Irrigation System Prep and Early Season Water Requirements for Peanut Production

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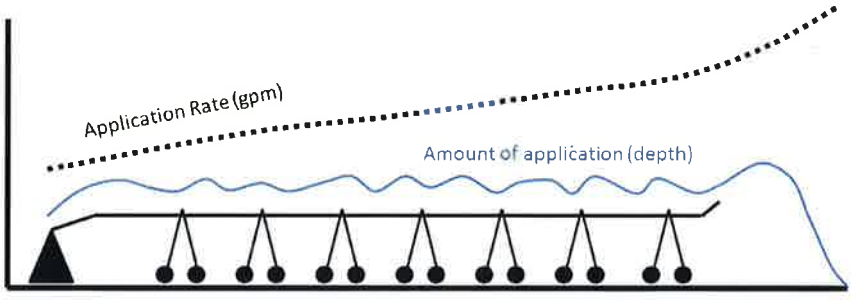
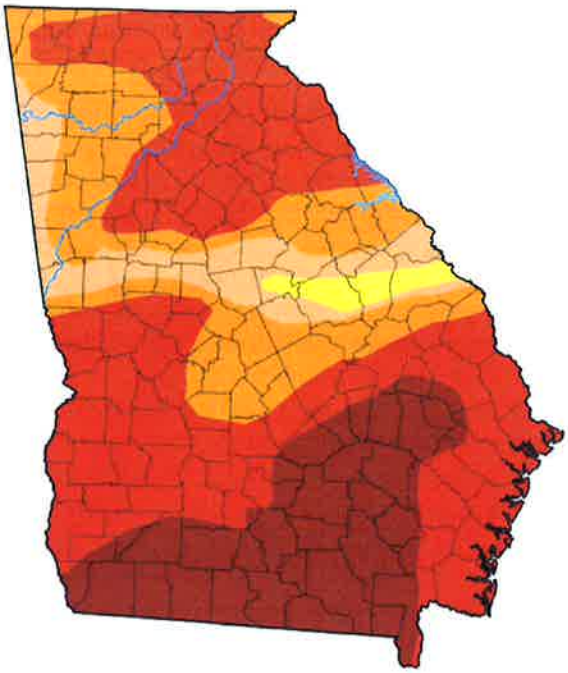
Corn now should be up and growing, and lots of equipment is moving through the fields. Hopefully, we have spent or will find some time in the next few weeks to ensure that our equipment is ready for the season. Depending on conditions, peanut planting will start here at the end of April. By that point, countless hours and many dollars will have been spent on tillage, spraying and planting equipment to be prepared for another year. However, ensure that you do not overlook one of your largest investments and one that is just as important as any other, your irrigation systems. If you have not already done so, now is an optimal time to do routine and preventative maintenance on your irrigation systems to ensure they are in top shape. Remember that we had a very cold winter, and multiple days with temperatures in the upper teens and lower twenties. Due to this, if an irrigation system was not properly prepared for the winter there is a high chance there are going to be leaks and places that polymer parts are broken due to freezing water in the system. Thus, there are two important actions that need to be performed before you begin planting your peanuts. The first one is an overall irrigation system check and the second is specifically focusing on water application uniformity of your system. First look up the Spring Center Pivot and Lateral Irrigation System Preparation | UGA Cooperative Extension (B1452) and go through the checklist that includes all main components on your irrigation system to ensure that they are working properly. Some of these components can include but are not limited to the power unit, pumping system, pipes and drains, electrical systems (which includes cellular connections for remote monitoring and GPS), safeties, tires, gear box oil level and leaks, and the switches on the auto stop feature. Once you have checked all these components, start the irrigation system and finish checking components by documenting any clogged or partially clogged nozzles along with any visible leaks. Also, check the line pressure, flow, sprinklers, end gun arc travel and booster pump operation. A reduction in pressure and GPM from last year or brass and excessive sand in the trap may be a good indication of potential well issues. The first time you start this system for 2025 should not be for a stand establishment, herbicide activation, nor the first time you need irrigation!!! Start it now and avoid costly issues. An example of the system flowrate and application rate for a center-pivot irrigation system is represented in Figure 1. It is important to remember that due to increasing travel speed as we move towards the end of the pivot, the system flow rate (represented as dashed black line) will go up, but the application depth (represented as solid blue line) should remain consistent. This is achieved with properly sized sprinkler packages.



