**Early Season Irrigation Considerations for Peanut Production**

Wesley Porter, Extension Precision Ag and Irrigation Specialist, UGA
David Hall, Extension Water Educator, UGA
Jason Mallard, Extension Water Agent, UGA
Phillip Edwards, Extension Water Agent, UGA
Savannah Beasley, Extension Water Educator, UGA

At the time of writing this, approximately 6% of the peanut crop has been planted in the state of Georgia. At this time this was written and originally posted we were still early in the crop production season. However, this means that we will be moving into peak planting season soon. As we have discussed too much recently, we are in an exceptional drought throughout most of southern Georgia. Moving into the season we need to have a solid plan for irrigation management. Obviously, this plan will be based on water source, how many systems the pump is supplying, what crops are under the system etc. A solid plan can help ensure you allocate irrigation as needed. Of course, as with any plan it should be adjusted throughout the season to meet current conditions.

Once the crop is in the ground it's time to start considering how to manage it, and specifically how to manage irrigation. Even though we have a wetter May predicted that can always change, and we should plan to address our current conditions. Thus, unless there are drastic changes you will most likely (and many already have) need to pre-water prior to planting, then you will need to irrigate shortly after planting to either aid with germination and emergence and to activate herbicides. It is advised not to irrigate after planting into hot dry soils, as the cooler water may shock the seeds. If irrigation is needed for germination, irrigate prior to and after planting.

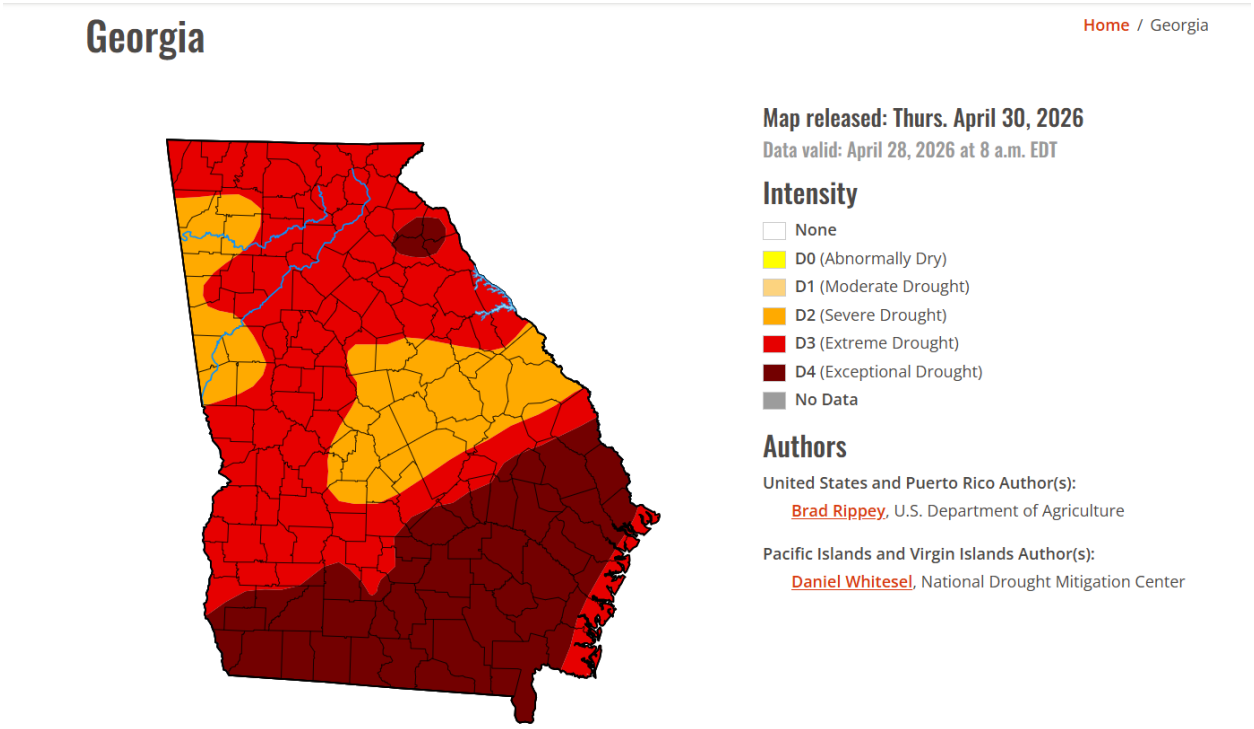


Figure 1. Drought status map for April 30, 2026.

