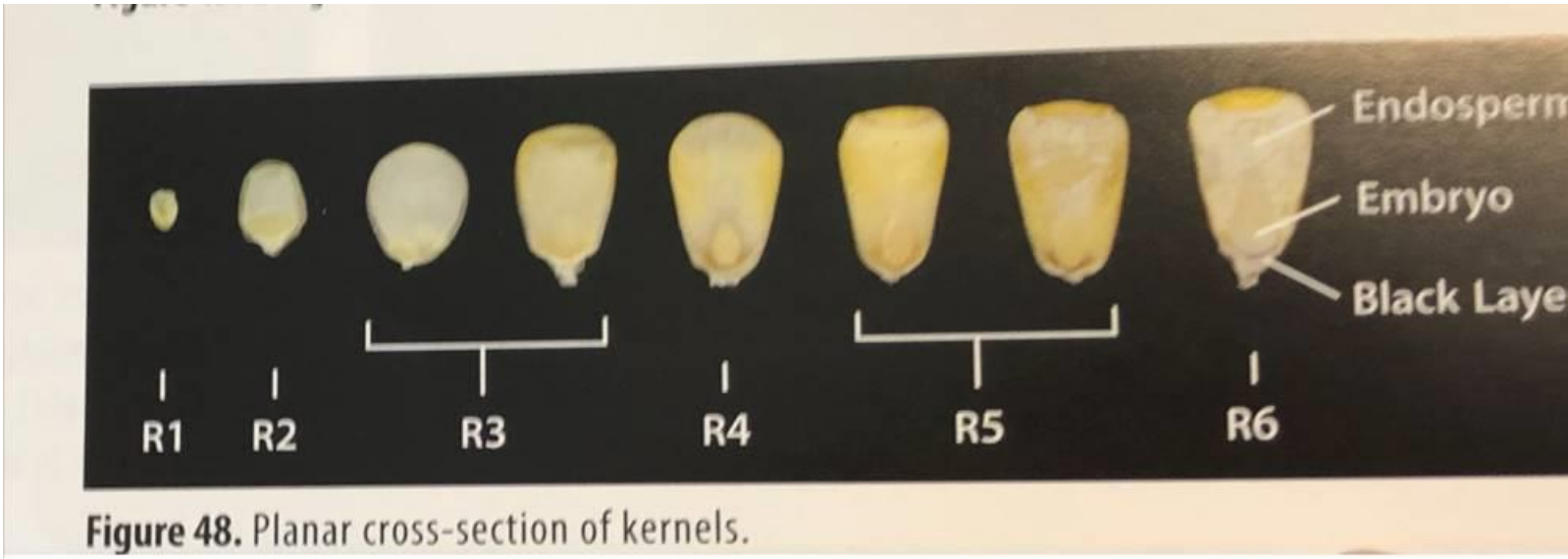


Figure 48. Planar cross-section of kernels.

Silking Blister Milk Dough Dent

Pollination problems

Kernel Abortion

Kernel weight

Georgia Grain News 6-11-22

Early System **Indeterminate** soybeans are now setting pods. They set them starting at the bottom of the plant and work their way up. The plant keeps growing and blooming. **Determinate** varieties, like what is mostly grown in Georgia, do it differently. They grow their full height first and then begin flowering and setting pods at the top of the plant.

The different maturity groups grow different amounts of time before beginning to flower, depending on night length. So a group 5 will stop growth and flower about a week before a group 6 variety. So generally, later in the planting season you plant a little later variety so it doesn't bloom when still very short. But each variety is different so it takes some investigation to see what is suited for the timing and where you are in Georgia. See the UGA Soybean Production guide and the UGA Statewide Variety Testing site for more info.

Here's photos I took today of an indeterminate group 4 variety that is setting pods at the bottom of the stalk and blooming and plants are pocket high and still growing. The roots are impressive and full of Nitrogen fixing nodules, look for pink inside them if they are actively working, (remember they are attached to the root whereas root knot nematodes would be a swelling of the root, although at first glance it's hard to tell the difference). These were planted on April 20th so are 52 days old. We are watching for caterpillars and stink bugs, especially the very destructive red banded one, and whiteflies and diseases on these now. Its important to keep these wet now as well for best yield as they are beginning to fill pods.

Corn

This week in corn we are seeing some Southern rust in several counties and some smut along the edges is fairly common, especially if stink bugs are present. Dr. Kemerait showed us in Tifton this week that it is edible by eating some raw.

Stink bug sightings are common in corn fields this week, with some egg masses and immatures, and so many fields have been sprayed with a fungicide and insecticide combination.

Many early planted fields are in the Milk stage (aka Roastin' ear stage), R3 which is the highest water use stage in corn, 2.4 inches a week. Kernel abortion can happen in the blister and milk stages under stress, where the kernel collapses and doesn't continue to fill.

Our oldest fields are in the Dough stage R4, seen in photo taken today below, so we generally need about 4.5 weeks until this field will be mature depending on heat unit accumulation.

When we are past the milk stage we don't abort any more kernels, but stress can cause lower kernel weight. Still need 2.3 inch a week during dough stage. Remember if you get a big maybe 3 inch rain you can't count the whole amount cause our soils can't hold that much for long. Usually count about an inch but there's more information on this with different soils in the UGA Corn Guide.

Georgia Grain News 6-3-22

Agents,

We are seeing a lot in corn fields this week. Corn is tasseling and silking and some of the oldest is at the end of pollination, and it looks pretty well pollinated in most cases. Blister stage (R2) marks the end of pollination and we quickly thereafter enter the Milk stage (R3).

Stink bug numbers are on the increase and with Southern rust being found in Georgia this early in the season, many growers are spraying fungicides and insecticides once the corn tassels, see below article concerning stinkbugs and Dr. Buntin's info in the Corn guide and Pest management handbook and Dr. Kemerait's info in Corn Guide, Pest Management handbook and his communications. Corn next to small grains needs to be closely watched for stinkbugs.

Purple Leaf Sheath is common to see but really not a problem, blotch usually has a tan interior and purplish margin. Thought to have to do with pollen caught under plant parts. Can make you think of stalk rots but cut into the area to see that decay doesn't go into or come from the stalk.

Here's a link to my old blog post concerning it
https://seminolecropnews.wordpress.com/2015/05/28/purple-leaf-sheath/

Thrips are still causing whitish leaf areas especially at field edges, sometimes small necrotic areas too but not a real concern.

We had some high winds in the 40 mph+ range after lots of rain and got some lodging in spots. Worse where plant population and soil fertility is high.

Wheat Harvest

Wheat combining was interrupted in many areas by rains recently, some folks got 4 inches over a few days and we are seeing a little sprouting of the wheat in the head. This isn't much of a problem in feed wheat but for milling wheat for flour it is a problem and of course for wheat for seed it is a problem, as those grains that sprout won't sprout again when planted.

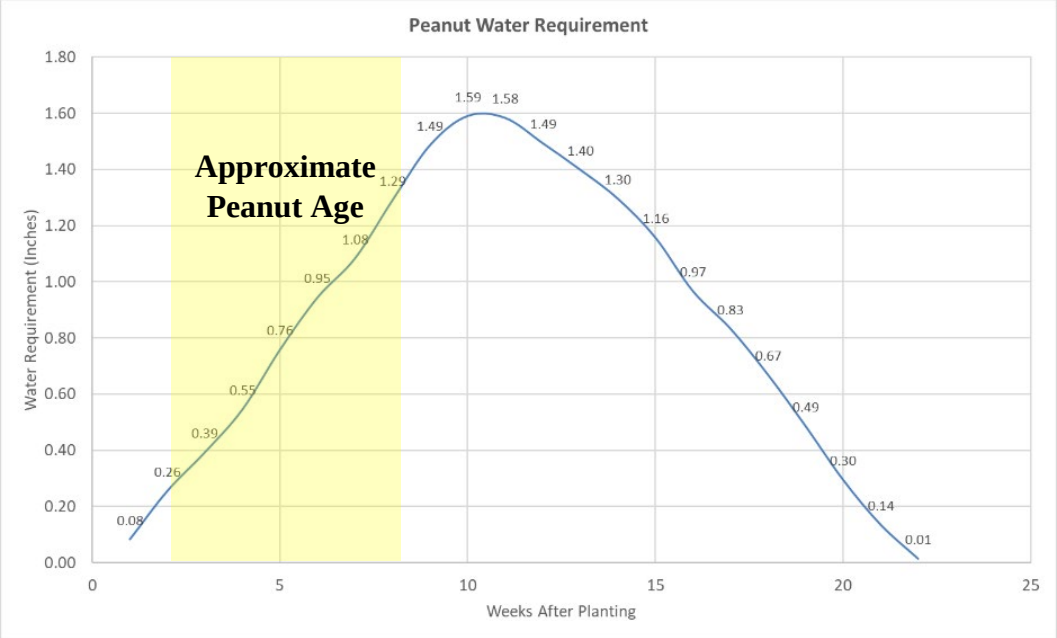
The point of my story is that we need to get wheat out of the field quickly once its ready. See the sprout and the long roots in my photo I took this week in Southwest Georgia.

Peanut Pointers

Early to Mid-Season Irrigation for Peanuts Wesley Porter, Extension Precision Ag and Irrigation Specialist, UGA David Hall, Extension Water Educator, UGA Jason Mallard, Extension Water Agent, UGA

Similar to May of 2021 which was very hot and dry, we had some very hot and dry weather during May of 2022, dry enough that we have needed to apply some small irrigation events to our young peanut crop. While we have received some sporadic rainfall across the state, this either was not enough to adequately meet the water requirements or it was missed. Thus, even though we do not typically apply irrigation to peanuts early in the season, years such as 2022 may require some applications to ensure it has adequate moisture.

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. 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 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 and have “weighted” the sensors, now is the time to reweight the sensors because of increased root development and crop progression. Consider using other tools in conjunction with your moisture sensors. IrrigatorPro (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 IrrigatorPro usage, contact your local UGA Extension ANR Agent, additionally, The IrrigatorPro website includes a step-by-step video tutorial on how to download the app.

June 2022 Outlook Pam Knox, Agricultural Climatologist, UGA

Over the past month, the temperature across the Southeast has been warmer than normal in almost all locations. Rainfall has been variable, with bands of wet and dry conditions across the region due to the impacts of slow-moving fronts that have concentrated precipitation in some places while leaving others high and dry. The Drought Monitor has shown this with an increase in dry conditions depicted until late May but some decrease since then as rain has become more frequent.