Application Rate and Depth

Figure 1. Application rate and depth across a pivot tower.

Georgia



Map released: Thurs. April 16, 2026

Data valid: April 14, 2026 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

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Figure 2. US Drought Monitor for Georgia Released Thursday April 16, 2026.

Figure 2 shows the ever increasing drought status across all of Georgia. If you have been tracking it the Exceptional drought status is growing every week unfortunately. And as of the writing of this article, there is not a guaranteed rainfall event predicted in the near future. With the current drought situation (Figure 2) and subsoil moisture being very low, it is very important to be sure irrigation system uniformity is good as issues will be very impactful this year if the current situation continues. While it is easy to see major leaks, missing or clogged sprinklers it is important to note that it can be very difficult to detect differences between individual sprinklers and banks of sprinklers on a pivot visually, so it is strongly recommended that an application uniformity test be performed on the center pivot to detect any discrepancies along the tower length. Based on water quality and source it is recommended that you change sprinkler packages anywhere from 6 to 10 years. If you have not updated sprinklers in this time frame, we strongly suggest doing a uniformity and considering a new sprinkler package. A UGA Factsheet titled Evaluating and Interpreting Application Uniformity of Center Pivot Irrigation Systems | UGA Cooperative Extension (C911) is a very good step by step guide to accomplish this process. If individual sprinklers are replaced, it is important to replace each sprinkler according to the original design. According to sprinkler size, sometimes small changes can have significant impact on irrigation applications. Each irrigation system was originally designed for a specific operating pressure. Pressure gauges are an important tool for you to know how well your system is operating. Leaks, wrong sprinklers, stopped up sprinklers all have an influence on the systems operating pressure and therefore will impact how well the system operates.

To illustrate the importance of pivots applying water uniformly, Figure 3 has an example of possible dollars that can be lost from a 235-acre pivot with nozzle issues.

Let's Talk $$$

- Average irrigated peanuts 5,350 lbs
- 10% loss in affected 40 acres (lbs lost per affected acre 535 lbs x $.2075 x 40 acres) equals $4,441.00
- 15% loss in affected areas (lbs lost per affected acre 803 lbs x $.2075 x40 acres) equals $6,665.00
- Figures can be greatly increased, depending on drought and heat severity

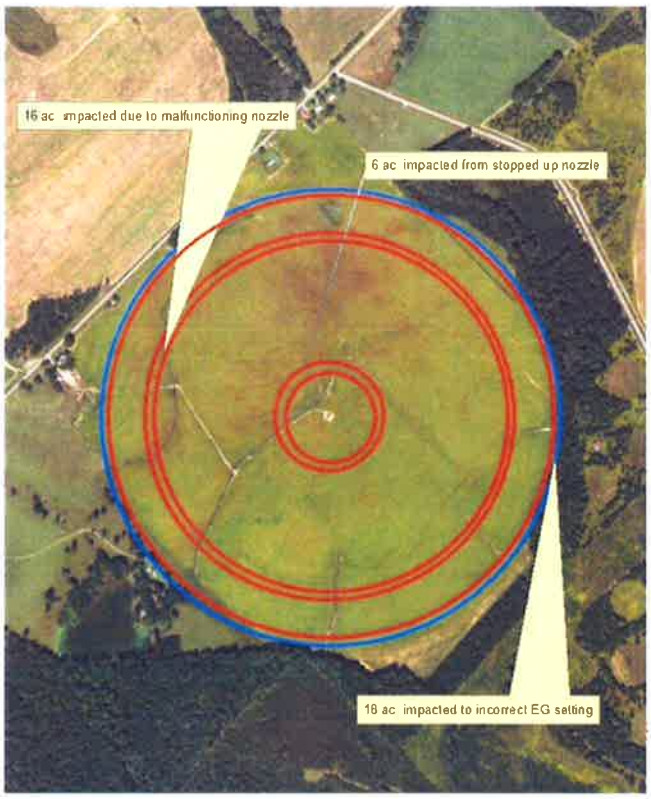

Figure 3. Example calculations of yield loss from a Pivot with uniformity issues.