There are many irrigation scheduling tools available to producers which range from the UGA Checkbook method to computer models, soil moisture sensors and as advanced as hybrid soil moisture sensor crops models. Depending on your operation and what your irrigation capabilities are, one of, or a combination of these methods may be a better fit than others for your farm. The simplest method is the UGA Checkbook method shown in Figure 2. UGA Extension has a quick and easy irrigation scheduling guide that is laminated and contains the four major row crops

grown in Georgia. The guide can be downloaded at https://fieldreport.caes.uga.edu/publications/C1189/irrigation-reference-guide-for-corn-cotton-peanuts-and-soybeans/. Peanuts typically do not require a lot of water during the first month after planting as exhibited by the yellow box on the water use curve below. However, if it stays hot and dry you will need to apply a few small irrigation applications. It seems like each year farmers do not want to irrigate their peanuts during the first 40 days, but it is critical to watch the weather and irrigate if it is hot and dry like it has been recently. The yellow box below represents the peanut water requirements for the first five weeks after planting. Track rainfall and temperature, consider your irrigation efficiency (typically around 65-70% for high pressure systems and 80-90% for low pressure systems) and make irrigation applications accordingly. Keep in mind that the water requirement in the Checkbook method is irrigation plus rainfall, and the weekly water requirement recommendation was developed based on a historical average of evapotranspiration. So, your actual water/irrigation requirement may vary slightly based on weather conditions and rainfall during the growing season.

Additionally, if it stays dry and turns very hot, irrigation will most likely be needed during the first month after peanut planting. So, don't fall behind early during the season due to the depletion of soil moisture from heat and lack of rainfall. Many times, as mentioned previously, farmers tend to skip on irrigation between emergence and the first 40 days. If it turns hotter than normal, the hot soil can greatly increase risk to Aspergillus crown rot, leading to stand loss. Irrigation and rainfall help to reduce risk to this disease. For a more in-depth irrigation scheduling recommendation, it is suggested that you consider implementing either a computer scheduling model either online or via a Smartphone App, or soil moisture sensors. For more information about either of these contact your local county Extension Agent.

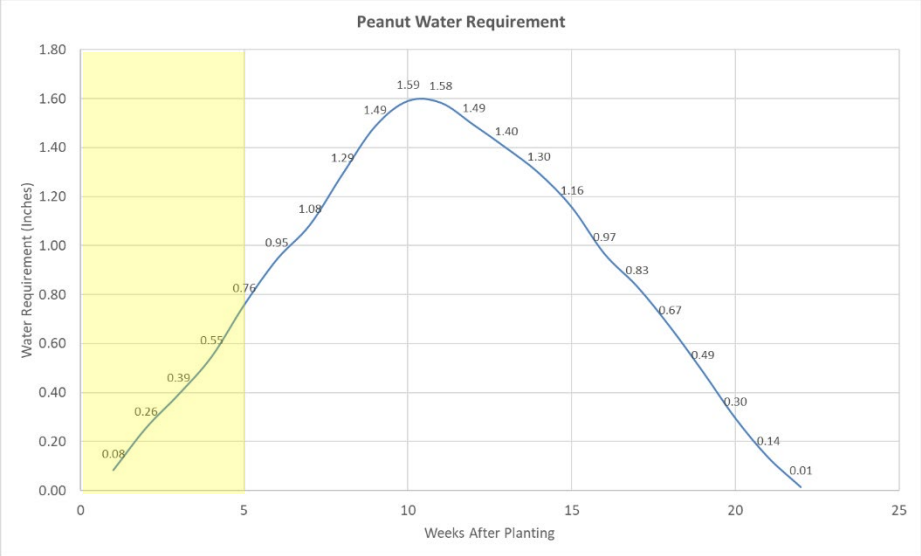


Figure 2. Seasonal Peanut Water Requirement.

For peanut farmers who utilize tools such as soil moisture sensors for irrigation scheduling, there are a few quick reminders to keep in mind. We tend to visualize the above ground plant biomass and forget what is growing below the surface. We can sometimes be guilty of placing a sensor in the row of peanuts and allowing it start logging data, making decisions from that data, and assuming everything is good to go. Unfortunately, we need to ensure we know what is going on in the field before we blindly start following the sensor. We need to ensure that the sensor is in an area that is representative of the field, crop canopy development, and crop stand. Remember, that a sensor can be moved during the season to a better spot so that better data is utilized for decisions. Based on when you planted certain fields, peanuts may be spread in age by several weeks while some are still in the bag. This is a good time to think about "weighting sensor depths" according to rooting depths.