The outlook for June and July is for warmer than normal temperatures to continue for most of the next six weeks, although it will not be as outrageously hot as the drought regions out west and will have some breaks with cooler weather interspersed. Precipitation is expected to be fairly dry through early June with some daily thunderstorm activity scattered around the region. Rainfall is expected to pick up in mid-June for a week or two before dry weather returns to the region through mid-July. If you are applying field treatments that depend on the absence or presence of rain, you will want to watch the forecasts carefully to make sure you find the right timing. If the dry conditions in late June and early July do occur, I expect to see an increase in drought conditions since the warm temperatures will also increase water stress.

The first real tropical activity of the year was the Potential Tropical Cyclone #1 that just traveled through southern Florida, dropping as much as 15 inches in some locations in Miami and surrounding areas. Just a few areas in coastal Georgia received any rain from the outer bands of this storm, and most of us were sunny and dry. PTC#1 did not develop a closed circulation and so was not given a name, but after it gets back out over water and the warm Gulf Stream, it will likely be named Alex as it tracks off to the east away from the US. Just shows that it does not need to be a named storm to cause a lot of damage if it hits near you, and rain can be as much of a problem as high winds!

There is nothing else brewing in the tropics right now, but the Gulf of Mexico is warmer than normal and that is the prime tropical development region in June and July, so we could see more action later in June. The GFS model is hinting at another Gulf storm around the 3rd week of June, but it often does that far in advance. Most of the time, those predicted storms do not come to fruition, so don't get too excited if people post dire maps of hurricanes at hour 360 on social media, since they are usually just a single model without much support from other predictions. If a storm does develop, it will likely be in plenty of time for you to react as long as you are watching the forecasts regularly.

La Nina is still hanging on in the Eastern Pacific Ocean and has gotten a little colder, which means it will likely continue through the summer. That will enhance the storm activity in the Atlantic, making this another active year, as predicted. But of course, it really only matters if it comes near you, so be prepared but not worried at this point. The start of the season is a great time to make sure you are ready so that if a storm does head for you, you have planned what to do and have all your documentation in order.

Early Season Observations Scott Monfort, UGA

Seed quality has been very good this season. I have received very few phone calls regarding poor stands as it relates to seed quality. In conducting a few stand counts, we were getting 5 to 6 plants per foot of row so we were getting very good emergence. The only calls I have received regarding planting have been related to grower mistakes like: planting to fast, wrong chain sprocket setup, not using inoculants in a field new to peanut. Luckily, the stands in the first two were adequate and did not need to be replanted. The missing inoculant question would require 60 units of nitrogen. Thrips pressure seemed to be pretty heavy for much of April and May. With this in mind we are already seeing TSWV, especially where growers used imidacloprid.

A few things to remember regarding peanut cultivars:

- Georgia-06G

- Still the most flexible variety across state. Still highest overall yield. 140-150 day maturity. Good peg strength.

- TifNV-High O/L – High Oleic
  - Newest nematode variety, ~145 day maturity, better WM, TSWV and LS resistance than 06G which allows for earlier planting, some peg issues observed. Very good resistance to root-knot. 500 to 1000 lbs yield lag vs. GA06g

- TiftNV HG - High Oleic
  - 2-3 years before seed will be available. Very good resistance to root-knot and does not have yield lag. Yielding just as good as ga-06G

- AUNPL-17 - High Oleic
  - We are still learning about this variety but looks pretty good so far. The breeders say it has a good level white mold, Leaf spot, and TSWV resistance. Maturity is 145 DAP. Alabama group says it performs well across environments.

- Georgia-12Y
  - Acreage is growing, 150-155-day Maturity, performs in most environments, High level of TSWV resistance, good level of White Mold resistance. better level of LS resistance than GA-06G, very susceptible to Rhizoctonia limb Rot. This variety needs to be managed for vine growth (Apogee or Kudos) in irrigated fields. Needs to be planted before May 12th, it does not reach high yields after May 12th in most years. Grade is 1-2 points less than GA06G.

- Georgia 16HO - High Oleic
  - This variety has performed well compared to Ga-06G. One of the better high-oleic varieties. It performs well in most environments. It had good TSWV resistance so it can be planted early. It is slightly more susceptible to early leafspot than GA-06G. We

    noticed some elevated pod loss (excessive moisture) this past year with this variety but it still yielded very close to Ga-06G. 140-145 Day Maturity.

- Georgia-18RU
  - This variety has performed well compared to Ga-06G. It is slightly more susceptible to TSWV (I would be cautious about planting in April). Yield is similar to GA-06G with grades being 1-2 points higher. 140-145 day maturity. Seem to do good across environments.
  -

- Georgia-20VHO – High Oleic
  - This variety has performed (yield and Grade) well compared to Ga-06G in well drained soils. 140-145 day maturity. We noticed some elevated pod loss (excessive moisture) this past two years with this variety. You could observe significant yield loss in fields with excessive moisture.

Late Planting

Just like most years there are several areas in the Georgia peanut belt that did not receive sufficient rainfall in May to plant during our recommended time frame. There will be some fields planted in early to mid-June, but hopefully only a few. The risk in planting after about June 5th is that it pushes maturity well into October, which can start to get cold enough to stop normal maturation of the pods, thus lowering yield and grade potential. If Georgia-06G, or any other similar maturity range cultivar, is planted on June 15, then the "normal" maturation period of 140-145 days after planting would put digging around November 2nd. The average minimum temperature at Tifton for November 2nd is around 50. However, it is not unusual to have low temperatures in the lower 40's in mid to late October in some years. The bottom line is that planting as late as June 15 is very risky for reaching optimal yield and grade.

Peanut Maturity Calendars (April, May & June)

April

PEANUT MATURITY CALENDAR

Date of Indicated Days After Planting:

Planting Date	Blooming.	First Pegs.	Critical pod-fill, water use, and white mold control period about 60-110 DAP.				Begin Hull scrape to est. time to harvest.		*Typical maturity range for medium maturity varieties.					*Increasing risk of over-maturity and pod loss.		
	35	45	60	75	90	105	120	125	130	135	140	145	150	155	160	170
1-Apr	6-May	16-May	31-May	15-Jun	30-Jun	15-Jul	30-Jul	4-Aug	9-Aug	14-Aug	19-Aug	24-Aug	29-Aug	3-Sep	8-Sep	18-Sep
2	7-May	17-May	1-Jun	16-Jun	1-Jul	16-Jul	31-Jul	5-Aug	10-Aug	15-Aug	20-Aug	25-Aug	30-Aug	4-Sep	9-Sep	19-Sep
3	8-May	18-May	2-Jun	17-Jun	2-Jul	17-Jul	1-Aug	6-Aug	11-Aug	16-Aug	21-Aug	26-Aug	31-Aug	5-Sep	10-Sep	20-Sep
4	9-May	19-May	3-Jun	18-Jun	3-Jul	18-Jul	2-Aug	7-Aug	12-Aug	17-Aug	22-Aug	27-Aug	1-Sep	6-Sep	11-Sep	21-Sep
5	10-May	20-May	4-Jun	19-Jun	4-Jul	19-Jul	3-Aug	8-Aug	13-Aug	18-Aug	23-Aug	28-Aug	2-Sep	7-Sep	12-Sep	22-Sep
6	11-May	21-May	5-Jun	20-Jun	5-Jul	20-Jul	4-Aug	9-Aug	14-Aug	19-Aug	24-Aug	29-Aug	3-Sep	8-Sep	13-Sep	23-Sep
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May

PEANUT MATURITY CALENDAR

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25	29-Jun	9-Jul	24-Jul	8-Aug	23-Aug	7-Sep	22-Sep	27-Sep	2-Oct	7-Oct	12-Oct	17-Oct	22-Oct	27-Oct	1-Nov	11-Nov
26	30-Jun	10-Jul	25-Jul	9-Aug	24-Aug	8-Sep	23-Sep	28-Sep	3-Oct	8-Oct	13-Oct	18-Oct	23-Oct	28-Oct	2-Nov	12-Nov
27	1-Jul	11-Jul	26-Jul	10-Aug	25-Aug	9-Sep	24-Sep	29-Sep	4-Oct	9-Oct	14-Oct	19-Oct	24-Oct	29-Oct	3-Nov	13-Nov
28	2-Jul	12-Jul	27-Jul	11-Aug	26-Aug	10-Sep	25-Sep	30-Sep	5-Oct	10-Oct	15-Oct	20-Oct	25-Oct	30-Oct	4-Nov	14-Nov
29	3-Jul	13-Jul	28-Jul	12-Aug	27-Aug	11-Sep	26-Sep	1-Oct	6-Oct	11-Oct	16-Oct	21-Oct	26-Oct	31-Oct	5-Nov	15-Nov
30	4-Jul	14-Jul	29-Jul	13-Aug	28-Aug	12-Sep	27-Sep	2-Oct	7-Oct	12-Oct	17-Oct	22-Oct	27-Oct	1-Nov	6-Nov	16-Nov
31	5-Jul	15-Jul	30-Jul	14-Aug	29-Aug	13-Sep	28-Sep	3-Oct	8-Oct	13-Oct	18-Oct	23-Oct	28-Oct	2-Nov	7-Nov	17-Nov

June

PEANUT MATURITY CALENDAR

Date of Indicated Days After Planting:

Planting Date	Blooming.	First Pegs.	Critical pod-fill, water use, and white mold control period about 60-110 DAP.				Begin Hull scrape to est. time to harvest.		*Typical maturity range for medium maturity varieties.					*Increasing risk of over-maturity and pod loss.		
	35	45	60	75	90	105	120	125	130	135	140	145	150	155	160	170
June 1	6-Jul	16-Jul	31-Jul	15-Aug	30-Aug	14-Sep	29-Sep	4-Oct	9-Oct	14-Oct	19-Oct	24-Oct	29-Oct	3-Nov	8-Nov	18-Nov
2	7-Jul	17-Jul	1-Aug	16-Aug	31-Aug	15-Sep	30-Sep	5-Oct	10-Oct	15-Oct	20-Oct	25-Oct	30-Oct	4-Nov	9-Nov	19-Nov
3	8-Jul	18-Jul	2-Aug	17-Aug	1-Sep	16-Sep	1-Oct	6-Oct	11-Oct	16-Oct	21-Oct	26-Oct	31-Oct	5-Nov	10-Nov	20-Nov
4	9-Jul	19-Jul	3-Aug	18-Aug	2-Sep	17-Sep	2-Oct	7-Oct	12-Oct	17-Oct	22-Oct	27-Oct	1-Nov	6-Nov	11-Nov	21-Nov
5	10-Jul	20-Jul	4-Aug	19-Aug	3-Sep	18-Sep	3-Oct	8-Oct	13-Oct	18-Oct	23-Oct	28-Oct	2-Nov	7-Nov	12-Nov	22-Nov
6	11-Jul	21-Jul	5-Aug	20-Aug	4-Sep	19-Sep	4-Oct	9-Oct	14-Oct	19-Oct	24-Oct	29-Oct	3-Nov	8-Nov	13-Nov	23-Nov
7	12-Jul	22-Jul	6-Aug	21-Aug	5-Sep	20-Sep	5-Oct	10-Oct	15-Oct	20-Oct	25-Oct	30-Oct	4-Nov	9-Nov	14-Nov	24-Nov
8	13-Jul	23-Jul	7-Aug	22-Aug	6-Sep	21-Sep	6-Oct	11-Oct	16-Oct	21-Oct	26-Oct	31-Oct	5-Nov	10-Nov	15-Nov	25-Nov
9	14-Jul	24-Jul	8-Aug	23-Aug	7-Sep	22-Sep	7-Oct	12-Oct	17-Oct	22-Oct	27-Oct	1-Nov	6-Nov	11-Nov	16-Nov	26-Nov
10	15-Jul	25-Jul	9-Aug	24-Aug	8-Sep	23-Sep	8-Oct	13-Oct	18-Oct	23-Oct	28-Oct	2-Nov	7-Nov	12-Nov	17-Nov	27-Nov

*VARIATION IN SEASONAL TEMPERATURE AND DROUGHT STRESS, VARIETY, & OTHER FACTORS

Should I Use Gypsum on my Peanuts This Year? Or Maybe an Alternative Source of Calcium?

Glen Harris, UGA

There doesn't seem to be as much talk about a gypsum shortage this year, but there are still 'supply chain" issues and price of input concerns to the point where there is plenty of talk about whether to apply gypsum or maybe use an alternative.

To review, UGA Extension recommends using gypsum when you take a pegging zone soil sample (4 inches deep) soon after peanut emergence and when the results say you have either 1) less than 500 lb Ca/a or 2) a Ca:K ratio of less than 3:1. If either

of these criteria are not met then we recommend applying 1000 lb/a gypsum m at early bloom (approximately 30-45 days after planting). All peanuts to be saved for seed get 1000 lb/a gypsum automatically since calcium levels in the nut are critical to good seed germination.

Can I use lime instead of gypsum? Yes, but lime needs to be applied before planting since the calcium in lime is not as soluble as the calcium in gypsum. So timing is important. Also if you deep turn you need to deep turn before applying lime so you don't bury it. So placement is important. The calcium needs to be in the "pegging zone" (top 4 inches). And technically, lime should only be used when you either need a pH adjustment (below 6.0) or start around 6.0 so the lime will not raise the soil pH too high.

What about "liquid lime" ? There is a product currently available called "Topflow" that has been field tested at a 12 gal per acre rate, surface applied at planting. This may not provide as much calcium to the pegging zone as 1000 pound per acre of gypsum and won't raise the soil test calcium as much but can be considered an alternative if you cannot get gypsum. Even though it is a liquid, it is still lime so it needs to be applied before or at planting.

What about other "Liquid Calcium's" ? Well, it depends on which "liquid calcium: you are talking about. For example, recent research has been conducted showing 10 gallons per acre of calcium chloride (or 20 gallons of calcium thiosulfate) through the pivot during peak pod fill (around 75 days after planting) can have some benefit. Again, this is not as good as a timely gypsum application but can be viewed as an 'emergency" or "insurance" application. The calcium in both of these products is basically 100 % soluble and therefore can be applied during peak pod fill. Also, calcium chloride should be the more affordable option but check on price and availability.

What if I get delayed getting gypsum? Or how late is too late to put out gypsum? Again, gypsum should be applied at "early bloom" or approximately 30-45 days after planting. Since "peak pod fill" is around 60-90 days after planting you can still see benefit from gypsum applications made any time before 60 days after planting. It can also depend on water or irrigation since you need water to dissolve the calcium and get it through the hull into the developing kernels.

Does every field of peanuts in Georgia need gypsum ? Probably not, so if supply is short or budgets are tight how do you decide which fields get gypsum? First, any peanut being saved for seed should automatically receive 1000 pound per acre of gypsum, regardless of soil test calcium levels. Second, any field where results from a pegging zone test show you need gypsum should get it. Remember, if the soil test calcium (Mehlich 1 Extractant) is 500 or higher and the calcium to potassium ratio is 3:1 or higher in a pegging zone sample then the soil test calcium will be considered adequate and no gypsum will be recommended. This is based on research field trials looking at yield and grade. Research also shows that gypsum is even more important in dryland compared to under irrigation since water will be more limiting in dryland and less soil test calcium will be available.

Can I base my gypsum or calcium needs on a Fall soil sample? You can, and this is better than nothing, but it is still better to base your calcium needs on a pegging zone sample. Soil samples taken in the Fall were likely taken at a deeper than the pegging zone. Also, calcium can leach out of the pegging zone between a Fall sample and early bloom and give you a false sense of security. Finally, if you take a fall soil sample and then deep turn before planting peanuts you can very possibly turn up soil into the pegging zone that is low in calcium.

How important is gypsum for peanut production? This probably should have been the first question answered. And the answer …. It is very or extremely important! Since peanuts as a deep tap-rooted legume can fix nitrogen and scavenge residual soil phosphorous and potassium, calcium is the most critical element. Lack of calcium in the pegging zone to be absorbed through the hull can result in "pops" or no kernels which obviously reduces yield. Calcium deficiency on peanut can also lead to pod rot. And again, calcium is critical to germination for peanuts saved for seed for next year.

Sprayer Considerations Simerjeet Virk, UGA

Spray Considerations: As growers shift their focus from planting to crop management, it is important to be timely and efficient with fungicide applications in peanut to stay on top of pest and disease control throughout the season. Adequate spray coverage and penetration into the peanut canopy is important for achieving desired efficacy and to protect peanut yield. Below are several considerations for effective fungicide applications with boom sprayers:

Nozzle Selection: Nozzle type affects product rate and spray coverage. Make sure to check fungicide labels for recommended application rate, droplet size, and conditions needed for safe application. Consult the manufacturer's nozzle catalog for selecting the nozzle that provides the desired rate and best coverage. Nozzle selection will also depend on the ground speed and pressure required to achieve the rate in gallons per acre.

Spray Pressure: Spray pattern and droplet size changes with pressure. Lower pressures result in larger droplets whereas higher pressures produce smaller droplets for a given nozzle size. For most fungicide applications, consider selecting a nozzle that provides the medium to coarse droplet size in 30 – 50 PSI pressure range.

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. It is recommended to reduce the sprayer speed (less than 10 mph) to obtain a consistent and more uniform coverage.

Boom Height: Boom height influences overlap and uniformity of spray application at a selected nozzle spacing and spray angle. Lower boom height (20 – 30 inches from the target) is highly recommended for maintaining a proper spray pattern and overlap to achieve satisfactory coverage while reducing spray particle drift.

Environment: Weather conditions such as wind speed and temperature also play a role in making ontarget application while also achieving the desired spray coverage. High wind speed results in greater drift and less product being applied onto the crop. Wind direction should be also considered to avoid spraying towards sensitive crops, homes, etc. Warmer temperatures also increase drift especially at higher boom heights.

Sprayer Calibration: Proper sprayer calibration is important to verify the nozzle output (gallons per minute) and consequently application rate (gallons per acre) based on the selected ground speed and nozzle spacing. During calibration, make sure to check all the nozzles for application uniformity across the whole boom, and for any leaks or uneven spray patterns.

Spray Technology: Spray technologies such as rate controller and section or individual nozzle control can be utilized to minimize variations in application rate and coverage. Advanced technologies such as PWM (pulse width modulation) and automatic boom height control systems are also available for use on boom sprayers for improving application accuracy – both rate and droplet size.

June, 2022 Peanut Pointers Bob Kemerait, UGA

White mold could easily become one of the greatest threats to peanut production in 2022.
Temperatures in southern Georgia are expected to be in the mid-to-upper 90s for the remainder of June. Rainfall is anticipated to be sparse and scattered. *Sclerotium rolfsii*, the fungal pathogen that causes white mold (more properly referred to as "southern stem rot") thrives in hot weather. Lack of rainfall, especially in non-irrigated fields, can make it more difficult to control white mold as rainfall or irrigation within 24 hours after a fungicide application is important to move the fungicide from the foliage to the crown of the plant. Protecting the crown of the plant is an important "target" for management of white mold.

Sclerotium rolfsii can infect peanut plants at any growth stage, but causes the greatest damage when the limbs and foliage along a row have closed. This allows the fungus to easily spread from one plant to the next when conditions are warm and humid. Smaller plants can be affected by white mold early in the season; however spread from one plant to the next is much more restricted.

Recommendation: Though "white mold programs" typically begin at about 60 days after planting when the peanut canopy is larger and more at risk for disease spread, growers should consider putting something out at 45 days after planting. I believe a more aggressive white mold program is justified this season because of early-season conditions. Growers could initiate a "white mold" program by one of three ways.

1. Mix 7.2 fl oz of tebuconazole with a leaf spot material, for example chlorothalonil.
2. Use products like Priaxor or Lucento that have fair white mold activity in addition to stron leaf spot control.
3. Initiate the 3-spray Elatus (7.3 oz) or Excalia (2.0-3.0 fl oz/A) programs

For several reasons beyond those mentioned above, June is a critically important month for disease management and, sometimes, for nematode management as well. Based on planting date, most of the peanut crop will be between 30 and 45 days after planting at some point in June. Some of the below is "recycled" from last season. I hesitate to do this, but if fits again this year, so here goes….

1. Fungicide programs for management of leaf spot diseases (except for the earliest and latestplanted peanuts) are typically initiated during the month of June. Leaf spot programs should begin closer to 30 DAP when A) the field is at higher risk to leaf spot based upon results from Peanut Rx, and/or when B) fungicides to include chlorothalonil, Mazinga, chlorothalonil + Domark, and chlorothalonil + Alto are used as the first fungicide application.
2. Fungicide programs for leaf spot management can safely begin closer to 45 days after planting when A) the field is low-risk to leaf spot diseases as determined with Peanut X, B) fungicides such as Priaxor, Lucento, or Aproach Prima are used in the opening fungicide application, or C) Velum or Velum Total is used in-furrow at planting.
3. Growers should avoid, if at all, possible initiating a peanut fungicide program later than 45 days after planting.
4. The "backbone" of most fungicide programs for control of white mold does not begin until approximately 60 days after planting; however growers often start earlier, especially when short rotation increases risk to disease. Effective ways to begin a white mold program within the first 45 days after plantings are to A) apply Proline (5.7 fl oz/A) in a narrow band over the peanuts, B) include tebuconazole or azoxystrobin with your first leaf spot applications, or C) adopt Elatus or Excalia programs that begin as early as 30 days after planting.
5. Applications of Propulse can be made as early as 45 days after planting to fight leaf spot, white mold, and to supplement earlier nematicide applications for control of nematodes.