The 40 acres highlighted in red are areas where a nozzle, or nozzles, are partially clogged, malfunctioning, or simply the wrong nozzle size that replaced a missing one. The end gun arc adjustments in this example are incorrect, leading to underwatering the last 90-100 feet and overwatering in the overhang or end of the pivot area. Remember, once water flows from the pivot, the cost of pumping the water is the same whether you apply it uniformly or not, but the maximum return of dollars from our crop can be drastically reduced.

If you need any further guidance or have interest in having an on-farm uniformity test performed, contact your UGA County Extension Agent they can help get the process started. By following these suggestions, you should have a properly operating pivot ready to go for the upcoming production season.

Once you have performed maintenance on the pivot, have it operating, and are confident that it is adequately applying water uniformly with no problems, it is time to start thinking about water requirements for your crops. It is important that you keep an eye on the current weather and soil moisture conditions as you begin planting crops, in conjunction with the extended forecast. Peanuts typically do not require much water in the first month after planting as exhibited by the yellow box and water use curve below. However, if it gets hot and dry again you may need to apply a few small irrigation applications. The yellow box below represents the first five weeks after planting of peanut water requirements. Keep track of irrigation, rainfall, and temperature, and estimate 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 figure 4 is irrigation plus rainfall, and the weekly water requirement recommendation was developed based on a historical average of evapotranspiration. Thus, your actual water/irrigation requirement may vary based on weather conditions and rainfall during the growing season. Currently, I have heard that this is supposed

to be a warmer and drier season based on Enso cycle, but that could change, again track your local and current conditions. For a more in-depth irrigation recommendation it is suggested that you consider implementing either a computer scheduling model either online or via a Smartphone App, or soil moisture sensors. An additional option is the utilization of USDA-ARS's Irrigator Pro. For more information about any of these contact your local county Extension Agent.