Figure 2. Visual development of root development as the peanut plant progresses in age.

Adding rooting depths and plant needs into the equation creates the need for a formula for weighting sensor depths in your irrigation scheduling decision, an important factor throughout the growing season. Most sensors come with two or three depths that measure available moisture. Early in the season, we generally have cool nights and afternoon temps are "normally" around the low to mid 80s. The evaporation rate is low in comparison to the dry hot summer days and nights. The root profile for the first month develops shallow in the soil. These combinations of events reflect the plant water requirements, as shown in our UGA Checkbook method.
Moisture sensors generally default to an average of using sensors available on the probe for an irrigation trigger decision. This can provide false water needs for young peanut plants. For example, if a 16" depth is showing a dry reading and the 8" sensor is reading adequate moisture, the average will possibly trigger an irrigation event. If a peanut plant has just fully emerged and your root profile is in the 8"-10" range in this scenario, you do not need to irrigate. Now, considering the rooting depth let's weight the 8" sensor by an 80% value and the 16" sensor by 20%. Since the average is weighted higher on the shallow sensor, irrigation may not be needed. You should not begin to fully use deeper sensors for irrigation scheduling decisions until you see water use occurring at those depths. Weighting moisture sensors can be very beneficial but can be harmful if adjustments are not made during the growing season. If you are interested in weighting sensors, below are UGA Extension suggestions to consider for weighting sensors during the growing season:

D1 = shallow sensor D2 = middle sensor D3 = deepest sensor

- Early-Season: 80% * D1, 20% * D2, 0% * D3
- Early-Mid Season: 60% * D1, 30% * D2, 10% * D3
- Mid-Season: 50% * D1, 25% * D2, 25% * D3
- Late-Season: 40% * D1, 30% * D2, 30% * D3

Soil moisture sensors provide the most accurate means of monitoring available soil moisture. Monitoring the root zone and available moisture present is a great tool in irrigation scheduling. If you have further questions about irrigation requirements and scheduling on your peanuts, reach out to your local UGA County Extension Agent.

**Preparing for the season – the stuff we don't always think about but should! (Taylor Singleton)**

While this month's newsletter will highlight preplant/early season considerations for you to think about, there's no doubt you are making a ton of decisions right now. As you think through what the season will likely have in store, and how to prepare for these challenges ahead of time, I would encourage you to think about your recordkeeping practices. One of the most important things you can do to protect yourself, your farm, and steward pesticide use is by keeping good records of what you do during pesticide applications.

If you don't already have a good pesticide record keeping system, I encourage you to reach out to your county agent soon and work with them to get something set up that fits you and your operation. There are lots of tools available, including both digital and paper-based. It's important to pick something that's easy for you to keep up with when the season gets hectic. If you like paper forms, consider making yourself a notebook to keep in every sprayer/spray tractor. For more information about what records are required for private vs. commercial license-types, and when you need to document, see "**Pesticide Regulations**" in the 2026 Georgia Pest Management Handbook.

It doesn't matter how good our records are, if we aren't safe in the way we use pesticides, then that means game over for the ability to continue using them in the future. Every pesticide label includes what PPE is required to be worn during mixing, loading, and application – but you can always wear more. Be sure to check the label of the product(s) you are applying, but generally long sleeves, long pants, closed toe shoes plus socks, and waterproof gloves are standard. These items form the basis of not only protecting our skin, but also preventing the accidental spread of pesticide residues to other parts of the body and our surroundings – think truck doors, seats, etc. Respirators, protective eyewear, and chemical resistant aprons while mixing can help further that protection. Remember, PPE is also necessary if entering the treated area before the REI has expired.

So just a friendly reminder that now is a great time to make sure you have everything you need PPE-related on hand for any pesticide handlers (including mixers, loaders, applicators, anyone who does maintenance on or washes the equipment). Make a kit and keep it in the tractor, sprayer, truck, at the fill station. **Your health, and the health of your family, is worth more than feeling uncomfortable when wearing PPE** (and I agree that it is uncomfortable!). It takes me 6 seconds (I actually timed myself) to put on a pair of chemical-resistant disposable gloves before I spray….and I know I can spare that time to protect my health long-term. I challenge you to do the same!