The "Good": Timely fungicide applications (before disease is established) are a critically important tactic for controlling disease. Starting your leaf spot program on-time, often in June, sets the stage for a successful disease management program and best yields.

The "Bad": Getting behind in a fungicide program early in the season may allow disease to become established that is difficult (if not impossible) to manage later in the season. While I know some growers wait until 50-55 days after planting to begin their program, I strongly advise you to not wait later than 45 days after planting and to begin as early as 30 days after planting in a number of situations.

June Mid-Season Irrigation Update (*David Hall, Jason Mallard, Wesley Porter*): The only thing for

certain in farming is that there are no two years the same. May of 2022 brought us some very hot and dry weather. Some areas of our state had some brief relief from the dry weather during the last week of May, however, this was not the case everywhere and even this little bit of rain and soil moisture did not last long when the hot and dry conditions returned. While we typically do not need to irrigate cotton during the first month or so after planting, conditions without rainfall may require irrigation to promote seed germination and emergence, or to relieve some heat stress.

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. 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

Emergence to First Square	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 don't forget that typically as water use increases is in late-June through July, usually so does very hot and dry weather, so keep 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. Please keep in mind, if you have been using soil moisture sensors and you have "weighted" your sensors as discussed in the last newsletter, do not forget to change the weighting to reflect current crop water use in the profile. Root growth has dramatically increased downward and we now need to be more balanced with our sensor readings.

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.

Sprayer Considerations (*Simer Virk, Eric Prostko, Wesley Porter*): As growers shift their focus from planting to crop management, it is important to be timely and effective with pesticide applications to stay on top of pest and disease control throughout the season. Achieving desired spray coverage and efficacy while keeping off-target movement of pesticides to a minimum can be challenging but an important consideration for us to continue using these valuable pest management tools in the future. Spray applications resulting in under- or over-application of pesticides, ineffective coverage, or off-target movement can have serious consequences. Below are several things to consider to help keep the product on target when applying pesticides safely and efficiently with boom sprayers:

Nozzle Selection: Nozzle type affects sprayer output, uniformity, coverage and drift. Make sure to check pesticide labels for recommended application rate, droplet size, and conditions needed to safely apply the pesticide. Consult the manufacturer's nozzle catalog for selecting the nozzle that provides the desired output (flow rate and droplet size) specific to the application. Nozzle selection will also depend on the ground speed and pressure required to achieve the rate in gallons per acre.

Spray Pressure: Spray pattern and droplet size changes with pressure. Lower pressures result in larger droplets whereas higher pressures produce smaller droplets for a given nozzle size. Based on the application (whether coverage or drift control is necessary), consider selecting a nozzle that provides the required droplet size in 30 – 50 PSI pressure range. Spray operation at both excessively low and high pressures results in non-uniform spray angle and pattern.

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 vice-versa. It is recommended to reduce the sprayer speed (less than 10 mph) to obtain a consistent and more uniform coverage. Faster speeds will cause excessive boom bounce sending finer droplets higher in the air and increasing potential for drift.

Boom Height: Boom height influences overlap and uniformity of spray application at a selected nozzle

spacing and spray angle. Lower boom height (20 – 30 inches from the target) is generally recommended for maintaining a proper spray pattern and overlap to achieve satisfactory coverage while reducing drift.

Environment: Weather conditions such as wind speed and temperature also play a role in achieving the desired spray coverage and on-target application. High wind speed affects spray coverage and also results

in greater drift. Wind direction should be also considered to avoid spraying towards sensitive crops, homes, etc. Warmer temperatures also increases drift especially at higher boom heights. To minimize off-target movement, avoid pesticide applications when conditions for temperature inversions are favorable.

Sprayer Calibration: Proper sprayer calibration is important to verify the nozzle output (gallons per minute) and consequently application rate (gallons per acre) based on the selected ground speed and nozzle spacing. During calibration, make sure to check all the nozzles for application uniformity across the whole boom, and for any leaks or uneven spray patterns.

Spray Technology: Spray technologies such as rate controller and section or individual nozzle control can be utilized to minimize variations in application rate and coverage. Advanced technologies such as PWM (pulse width modulation) nozzle technology and automatic boom height control is also currently available for use on spraying equipment for better application control and drift reduction.

Crop Monitoring and Management (*John Snider, Ved Parkash, Gurpreet Virk, Camp Hand*): Most of the cotton crop has been planted by now. The crop planted in late April or early May should be at the squaring stage soon after this newsletter comes out. As mentioned in the last newsletter, utilization of crop monitoring and management tools is an important component of any cotton production system. Each year, cotton faces unique challenges affecting growth and development. Thus, crop management decisions are highly dependent on prevailing conditions, and we should not broadly assume that what worked or did not work last season will have the same effect this season. As a result, it is important to actively engage in crop monitoring for cotton and make management decisions based on developmental trends. Cotton growth monitoring should be started when the cotton plant is at the 8 to 10 leaf stage. There are a number of indices that can be used as tools to monitor crop development and make management decisions such as measuring plant height, node development, counting the number of nodes above white flower (NAWF), internode length, and height to node ratio.

Plant Height: Multiple attempts have been made by researchers to identify the ideal plant height in cotton. However, early in the season, plant height is influenced by a number of different factors such as temperature, rainfall, fertility, variety, row spacing, and plant density. Therefore, plant height alone is not the best indicator of crop vigor. According to the cotton production guide, an ideal plant height is generally around 44 to 50 inches by the end of the season, but this can vary substantially. Another way to assess plant vigor is by measuring the length of top five internodes which can be used as an indicator of main stem elongation rate. The average internode length can be useful when the increase in plant height is constant (not increasing or decreasing) in order to determine the need for PGR applications.

Node development: Nodes are the points of attachment of leaves and branches to the main stem. As a general rule, it takes 3 days to develop a node under optimal environmental conditions. Another way to look at the rate of new node development is that approximately 50 DD60's are required to produce a new node. Thus, temperature can have a pronounced effect on the rate of development. Therefore, depending upon temperature, the development of a new node could take as little as 2 days under high temperature

conditions to as much as 10 days under low temperature conditions. The cotton plant will produce its first fruiting branch on node 6 ± 1.

An ideal cotton plant will have about 21 to 23 nodes by the end of the season. The number of mainstem nodes above a first position white flower (NAWF) could potentially be indicative of growth limiting stress, high plant vigor (horsepower), or poor fruit retention, depending on seasonal trends.

Nodes Above White Flower: NAWF is an indicator of the status of intra-plant competition between vegetative and reproductive growth. Values ranging from 9 to 12 squaring nodes above a first position white flower at first flower are indicative of ideal to vigorous vegetative growth. A low number of NAWF at first flower (i.e. 5) suggests poor vigor and 12 or more NAWF at first flower indicates vigorous or even excessive vegetative growth. With the onset of flowering and boll growth, NAWF should decrease as long as plants are retaining fruit, and when only 3-5 NAWF are left, this point is called cutout (Bednarz and Nichols, 2005). This represents the end to new vegetative growth by the cotton plant. Simply by measuring NAWF, growers can determine the balance between vegetative and reproductive growth and make management decisions accordingly. Figure 1 below is from Guthrie et al. (1993) and shows different trends in NAWF. A rapid decline in NAWF as shown in A and B curves of Figure 1 suggests a reduction in terminal growth due to rapid boll loading. The ideal situation is represented in (A), where the plant has good vegetative growth early on and then shows a rapid decline due to high fruit retention. The results presented in (B) are indicative of stress, where plant starts with a low number of NAWF, and then reaches cutout prematurely. However, curves C and D indicate vigorous growth, but the lack of a consistent downward trend in NAWF may suggest that insect pests or some other stress is limiting fruit retention required to constrain new vegetative growth.

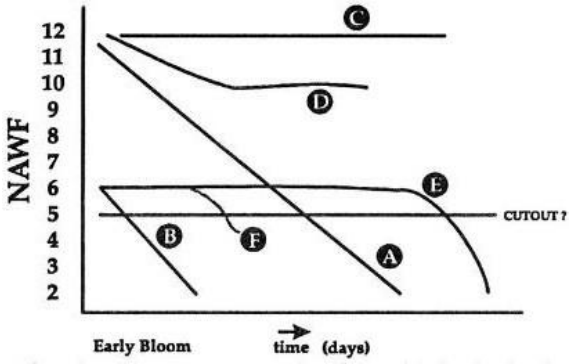


Figure 1: Different seasonal trends in NAWF reduction with growth (Guthrie et al., 1993)

Internode length: The portion of the mainstem between two consecutive nodes is referred to as the internode. Once the grower starts making PGR application decisions (particularly after early flowering), a long internode (3-5 inches) suggests conditions are favorable for plant growth with a potential for rank growth. A short internode (1.5-2 inches) suggests the crop may be under stress, and a moderate internode length (2-3 inches) indicates that vegetative growth is adequate. The measurement of internode length between the fourth and fifth internode from the terminal is usually the best indicator of plant growth as cell elongation stops at lower nodes.

Height to node ratio (HNR): Height to node ratio is calculated by dividing the plant height by the total number of mainstem nodes. Figure 2 shows height to node ratio values for a non-stressed, high yielding cotton crop at a given stage of development (i.e. total number of mainstem nodes). Growers can use information to compare with their crop's development and make management decisions based on it. A low HNR indicates relatively low vigor and there is a need to put effort into relieving growth-limiting stress (water, nutrients, etc.). A high HNR indicates excessive vegetative growth and that there is a need to consider plant growth management inputs.

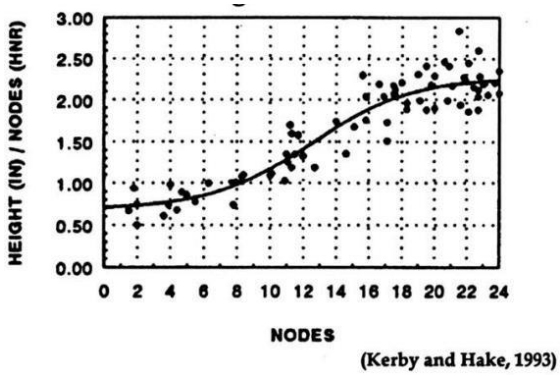


Figure 2. A benchmark data set indicating an ideal height to node ratio at a given stage of plant development (total number of mainstem nodes).