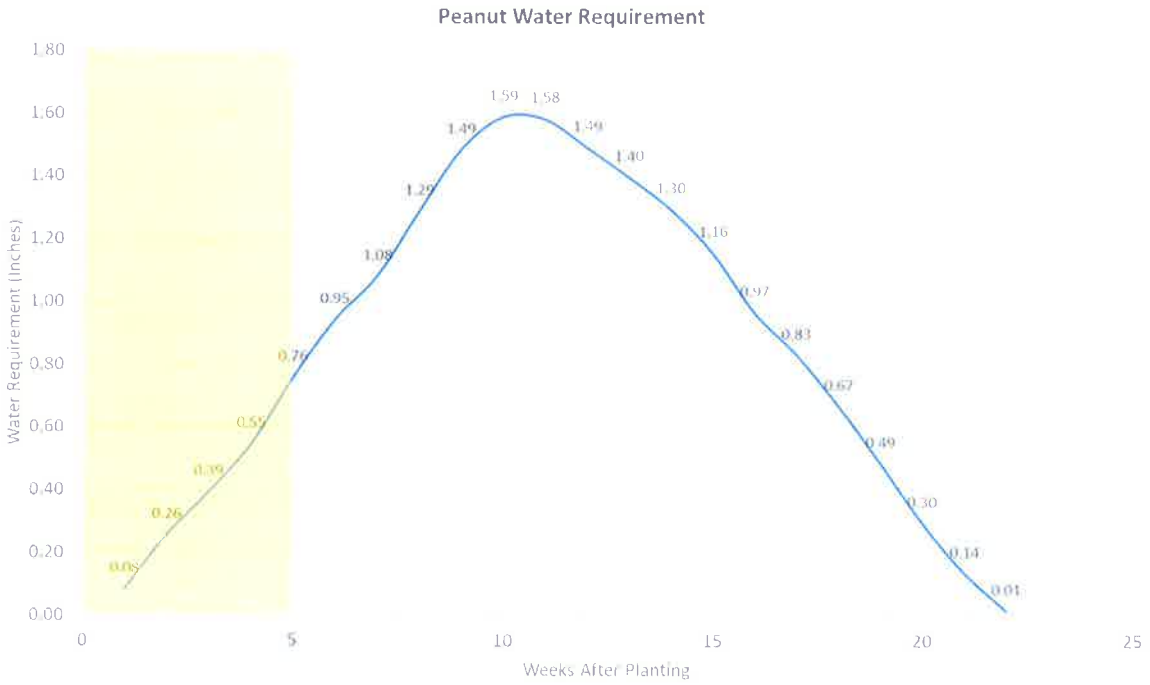

Figure 4. Seasonal Peanut Water Requirement.

UGA Extension's peanut irrigation checkbook, like most crops, shows that peanut water requirements are low once the stand is established for the first 40 days. Even though there is some past information out there stating that we do not need to irrigate peanuts in the first 40 days, we need to track rainfall and estimated soil moisture and irrigate accordingly so we do not cause moisture stress on the peanuts. If it stays dry, we are going to need to apply irrigation accordingly.

Once the planters start rolling, farmers continue to plant as fast as possible while sufficient moisture is present to ensure good germination and stand. Once moisture begins to leave the optimum planting level, plan your planting schedule around an irrigation event the day before planting, if available. Keep in mind, you will want to be planting the next day after an irrigation event to optimize the moisture. When irrigating prior to planting take available soil moisture, soil type and projected weather into account when deciding how much to apply. It has been very dry this year so it will probably take more than normal to have adequate moisture for germination. There is a fine line between not being able to reap the benefits of irrigation by not applying enough water or having to wait an extra day to dry out, costing time and money. If a rain event is not expected within 4-5 days of planting, another irrigation application will be necessary to incorporate and activate pre-emergent applied herbicides. Most labeled herbicides recommend around 0.5 inches of rainfall or irrigation. During extremely hot and dry weather, this post planting irrigation application can provide benefits in establishing a good start to peanut production; assisting with germination, activation of pre-emergent herbicides, keeping soil surface temperatures cooler and if soil surfaces have crusted, making it easier for peanut

plants to break through for less vigorous seed. Having good soil moisture will help tremendously with keeping soil temperatures cooler and ultimately reducing the chances of aspergillus crown rot disease losses and other diseases in peanut plants.

UGA Extension has developed a quick and easy irrigation scheduling guide which contains the four major row crops grown in Georgia. Please check with you local Extension Agent for availability. The guide can also be downloaded at Irrigation Reference Guide for Corn, Cotton, Peanuts, and Soybeans | UGA Cooperative Extension

Peanut Pointers

April 2026

Entomology-Abney

Early planted peanuts will be at increased risk for Tomato spotted wilt virus (TSWV), and growers need to be reminded that TSWV management options end once the furrow is closed. Using Peanut Rx can help agents and growers understand the risk associated with various production practices. Growers planting peanuts before the 10th of May should be using practices that reduce the risk of TSWV infection. Applying phorate (Thimet) in furrow, planting cultivars with high levels of field resistance, and rapid, uniform stand establishment are known to reduce the risk of TSWV infection. The UGA Peanut Entomology Blog has numerous posts about early season thrips and TSWV management that can be a useful resource as planting season kicks off. Select "Thrips" in the "Categories" pull down on the blog's homepage to view posts.
https://site.extension.uga.edu/peanutent/

For the first time in forever, growers will have the option to apply an at-plant, in-furrow insecticide for rootworm management in peanut. Isocycloseram (Vertento) was registered in late 2025, and a 24c Special Local Needs label for in-furrow application was approved by the Georgia Department of Agriculture in 2026. UGA research has shown very good efficacy from in-furrow applications. Vertento also works well for rootworm management when applied as a chemigation treatment through center pivot irrigation. If you have questions about Vertento use in peanut, please do not hesitate to contact me.