As we get ready to enter into a new growing season, remember the challenges that pesticides have faced in previous years….pesticide use and availability are not a given. We must be smart with our actions and collectively work together to steward pesticide use. It starts and continues with being SAFE in the way we use these critical products and being conscious of our recordkeeping practices. If you have any questions or need help dialing in the pesticide safety or recordkeeping practices you implement on your farm, please reach out to your local extension agent. Have a great (and safe) planting season!

## Managing Potassium for Optimal Peanut Quality and Yield

As we move through key production decisions this season, one nutrient that continues to deserve close attention in peanut systems is potassium (K). While potassium is essential for plant health, vigor, and yield formation, it must be carefully managed in peanut production to avoid unintended consequences, particularly when it comes to calcium (Ca) uptake and pod development.

### Why Potassium Management Matters in Peanuts

Potassium plays a vital role in regulating water movement, enzyme activation, photosynthesis, and overall plant stress tolerance. Adequate potassium levels support strong vine growth (Table 1) and help plants withstand drought and disease pressure.

However, in peanut production systems, more is not always better. High levels of potassium, especially when concentrated in the upper soil profile, can interfere with calcium uptake by developing pods. This competition between potassium and calcium is particularly important because calcium is not translocated within the plant. Instead, developing pods must absorb calcium directly from the surrounding soil environment.

When potassium levels become excessive, particularly in the top four inches of soil where pod development occurs, calcium availability to pods can be reduced. This imbalance can lead to serious quality and yield issues.

**Table 1**. Average nutrient removal by high-yielding peanuts.

| Nutrient | Peanuts, Nuts *4,000 lbs/acre | Peanuts, Vines *5,000 lbs/acre |
|---|---|---|
| | Nutrient Removal (lbs/acre) | |
| Nitrogen (N) | 140 | 100 |
| Phosphorus ($P_2O_5$) | 22 | 17 |
| Potassium ($K_2O$) | 35 | 150 |
| Calcium (Ca) | 6 | 88 |
| Magnesium (Mg) | 5 | 20 |
| Sulfur (S) | 10 | 11 |

***Yield per acre.**
Source: Nutrient Removal by Alabama Crops - Alabama Extension Publication ANR-0449.

### Key Risks of Excess Potassium

One of the most notable consequences of excessive potassium in peanut fields is an increased incidence of **“pops”**. Pops are undeveloped or hollow pods that fail to properly fill. These pods reduce overall marketable yield and can significantly impact grade.

In addition to pops, high potassium levels have also been associated with increased risk of **pod rot**. Pod rot can be caused by a complex of soilborne pathogens, and while potassium is not a direct cause, nutrient imbalances can weaken pod integrity and increase susceptibility to disease pressure. Together, these issues can reduce both yield and quality, ultimately affecting profitability at harvest.

**Soil Testing and Balanced Application**

The foundation of proper potassium management begins with accurate soil testing. Potassium applications should always be guided by soil test recommendations rather than applied on a fixed or excessive schedule. Fields vary widely in potassium levels depending on past fertility programs, manure applications, and soil type.

If soil tests indicate adequate or high potassium levels, additional applications may not be necessary. In fact, over-application should be avoided, particularly in fields with sandy soils or low cation exchange capacity where nutrient movement can be more dynamic.

When potassium is required, it is important to avoid creating high concentrations in the upper four inches of soil. This zone is critical for peanut peg penetration and pod development, and excessive potassium in this layer can directly interfere with calcium uptake.

**Timing and Placement Considerations**

Timing and placement are just as important as rate when it comes to potassium management. The recommended approach is to apply potassium during **pre-planting or early growth stages**, allowing time for the nutrient to move into the soil profile before peak pod development begins. Incorporation is strongly recommended whenever possible. Incorporating potassium into the soil helps distribute it more evenly throughout the root zone and reduces the risk of localized concentration near the soil surface.

Avoid late-season potassium applications unless specifically recommended by soil or tissue testing. Late applications are less effective and more likely to disrupt the nutrient balance during critical pod fill stages.

**Key Takeaways for the Season**

To optimize peanut quality and minimize risk this season, consider the following management principles:

- Base potassium applications strictly on soil test recommendations.
- Avoid excessive potassium applications, especially in the upper soil profile.
- Ensure potassium is applied pre-plant or early in the growing season.
- Incorporate potassium into the soil to improve distribution and reduce surface concentration.
- Remember that excess potassium can interfere with calcium uptake, increasing the risk of pops and pod rot.