References

- Kerby, T.A., R.E. Plant, and R.D. Horrocks. 1997. Height-to-Node Ratio as an Index of Early Season Cotton Growth. Journal of Production Agriculture 10:80-83. doi: https://doi.org/10.2134/jpa1997.0080.
- Whitaker, J., Culpepper, S., Freeman, M., Harris, G., Kemerait, B., Perry, C., Porter, W., Roberts, P., Shurley, D., Smith, A. (2018). 2018 Georgia cotton production guide. Retrieved from *http://www.ugacotton.com/vault/file/2018-UGA-Cotton-Production-Guide-Final-Print-Version-1.pdf*
- Guthrie, D., F. Bourland, P. Tugwell, and K. Hake. 1993. Charting a course to cutout. In: Cotton Physiology Today. National Cotton Council, Memphis, TN.

Agronomic Update (*Camp Hand*): Well, each growing season is unique and this one has been no exception. We haven't been catching as many rains on much of the station, but I am always glad to hear that other parts of the state are getting much needed rainfall. But prior to sporadic rain showers, it had gotten extremely dry. How dry you ask? Below is a conversation that happened between myself and Tucker Price, Cook County ANR Agent, approximately three weeks ago:

Me: "Hey Tucker, how's it going?"

Tucker: “Pretty good Camp, how about you?”

Me: “Can’t complain. What’s going on?”

Tucker: “Well, it’s so dry the nutsedge is dying!!”

That is about when I knew we needed a rain and needed one bad. Luckily since then there have been a couple of fronts come through as well as the usual “pop-up” shower that happens some afternoons. This has greatly helped us close the gap in planting, as the USDA crop progress report has us at approximately 86% planted as of June 6, which puts us a little ahead of the five year average.

In my drives across the state, from what I have seen, the crop looks to be in really good shape thus far. I think we are positioned for success as of right now. The major thing I have been getting calls on is replants. Of course at this point, it might be a “take what you get” type situation. But even the “poor” stands I have been called to look at aren’t all that bad. There are definitely situations that have warranted replants this year, but for the relatively harsh planting conditions we have had I think we are in really good shape. If you are toying with the idea of replanting your crop, remember – top end yield can still be achieved at a final stand of one plant per foot, evenly spaced. If you decide to replant, keep in mind plantback intervals for residual herbicides that were applied PRE or POST, and also remember we are starting to come to the end of the planting window here in Georgia.

USDA also reported that 8% of our crop is squaring as of June 6. I applied some squaring treatments to cotton that was planted May 3 this morning (June 7), so we might be a little further along than the reported number. With that, there’s a couple of things I would be thinking about if my cotton was beginning to square. The first is nitrogen fertility. If preplant nitrogen rates were reduced or eliminated, it is of the utmost importance that sidedress nitrogen be applied in a timely manner. Dr. Glen Harris recommends that sidedress nitrogen go out closer to first square than first bloom if there was little to no preplant nitrogen utilized. Timeliness is key. Secondly is growth regulators. I am already starting to get questions about PGR applications on cotton, and on our early planted, irrigated ground with an aggressive variety, prebloom applications will be necessary. Keep in mind that with PGRs, timing is more important than rate (i.e. lower rates early in the season work better than high rates late in the season).

I hope everyone safely wraps up planting in the coming weeks. As always, if you have any questions, don’t hesitate to reach out. Your local UGA County Extension Agent and specialists are here to help!

Tarnished Plant Bug Management (*Phillip Roberts*): Tarnished plant bug is an occasional insect pest of cotton in Georgia. Primary damage caused by plant bugs is feeding on small squares in plant terminals.

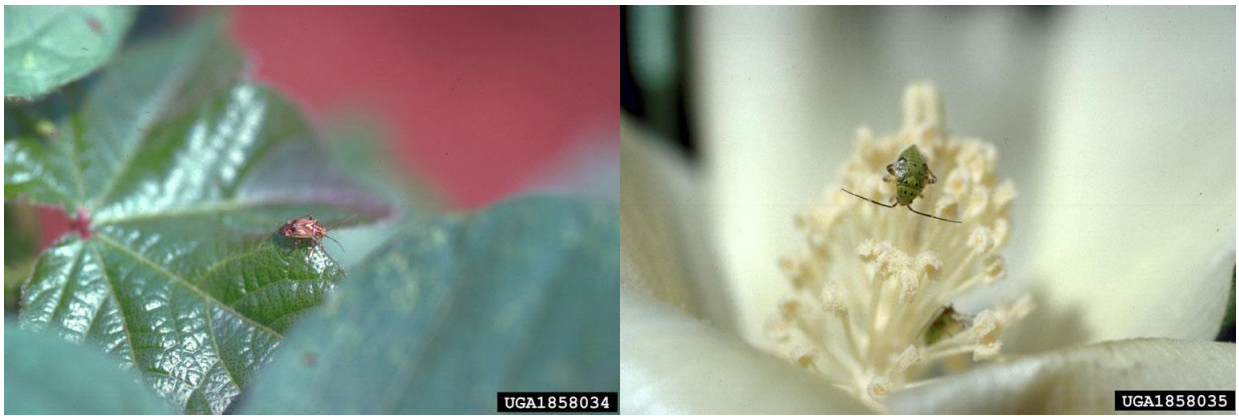
However, plant bugs may also feed on large squares, small bolls, and terminals. Plant bugs insert their needle like piercing sucking mouthparts into fruiting forms and feed on the plant juices. After a pinhead square has been damaged, it turns yellow to brown or black and easily falls from the plant when touched. Healthy undamaged squares will be firmly attached to the plant. When the square is shed by the plant, an

elliptical scar where the square was attached remains. No visible damage is apparent on the outer surface of squares damaged by plant bugs. Plant bug feeding in the terminal may alter the physiology and result in a malformed plant. Large squares which are damaged will often remain on the plant and appear healthy and normal, however when the square blooms the flower will have warty growths on the petals and darkened anthers. This type of flower damage is referred to as a "dirty bloom". Plant bugs may also feed on small bolls. Excessive feeding may cause boll shed, but most often localized lint and seed damage is the result. Callous warty growths on the inner surface of the boll wall will often form near the feeding site (appears very similar to stink bug damage).

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

It is important that we scout all fields and use thresholds. Insecticide should only be used if thresholds are exceeded since beneficial insect populations will be disrupted with plant bug applications. During 2021 we estimated that 30 percent of the cotton in Georgia was treated for plant bugs. Our goal with a plant bug management program is to retain at least 80 percent of first positions when we enter bloom.

Adult tarnished plant bugs are about ¼ inch long with a general brown color mottled by patches of white, yellow, reddish-brown or black. A light-colored "V" on the scutellum (behind the head) and two light-colored patches further back on the wings are characteristic. Eggs are about 1 mm long and are almost always embedded into plant tissue, and thus not easily found. Immature tarnished plant bugs typically vary from yellowish-green to dark green or brownish. Early instars can look like an aphid, but tarnished plant bug nymphs run quickly whereas aphids are docile and move very slowly. Later nymphal instars have four dark-colored spots on their thorax and one spot in the middle of the abdomen. Plant bugs have a large host range and survive the winter as adults on wild host plants. Females lay 50-150 eggs which hatch in 7-12 days and nymphs develop into adults in 15-25 days.



Tarnished plant bug adult (left) and nymph (right). Images by Ron Smith, Auburn University, Bugwood.org.

Scouting plant bugs can be accomplished by monitoring square retention and being observant for plant bugs, using a sweep net (pre-bloom), using a drop cloth (after bloom), or preferably a combination of monitoring square retention and sampling for plant bugs.

Square retention counts should be made once cotton begins fruiting and continuing into the 2nd week of bloom. As we get further into bloom, square retention is a less reliable indicator of possible plant bug feeding due to natural square loss for various reasons. To make a square retention count gently pull the top two main stem leaves apart and look for the presence or absence of a small square. Typically, we teach scouts to monitor a single fruiting site per plant. The threshold is when plants are retaining less than 80% of small squares and plant bugs are observed. It is also a good idea to randomly pull plants in the field to monitor overall square retention. Again, our goal is to maintain 80 percent of all first positions when we enter bloom. Plants with 80 percent first position square retention at first bloom still have maximum yield potential.

Sweep nets (15-inch diameter) are a good tool for monitoring plant bug adults on squaring cotton. Adult plant bugs are elusive, so walk quickly when sweeping. Drop cloths are the preferred sampling tool in blooming cotton and are much more effective in detecting plant bug nymphs.

Plant Bug Thresholds:

First two weeks of squaring:
Sweep Net: 8 plant bugs per 100 sweeps
Drop Cloth: 1 plant bug per 6 row feet

Third week of squaring through bloom:
Sweep Net: 15 plant bugs per 100 sweeps
Drop Cloth: 3 plant bugs per 6 row feet

Insecticides recommended for plant bugs include Orthene, Bidrin, Admire Pro, Diamond, Vydate, Transform, and Centric. A few comments on each:

Orthene and Bidrin are organophosphates. Orthene is very active on plant bugs, however it is also is hard on beneficial insects and tends to flare spider mites. Orthene does not have activity on aphids and would likely exacerbate aphid populations if present. Bidrin is also very active on plant bugs and hard on beneficial insects. The Bidrin label only allows higher use rates such as 4-8 ounces per acre from first bloom to 30 days prior to harvest. Bidrin will provide some control of aphids. Delaying use of Orthene and Bidrin until later in the season (after bloom) is advisable.

Transform is very active on plant bugs and provides good control of aphids and is not as hard on beneficials as the OPs. Centric provides good control of plant bugs and decent but sometimes erratic control of aphids. Both of these products would be good choices when targeting plant bugs on squaring cotton. Admire Pro (imidacloprid) has some activity on plant bugs and some activity on aphids and would not be the treatment of choice if plant bug populations were high. Vydate provides fair control of plant bugs and has little to no activity on aphids.

Diamond is an insect growth regulator and is only active on immature plant bugs. Diamond will not control adults. Diamond is used on many acres in the Mid-South where plant bugs are an annual problem. Diamond performs best when applied before the situation is out of control. If you have fields where high adult populations have been observed and nymphs are starting to be found, Diamond would be a good option. In situations where adults are also being found, a knock down insecticide for adults will also be needed.