It is important to note that thrips are included on the Vertento label, but the product is NOT SYSTEMIC. An in-furrow application of Vertento will NOT control thrips or reduce the incidence of TSWV.

April Peanut Pointers

Scott Monfort

Peanut planting is underway across Georgia, and several key factors deserve close attention as the 2026 season begins. April often brings the risk of a late cool snap, but this year has opened with unusually warm and very dry conditions. While these conditions may encourage early planting, growers should carefully weigh the risk of Tomato Spotted Wilt Virus (TSWV) before moving forward. We cannot predict TSWV severity for 2026, but the Peanut RX decision tool (https://peanutrx.org) can help estimate field-specific risk. Management decisions that can significantly reduce TSWV risk include selecting low-risk planting dates, choosing varieties with higher levels of TSWV resistance, and using Thimet to manage thrips and suppress TSWV.

Current weather conditions also warrant caution. The past several weeks have been hot and dry, and soil moisture levels are a growing concern. In non-irrigated fields, soil profiles are extremely dry, and the recent rainfall is insufficient to ensure uniform germination and emergence. Given the high cost of peanut seed, planting into dry soil with the hope of rain is a risky practice. In these situations, it is better to keep seed in the bag and wait for improved moisture conditions.

For irrigated fields, producers should ensure the soil profile is adequately moistened prior to planting. Avoid planting into hot, dry soil and then irrigating afterward, as this can shock the seed and lead to uneven emergence. Under current conditions, irrigating before planting — and again after planting — is a more effective approach for establishing a uniform stand. Under these conditions, you also may need to irrigate several times during the 1st 40 days to ensure the peanuts are progressing as needed.

Finally, remember that peanut seed viability can be reduced by exposure to extreme heat. Do not leave seed for extended periods in direct sunlight or enclosed trailers, as high temperatures can significantly reduce germination.

Calcium Considerations for Peanut Production in Georgia

Doug Amaral, Extension Soil Fertility Specialist, Crop & Soil Sciences, UGA-Tifton

When you start talking about cutting costs or adjusting fertility programs, calcium is usually one of the first nutrients that gets questioned in peanut production, mainly due to rising gypsum costs. Between price, availability, and all the "alternatives" being marketed, it is understandable. But in Georgia peanut production, calcium is still the nutrient that deserves the most respect and probably the least compromise.

Peanuts are simply different. We can manage nitrogen through fixation, often lean on residual phosphorus and potassium, and still make a good crop. But calcium is a different story. If it is not in the right place at the right time, there is no fixing it later. The reason comes down to how the plant works. Calcium moves upward in the plant with water flow, but it does not move back down. That means the plant cannot take calcium from leaves or stems and send it to the pods. Instead, every pod has to pull calcium directly from the soil, right where it is developing. That zone, the top 4 inches where pegging occurs, is where everything happens.

And that is where Georgia conditions make things more challenging. Our sandy Coastal Plain soils do not hold calcium well. Rainfall can move it out of the pegging zone, and deep tillage can bring low-calcium soil back to the surface. So even when a field looks good on a standard soil test, that does not always mean calcium will be there when pods need it. That is why UGA recommendations are built around pegging zone sampling. Taking that shallow sample shortly after emergence gives you a much clearer picture of what the crop is actually working with. If calcium is below 500 lb/ac, or if the calcium-to-potassium ratio is less than 3 to 1, then gypsum is recommended. And for peanuts being saved for seed, that decision is already made, those fields get gypsum regardless of the soil test because kernel calcium directly affects germination.