Balanced fertility is one of the most powerful tools available to peanut growers. While potassium is essential for healthy plant growth, maintaining the correct balance, particularly with calcium, is critical for protecting pod development and maximizing marketable yield. Careful attention to soil testing, application timing, and placement can help ensure that potassium supports, rather than limits, your peanut production goals this season. In summary, follow soil test recommendations and avoid high potassium levels in the pegging zone. A balanced 3:1 ratio of calcium to potassium is considered ideal.

Peanut Pointers

Entomology

Abney

May 2026

May is usually about planting and weeds and thrips and weather. The peanuts I planted on 28 April are barely peeking out of the ground as I write this on 8 May. Though thrips pressure is predicted to decline over the next few weeks, I still expect these peanuts to get hammered. It only takes a couple adult female thrips on a peanut plant to lay enough eggs to cause significant injury. Peanuts with an effective in-furrow insecticide will likely not need any additional management, but if a grower did not apply an insecticide at plant or if there was an application problem, a foliar insecticide application will probably be needed. Acephate is still the go-to thrips product for foliar sprays in peanut, but remember to use the "peanut rate". In fact, I recommend the higher end of the peanut rate (at least 10 oz/acre).

Though not common, be on the lookout for foliage feeding caterpillars in peanuts later this month. Tobacco budworm can occasionally cause severe defoliation on seedling peanut, and it does not take long for this to happen when plants are small. The other pest to watch out for is lesser cornstalk borer. Hot, dry conditions favor this pest, but it can be present even when we are getting adequate rain. There is no "too early" for lesser cornstalk borer management. If this pest is present in peanut at threshold, it needs to be killed.

I have gotten a couple calls about grasshoppers in peanut. I don't have much experience with grasshoppers, and they can be tough to manage. Growers should be observant, but not overly anxious about treating grasshoppers. Infestations in peanut are typically localized and short lived.

**Scott Monfort – May Peanut Pointers**

We have received some much-needed rain. We hope that the rain continues to be on a weekly interval as we are about 10-15 inches behind. So far around the Tifton area we have received around one to two inches of rain over the last week with one to two inches more expected over the next few days. Once this rain has moved through the area everyone will be ready to go full steam ahead planting. There are a few things that you need to keep in mind as we do start back up planting. Growers need to know what their seed quality looks like. They need to ask what the % germ for each variety. Also, growers need to inspect the seed before planting. If they're seeing an elevated number of splits, or what we call bald peanuts, they need to decide: Is this OK for me to live with and bump the seeding rate up, or do I need to encourage a grower to send them back? I would say it is easy to overestimate the number of split/bald peanuts in a bag, as they stand out. (see pictures from David Hall).

Image 1. Picture of Peanuts in a hopper showing splits and bald peanuts. From David Hall

Image 2. Picture of peanut skins clogging the bottom of the peanut plate. From David Hall

You might want to take a handful and calculate the percentage rather than visually estimate the percentage. Prostko took some samples and calculated the percentages for some of the seeds he had. He said that, visually, it looked like 10% of the sample were split or bald peanuts, but it turned out to be under 4% after he counted. In other words, it can look worse than it is.

Peanuts planted before May 1st look pretty good. I have not seen any type of germ or emergence issues, except where we planted peanuts under drier conditions. I expect the recent rains will provide an opportunity to plant most of the peanuts before June. So far, I have not heard of many seed complaints, but it is still early. Please remind growers to watch putting too many untested products infurrow on peanuts. If there was a magic bullet out there to increase % germ or vigor, I would have shared it with you by now. Below are a few things to consider:

1.) Protect your seed by keeping it dry and out of harsh conditions
2.) Know the germination percentage of each variety/lot that you have. You can send samples to the GA Dept of AG seed lab if you want to check germ before you plant. It takes ~10 days to get a germ sample back.
3.) No fertilizers are recommended in-furrow on peanuts.
4.) Inoculants are a cheap and effective insurance practice to ensure you get good nodulation. Inoculant is strongly recommended if the field has not had peanuts planted in 4 or more years.
5.) Planting more than 7-8 seeds per foot tends not to provide a return on investment unless you know you have germination issues with a specific variety and you have to plant it. Even then, do not plant more than 7 seeds per foot on singles, as you will increase the risk for seed rot.
6.) Make sure to revisit each field in 7-14 days to ensure you have a good stand and do not need to replant or spot plant.
7.) There are a few cool nights predicted in the next week. This will slow down emergence some

** We will need your help again with the TSWV ratings. We need 10 fields from each county along with the following data: variety, twin or single row, planting date, insecticide used. I will send out an email later in the month.