It can be difficult to obtain control of plant bugs once nymphs are embedded in a field. Be sure to obtain good coverage and potentially make more than one application if populations are high.

Deceptively Quiet: Between Emergence and First Bloom (*Bob Kemerait*): Traditionally, the lion's share of disease and management opportunities for cotton growers happen before the furrow is closed. 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", the period between planting and first-bloom offers opportunity for additional management of diseases and nematodes.

1. **Application of Vydate CLV or Return XL 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. **Scouting fields for early-detection of nematodes and Fusarium wilt**. 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. Care attention to 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.

Is Nutsedge a Growing Concern in Your Cotton Field? (*Stanley Culpepper, Taylor Randell, Jenna Vance, Hannah Wright*): Historically, nutsedge is one of the most problematic weedy pests in all of agriculture. While often referred to as one species, yellow and purple nutsedge are actually two different species that are common in Georgia cotton exhibiting unique characteristics contributing to their ability to remain troublesome.

Yellow Nutsedge is a hardy, perennial sedge, tolerant of a range of moisture conditions as well as a wide soil pH range. It rapidly reproduces and spreads over large areas, due to a system of rhizomes and tubers. Rhizomes are an underground stem system that produces either a single nutsedge shoot (to emerge from underground) or a tuber at the tip of the rhizome. Additional rhizomes are formed from the tubers, and the cycle continues. A nutsedge plant can often reach reproductive maturity in 3-4 weeks in our environment, from

emergence to the production of another tuber. This allows for numerous flushes during each cropping season. Under optimum conditions, research has shown a single plant has the capability to produce more than 6,900 tubers, which can result in 1,900 new plants a year.

Purple Nutsedge, also a perennial sedge, is the more competitive of the two nutsedge species. It prefers well-drained soils and a warmer climate, where it produces an extensive underground stem system of rhizomes and tubers. The rhizomes either extend upward to form an aboveground shoot or down further into the soil where a tuber will form at its tip. These tubers will either produce shoots, or additional rhizomes and tubers, which will begin to grow together in a chain-like structure. Often in the 3-4 weeks following emergence, a purple nutsedge plant will have begun to form these reproductive structures in Georgia cotton. Compared to yellow nutsedge, purple nutsedge reproduces more aggressively.

Nutsedge control in cotton is complex but can be achieved through understanding the weed's biology, selecting and implementing timely management approaches, and making timely SEQUENTIAL herbicide applications THROUGHOUT the season. ***Due to yellow and purple nutsedge having a perennial life cycle and vast underground reproductive systems, control is best achieved when the tuber is targeted.***

Tillage, when used repeatedly and in a timely manner can be an effective approach, especially when used in conjunction with herbicides. Repeated tillage can break up the rhizome/tuber system, which prevents the carbohydrate storage needed for germination, therefore reducing population expansion. However, if not timely, tillage can actually spread the pest throughout the field.

Herbicides, similar to tillage, can be successful but only when implementing a timely systems approach. *The theory of making a single herbicide application and expecting adequate control of these nutsedge species is scientifically flawed.* Herbicides to consider for management in cotton include the following: glyphosate, Envoke, and MSMA. Reflex can be effective on yellow nutsedge (not purple), but current use rates in cotton are quite low for consistent control with this herbicide.

An example of a cotton weed management program designed for a field heavily infested with nutsedge:

Start Clean at Planting: Tillage or glyphosate at 2.25 lb ae (rate equal to 60 oz RU PowerMax 3 which is the max use rate) applied 8 days prior to planting, followed by Gramoxone applied 1 day prior to planting (Reentry interval for Gramoxone is currently 24 hours).

At Plant: Always use two residual herbicides for pigweed, Reflex depending on rate and rainfall/irrigation may be helpful on yellow nutsedge.

POST 1: As soon as the cotton is fully emerged at about 7 days after planting (hopefully), spot spray glyphosate (rate equal RU PowerMax 3 at 30 oz/A) on nutsedge infested areas of the field.

POST 2: About 14-17 days after planting or 7 to 10 days after the first glyphosate application, apply the broadcast application designed for pigweed management making sure to include glyphosate (rate equal to

Roundup PowerMax 3 at 30 oz/A).

POST 3: Envoke can be applied to cotton after the five-leaf stage through 60 days prior to harvest. The herbicide is expected to cause some cotton injury when applied topically, including stunting; thus, a sloppy directed application may be more acceptable for some growers. Mixtures with glyphosate are very effective on both nutsedge species.

Layby: MSMA mixtures are advised and can be very effective. Also, if Envoke was not applied earlier in the season, then a mixture such as Direx + MSMA + Envoke is outstanding; if grasses are present, one could apply glyphosate + Direx + Envoke as an alternative, although the MSMA mixture is preferred for nutsedge.

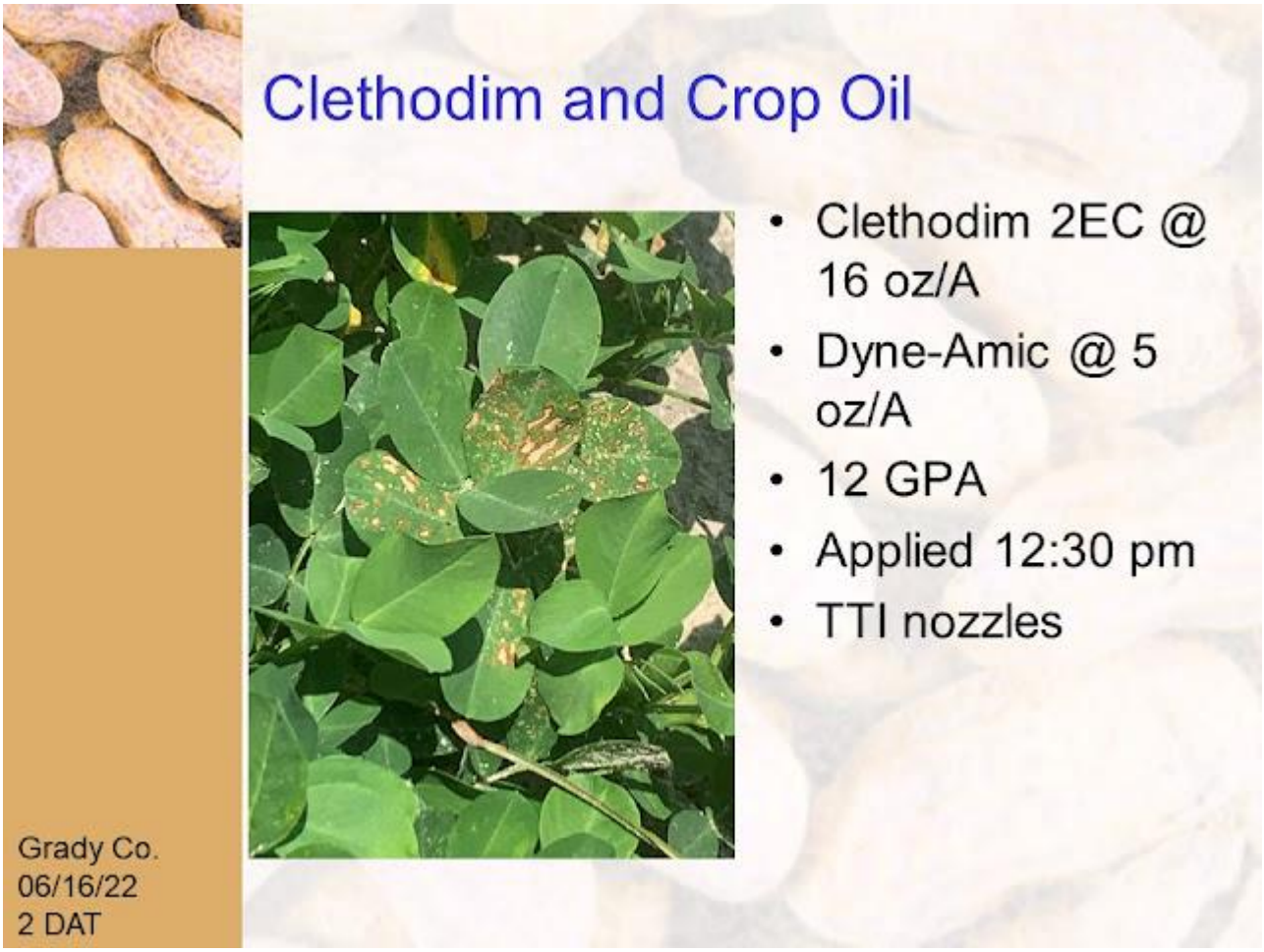
IMPORTANT NOTES:

1. **For those relying heavily on a dicamba or 2,4-D system, which usually includes not running a layby or hooded sprayer, then science suggests you should be prepared for nutsedge to spread at an increasingly alarming rate……just like spiderwort, grasses, and morningglory. Run the dang layby in these problematic fields!!!!!!!!**
2. **This program relies too heavily on glyphosate, thus one should rotate to a crop allowing alternative nutsedge herbicides to be used in the following year!**

More Tank-Mix Info/Mixing Order Problems (Prostko)

Here are a few things of interest from last week:

1) Been getting a lot of questions about the use of COC (1% v/v) vs. NIS (0.25% v/v) with Select/Clethodim 2EC on peanut. Generally, clethodim works better when applied with a COC vs. NIS (*~10-15% better on some days*). But, COC increases crop injury (see below) especially when hot/dry. In the picture below Dyne-Amic (Helena), is a combination of methylated seed oil (soybean) + organosilicone-based NIS. Growers who are overly concerned about peanut injury could use the other formulations of clethodim (Select Max 0.97EC, Tapout 0.97EC, Intensity One 0.97EC) that already include an adjuvant, can be used with a NIS, and are less likely to cause major leaf burn (*will still get some leaf burn in this weather*).



2) Check out this tank-mix. Ouch!! Class Act NG is a NIS + AMS product (Winfield). Praiz 6F is a generic chlorothalonil (Winfield). Domark 1.9ME (tetraconazole), from Gowan, is labeled for early/late leaf spot, web blotch, and rust. In my opinion, the Class Act NG was not really needed and the rate of Dual Magnum could have been reduced to 16 oz/A. ***This is a great example of everyone on the planet (me included) not knowing what will happen on any given day when 6 products are tank-mixed together (especially when hot/dry).***

3) Somebody asked me about tank-mixing boron with Cadre + DB + Dual Magnum + Priaxor??? Never did it before. See below. Not as bad as I was anticipating but it could be very different on any given day and/or when sprayed later in the PM.