Most of the time, that recommendation ends up being 1,000 pounds of gypsum per acre applied at early bloom. That timing is not arbitrary. It lines up with when the plant is starting to peg and when pods are about to begin pulling calcium from the soil. If the calcium is not there then, you have already lost some potential. After that, you are getting into peak pod fill, and the opportunity to fully correct deficiencies starts to narrow. Moisture also plays a role here. Calcium from gypsum has to dissolve before the plant can use it, so in dryland situations, limited rainfall can restrict availability even when gypsum has been applied correctly. That is one reason why calcium management tends to be even more important without irrigation.

With everything going on around input costs and supply, a lot of the recent conversation has been about alternatives (Table 1). The question is not whether there are other ways to get calcium out there, it is whether those options truly replace what gypsum is doing. Lime is the first one that comes up. It can supply calcium, but it behaves very differently. It is not very soluble, so it needs to be applied well before planting, and it needs to stay in the top

few inches of soil. If it gets buried with deep turning, it is not going to help the pods. On top of that, lime should really only be used when you also need to adjust pH. If your pH is already where it needs to be, pushing it higher just to get calcium can create other problems.

Table 1. Common calcium sources for peanut farming in Georgia.

Solid Sources	***Formula***	***Calcium Content (%)***
Calcitic Limestone	$CaCO_3$	40
Dolomitic Limestone*	$CaMg(CO_3)_2$	22
Gypsum	$CaSO_4 \bullet 2\ H_2O$	21
Liquid Sources	***Formula***	***Calcium Content (%)****
Calcitic Limestone Suspension	$CaCO_3$	25
Calcium Thiosulfate	CaS_2O_3	6
Calcium Chloride	$CaCl_2$	10

* Dolomitic Limestone also contains around 13% Mg.
**Calcium content in percentage by weight.

There has also been interest in liquid lime products like calcitic limestone suspensions and other liquid calcium products like calcium chloride or calcium thiosulfate. Some of these have been evaluated in Georgia, and they can provide some calcium when applied at planting or during pod development. But they do not deliver the same amount of calcium as a standard gypsum application, and they generally do not build soil test calcium to the same level (Table 2). They can be a backup option if gypsum is not available, but they are not a true substitute.

There is some evidence they can help, particularly as an "insurance" application if conditions have been less than ideal or as a supplemental calcium source for soils testing above 800 lbs/ac. However, these alternatives cannot substitute for a timely gypsum application, as prohibitively large volumes would be required to match the calcium supplied by gypsum. They are more of a way to hedge your bets when something has already gone off track. Even though it is not recommended, reducing the gypsum application rate to 750 lb/ac or even 500 lb/ac is likely a more economical option than most alternatives when soil test calcium levels are low.

Table 2. *Liquid product volume required to match the elemental calcium provided by Gypsum (21% calcium) at 1,000 and 500 lbs/ac.*

Source	**Calcium Content**	**Amount Needed**	
Gypsum	*21% Ca*	*1,000 lbs/ac*	*500 lbs/ac*
Calcitic Limestone Suspension*	3.5 lbs Ca/gal	60 gal/ac	30 gal/ac
Calcium Thiosulfate	0.63 lbs Ca/gal	330 gal/ac	165 gal/ac

Calcium Chloride	1.1 lbs Ca/gal	190 gal/ac	95 gal/ac

**Provide small increases in soil pH.*

So when you step back and look at it, the decision is less about whether gypsum always produces a visible yield response and more about what risk you are willing to take. There are certainly fields in Georgia that will not respond to gypsum every single year. But when calcium is limiting, the consequences are immediate and irreversible. You cannot go back and fix empty pods or poor kernel development. If supplies are tight or budgets are stretched, that is where prioritization comes in. Fields going to seed should stay at the top of the list. Fields that do not meet pegging zone thresholds are next. And if you are farming dryland peanuts, calcium becomes even more important because you are already dealing with less consistent moisture to move nutrients into the pods.

One other thing worth keeping in mind is how easy it is to get a false sense of security from fall soil tests. Those samples are usually taken deeper than the pegging zone, and a lot can change between fall and early bloom. Rainfall can move calcium out of the surface layer, and tillage can shift soil around enough to change what the plant actually gets. That is why pegging zone samples are still the most reliable way to make these decisions.