Dates to Remember:

- Agent Row Crop Field Day -in-service training - Thursday, June 4, 2026
- APRES – July 13-17, 2026
- SE Peanut Growers Conference – July 21-23, 2026
- Cotton and Peanut Research Field Day – September 2, 2026

**The Heart of 2026 Planting Season – Things to Watch - R. Scott Tubbs**

Hallelujah! We have some soil moisture to work with. After last weekend's rainfall and cooler weather, it feels like a reset on the beginning of planting season. Soil temperatures dipped across the peanut belt, in many places below the 4-inch threshold of 68F that we use for our planting "safe-zone". Temperatures have recovered, and with additional rain coming (it is raining outside my window at time of writing on May 7, with a high probability of additional rain on May 9 and 10), it is prime time to jump on our non-irrigated peanut acres and get those seed in the ground. Remember not to get in a hurry and plant faster than the capacity of your equipment. Some planters drop considerably in their ability to grab and hold seed to the plate when the plate spins too fast. Increasing seeding rate to bump up population in some cases is only effective if you reduce the traveling speed through the field to offset that increased spin speed of the plate.

With regard to land prep/tillage, I have heard of some areas that were dealing with issues stemming from the very dry conditions. It had become so dry throughout the soil profile that it was challenging to get a moldboard plow any deeper into the ground to invert. There was one report of only being able to invert down to an 8-inch depth. If you ever run into this situation, it may be better to switch to a subsoil shank before spending the time and fuel cost of running the plow, since plowing to an 8-inch level in dry conditions likely only causes greater compaction at (and just below) that depth leading to a hardpan. A hardpan as shallow as that will not allow the peanut roots to reach the depths needed to sustain the crop long-term. Roots will turn and grow across the top of the hardpan and essentially be reliant on soil moisture staying in that upper level of the soil profile throughout the season. Going back over the ground with a subsoil shank to break through that hardpan could be beneficial. Hence, better to identify that situation before plowing the entire field if you're going to need to run back over it with a subsoiler regardless.

Extremely dry conditions can potentially lead to issues with *Bradyrhizobia* populations in the upper soil profile as well. This is where the application of a peanut inoculant can be beneficial, even in our shorter rotations where peanut has been planted within the last 2-4 years. Peanut is not in the same cross-inoculation group as soybean, so be sure that a peanut inoculant is used on peanut, and a soybean inoculant is used on soybean. If you buy all of one or the other product, you will be severely disappointed in the results for whichever crop is receiving the wrong product. I get questions each year about formulations. My recommendation is to use a liquid that applies directly into the furrow after the seed is dropped, and just ahead of closing. In some situations, a liquid application is not possible. In those cases, there are two options. In terms of product performance, the next best option is a dry granular formulation that is metered directly into the opened furrow, placing the product just below the seed being dropped. However, this requires a metering mechanism that can apply dry product to the soil, as it is being applied similarly to phorate (Thimet) or aldicarb (AgLogic in peanut, or Temik in other crops). Many planters are not equipped with this metering mechanism in an open-system application, and the granular inoculant is not recommended to be mixed with these granular insecticides. Thus, the most likely available option for most growers without a liquid applicator is the least effective of the formulations (in terms of nodulation and N-fixation), which is the sterile peat/powder formulation. This is the dry product that is sprinkled onto the seed before or during loading of the seed into the seed hopper. This product is better than applying nothing, however it is not as effective as the other

two formulations. But selection of inoculant formulations is driven more by equipment capabilities than deciding which is the preferred option related to efficacy.

By the time these rains pass by and we're able to get back into the field, we will be nearing the point where we are getting too late for late-maturing varieties. The most notable that is currently available to growers is Georgia-12Y. If you have 12Y seed remaining and plan to use it, this one should be the next one planted, and try to get it in the ground prior to May 15, or as soon thereafter as possible. The later into the planting season we get, the less chance we have to reach full maturity on these peanuts as day length (and thus total sunlight received) decreases, temperatures fall, and rainfall events become fewer and further between.

This also applies to non-irrigated acreage. Historical average rainfall decreases the later we get in September and into October. Thus, now that we have adequate soil moisture to get peanuts germinated, priority needs to be given to non-irrigated acreage so they have enough water to progress to full maturity before things could turn too dry and slow progression in the fall.

Happy planting, it is definitely "go-time" now.