Cadre (4 oz/A) + 2,4-DB (16 oz/A) + Dual Magnum (16 oz/A) + Priaxor Xemium (8 oz/A) +/- Liquid Boron-10% (32 oz/A)

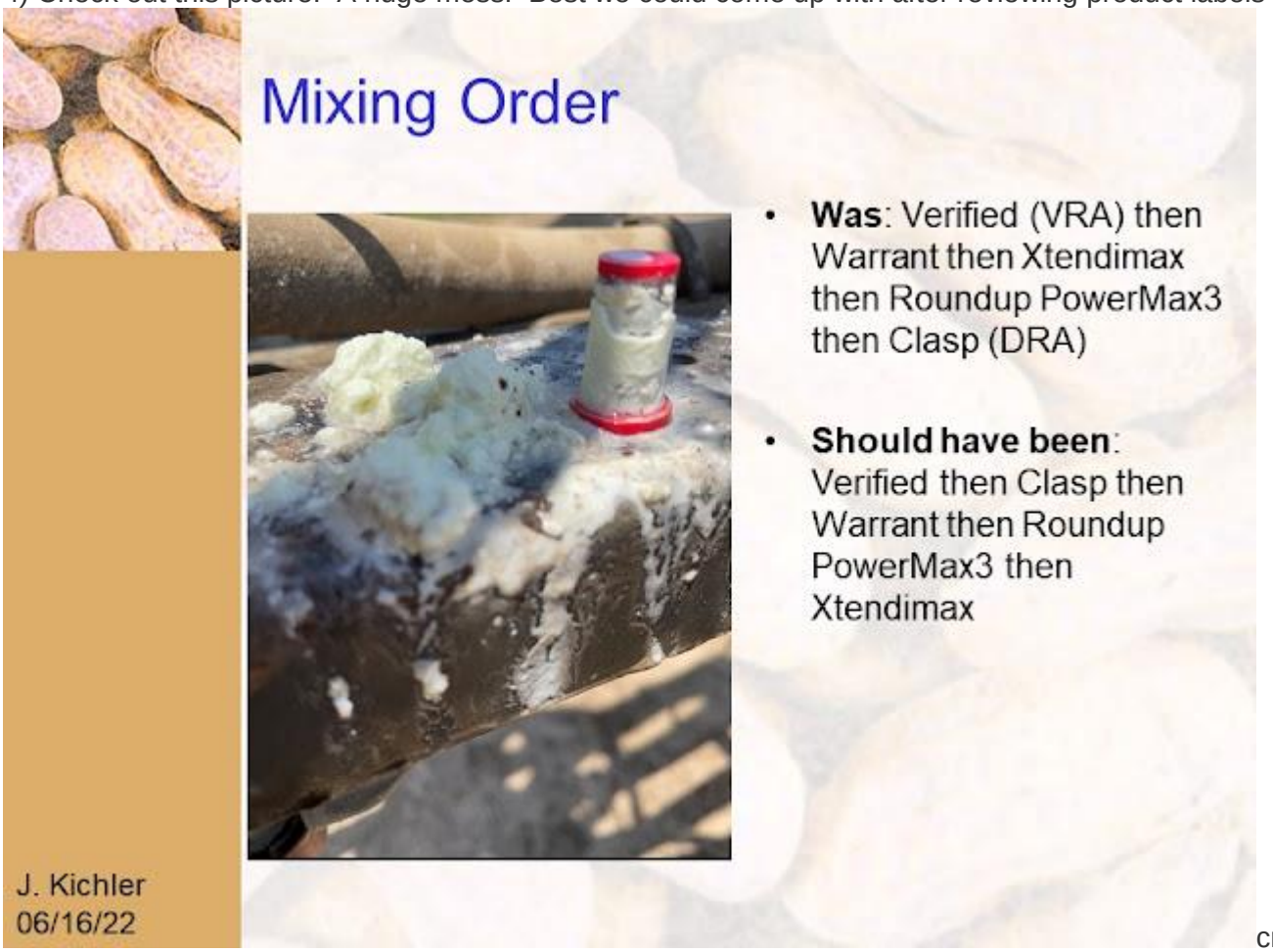
Applied 7 AM (41 DAP); 15 GPA, AIXR 10002 nozzles

- Boron

+ Boron

PE-22-22
June 16
3 DAT

4) Check out this picture. A huge mess. Best we could come up with after reviewing product labels and s



cratching our heads was an incorrect mixing order. Mixing order matters!!!!

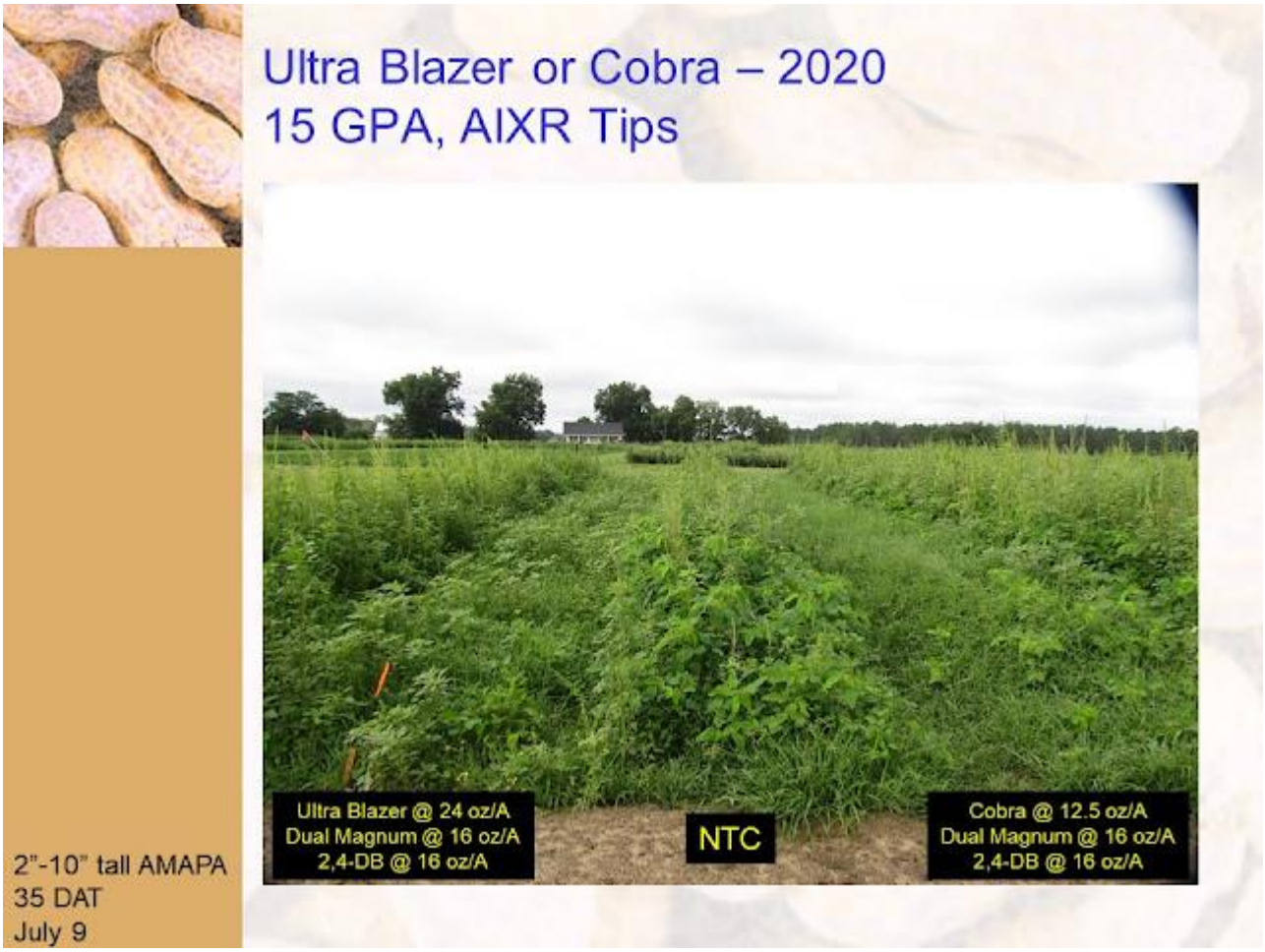
Cobra or Ultra Blazer for Large Pigweed (Prostko)

A late night text from "The Greatest American County Agent (*see below and note chest logo)* prompted this blog. For you Millennials reading this, it's a spin on an 1980's TV show called "The Greatest American Hero" (https://en.wikipedia.org/wiki/The_Greatest_American_Hero). This is what you get when you text me at 7:42 pm ***(Ha Ha! But all kidding aside, I am available 24/7/365 for county agents!***)