At the end of the day, calcium is not just another line item in a fertility program. It is directly tied to yield, grade, and seed quality in a way that very few other nutrients are. In a year when you are trying to be efficient and stretch every dollar, there are places where you can safely adjust. Calcium is usually not one of them. If anything, this is the input that protects everything else you have already invested in the crop.

The Early Situation Going Into the 2026 Peanut Season - R. Scott Tubbs

With Georgia expected to plant over 800,000 acres of peanuts again (for the 3rd consecutive year, and 5th time in the last 9 years), there will be challenges in our fields that are consistently planting in short rotations (back-to-back peanut, or only one summer crop between plantings). Many of the diseases, nematodes, insects, and weeds that we normally battle when growing peanut will have increased chances to thrive. When we don't provide the opportunity to rotate crops that are non-hosts, inoculum/populations build to threatening levels that can be difficult to control. In addition, rotation to other crops such as corn and/or cotton can alter modes of action used to combat against resistance with certain pesticides. There is also the consideration of fertility management where shortened rotation means similar nutrients are being removed from the soil profile and not being replaced as often when we simply rely on peanut to scavenge nutrients that are unused by other crops, especially ones with a shallow root system like corn. Soil testing can go a long way in ensuring that the nutrient needs of a peanut crop are met by getting fertilizer added ahead of planting.

But the situation at the beginning of planting season often centers around soil temperature and moisture. For 2026, temperature fluctuations above and below the 68 F threshold that we recommend before peanut planting begins are still volatile in some areas. Sustained temperatures above 68 F at the 4-inch level for 3 consecutive days gives the best potential for maximum germination. At the time of writing on April 17, some common peanut areas are still hovering slightly below the 68 F mark, with cooler temperatures coming in the next 3 days which will drop the soil temperatures again. Areas with finer, heavier soil-types (such as our "red-clay" areas in the regions around Terrell, Randolph, Sumter and surrounding counties) are still just shy of the 68 F mark and will drop again this weekend.

Even more important than soil temperature currently is the soil moisture situation. The most recent rainfall event was two weeks ago. The event prior to that one was another 18 days earlier than that. Before that "mini-event" over a few days, another 14 day stretch going back to February 26 occurred. The soil profile is depleted of moisture. Outside of a slow, multiple day, multiple inch event, it will take more than one event to replenish what is needed in the soil profile for consistent and uniform germination of a larger seeded crop like peanut. With no more than a 15% chance of rain over the next week, we need to be shifting attention to only planting irrigated fields currently.

Many fields that were prepared for planting more than one week ago (especially using conventional tillage) will need to be refreshed before planting once there is adequate moisture. Pay close attention to the forecast and be strategic in the amount of land that is prepared compared to the amount of rainfall that is anticipated. Even if the quantity of rainfall received is enough to get started planting, there is a strong possibility that the soil moisture will not be adequate to sustain continued planting until the next rainfall event occurs. Only prepare enough land for planting that you will be able to safely get across to avoid costly extra trips across the field at a later time vs putting yourself in a position of planting into conditions that are too dry or having to halt planting and allowing weed escapes to flourish before you are able to begin planting again.

Remember that it is still very early and there is ample time to get the crop in the ground. But with each passing week that planting is prevented because of sub-optimal conditions means we will have to be that much more efficient with our operations for land

preparation, planting, and spraying to get across our fields in a timely manner. Be ready, but not overly eager. Stay in position to produce your best crop possible instead of jumping the gun and creating more problems to deal with as the season progresses.

Cover Crop Termination (Taylor Singleton and Wes Porter)

It's incredibly dry right now, and there's been a lot of conversation about terminating cover crops ahead of planting, specifically what this means from a soil moisture perspective. Everyone is itching to plant, but there are a couple things to think about, especially since there is little to no rain in the extended forecast.