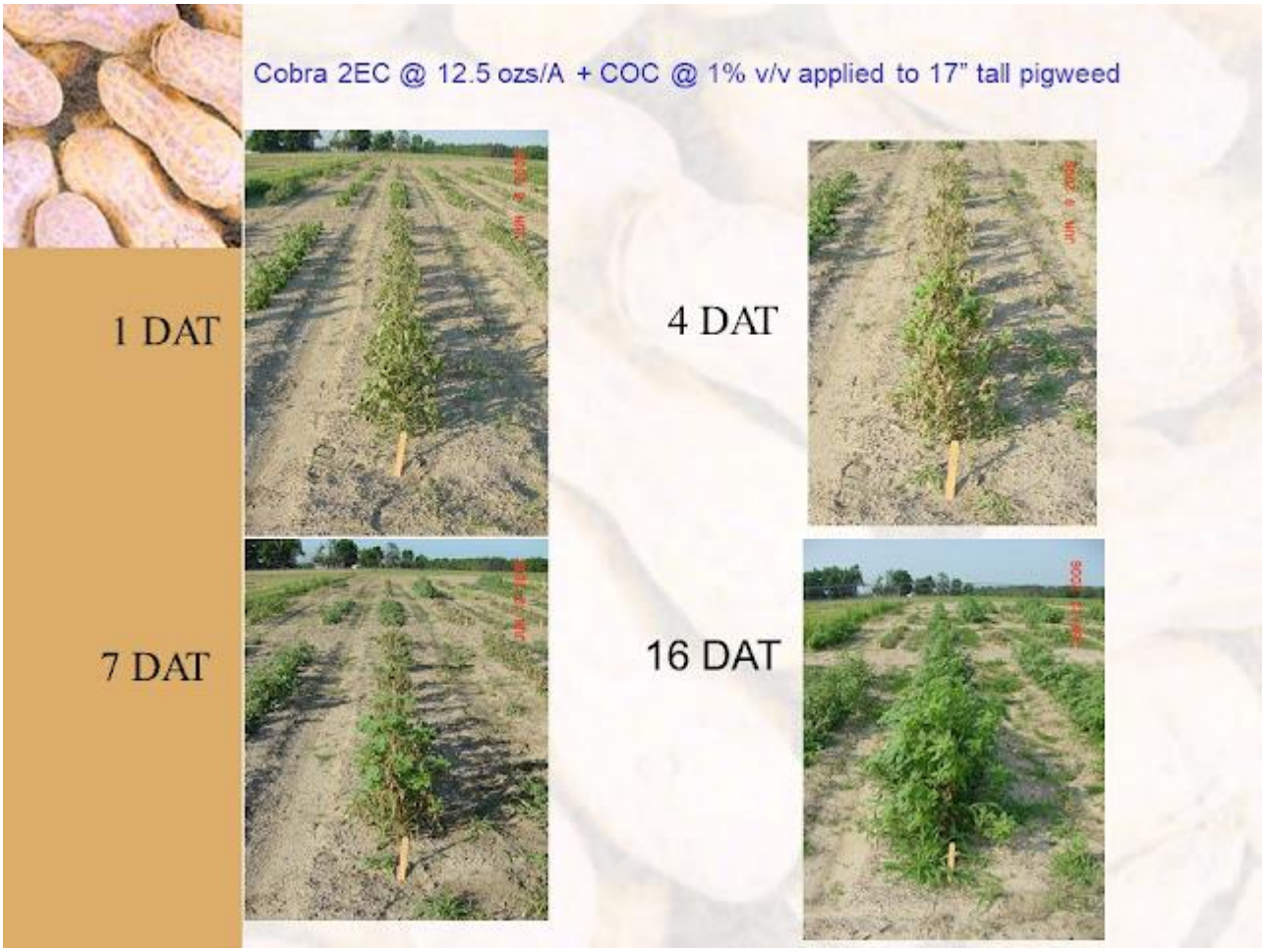
What are my thoughts about controlling large pigweed in peanuts with Cobra or Ultra Blazer?

1) I do not have a preference between Cobra or Ultra Blazer if the pigweed plants are 2"-4" tall.

2) I do prefer Cobra over Ultra Blazer when plants get bigger than that. But, I would not expect any miracles when plants get larger than 4". For the record, labeled maximum heights for Ultra Blazer (24 oz/A) and Cobra (12.5 oz/A) are 4" tall/6 leaf and 3" tall/6 leaf, respectively.



3) If plants are too big, grower is wasting his time and money on a revenge spray.



4) Other options for controlling large pigweed include hand-weeding, mechanical cultivation, and/or using paraquat in a non-selective applicator (wiper, rope-wick, etc.).

From the Field - June 2 (Prostko)

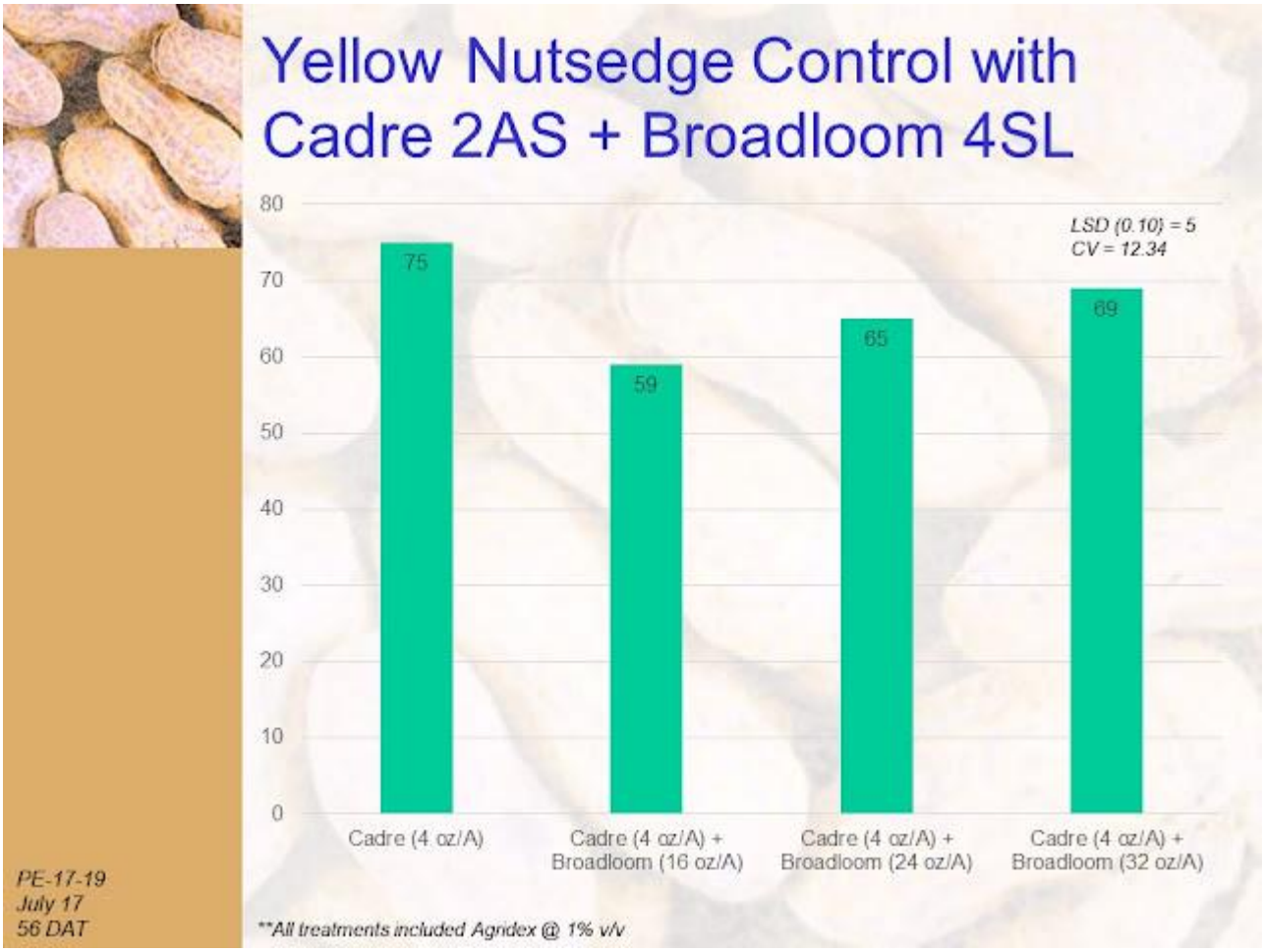
A few things for you to consider, fresh from the field:

1) New technologies are great but you can control weeds without it. Nothing beats starting clean, using a strong residual herbicide (*activated with moisture*) at planting, followed by a timely POST (*with more residual*). The Palmer amaranth population in these soybean plots is both glyphosate and ALS-resistant and was at an initial density of 40+ plants/sq. ft. Boundary is a combination of metribuzin + s-metolachlor.

2) These peanut weed control programs have worked for me for more than 20+ years (*started clean*). Once again, I have not observed any differences between Prowl or Sonalan based programs. If you don't like Dual Magnum, you can substitute Anthem Flex, Outlook, Warrant, or Zidua. If you don't like Cadre, use Ultra Blazer or Cobra but lower your weed control expectations, especially if nutsedge and/or sicklepod are present.

3) Don't expect to see much much from Cadre on yellow nutsedge for at least 21 days after application. Cadre must be absorbed by both the leaves and roots for it to be the most effective. POST applications of Cadre in dryland peanut fields that have not gotten much rain after application will likely provide less than optimum control.

4) Tank-mixes of Basagran/Broadloom (bentazon) with Cadre will ***NOT*** improve the control of yellow nutsedge. In fact, it could cause antagonism.



"Cracking" Time Again on Peanuts (Prostko)

Many peanut growers are in the field right now making "cracking" applications of paraquat (*whether they really need it or not?*). I always get tons of questions about product use rates. Check out these pictures from earlier today. These are rates I have been testing for years and they work pretty much all the time (*when applied to small weeds 1"-3"*). Higher rates and later applications, especially in dryland fields, can push a peanut plant's paraquat tolerance to its limits.

A few other thoughts:
1) If grower wants to use the 3 lb/gal formulation of paraquat (i.e. Helmquat or Gramoxone 3SL), the normal application rate in these tank-mixtures is 8 oz/A (0.1875 lb ai/A).

2) If a grower wants to use Basagran 4SL (bentazon) instead of Storm 4SL (bentazon + acifluorfen), I would suggest using 8 oz/A of Basagran 4SL.

3) If a grower wants to make his own Storm, I would suggest the combination of Ultra Blazer 2SL @ 16 oz/A + Basagran 4SL @ 8 oz/A.

4) I am not a huge fan of using paraquat + Dual Magnum or any other Group 15 herbicide without some Basagran or Storm to cool it down some on the peanut plant.

5) No adjuvants are needed when Dual Magnum or Outlook are used (*i.e. oil-based formulations*) but NIS @ 0.25% v/v (1 qt/100 gallons) is suggested when using Anthem Flex, Warrant, or Zidua.

6) Do I use i.e. and/or *italics* too much???? (*probably*)

Be Careful of Foliar Sulfur Sprays Under High Temperatures

Jun 16, 2022 | Written by Lenny Wells

Foliar Sulfur sprays applied in June and July have been shown to provide several benefits for pecan production, including suppression of mite populations and an increase in nut size. Sulfur may also aid in the suppression of some minor foliar diseases, and there is some evidence that it may aid in scab suppression

on cultivars with moderate scab resistance. However, our studies have shown no difference in scab incidence or severity by foliar sulfur on scab susceptible cultivars like Desirable. The research paper discussing foliar Sulfur sprays on pecan can be found here:

https://journals.ashs.org/hortsci/view/journals/hortsci/49/4/article-p434.xml?ArticleBodyColorStyles=pdf-4377

While foliar sulfur sprays have proven benefits, ***growers should be wary of applying Sulfur as a foliar spray when temperatures are in the 95-100 degree range or higher as we are facing over the next week.***

The most proven benefits of foliar Sulfur are mite suppression and an increase in nut size. Mite populations are normally higher late in the season and the benefits of Sulfur on nut size can be realized with sprays anytime during the nut sizing period which extends until mid August. Therefore, growers should not feel pressured to get Sulfur sprays out now. Under our current high temperatures, Sulfur may cause more damage in the form of burned foliage than any potential benefits it may provide.

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