When did you plant your cover crop? Many growers were delayed in planting their cover crop this fall/winter whether from a late harvest or the drought that we experienced in late November and early December in various parts around the state. Keep in mind, cereal rye (Wrens Abruzzi) typically matures around 150 days. I know a lot of folks were around a mid-December cover crop planting date; December 15 to April 15 is 121 days, which means that cover crop is right around the switch from head development (highest water use) to maturity (less water use but still using some). See the chart below from the University of Florida. If cereal rye can find moisture in the soil, it's going to pull it. If we are lucky enough to get a good rain soon, and that cover is still living, it's going to steal away all our moisture from what would be the peanut seed bed if we plan to plant soon.

Small grain daily crop water use (ETc - inches/day) - University of Florida

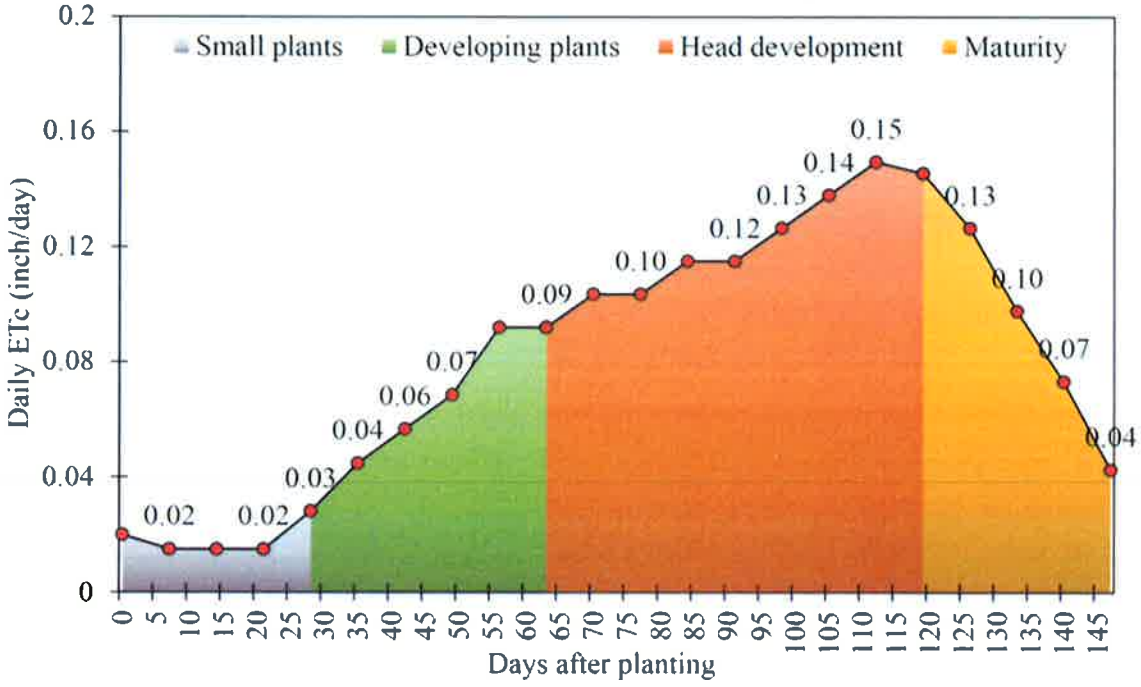

Figure 13. Small grains crop water use (inches/day).
Credits: Vivek Sharma, UF/IFAS

When do you plan to plant the crop? Maximizing cover crop biomass is really important for many reasons (weed suppression, erosion mitigation, soil characteristics, etc.), and it's often the reason we've planted the cover in the first place. If you plan to get out and plant

your crop (especially dryland) as soon as it starts raining again, I would highly encourage you to consider terminating any living cover. Typically, we like the cover to be terminated at least 2 weeks before planting the cash crop. In the case this year, terminate the cover and hopefully we get rain to replenish the seed bed before planting. Plus, any rain we do get the terminated cover will help us conserve.

Alternatively, if you're still a month out from planting peanuts, it may be worthwhile to hold tight and see what the weather conditions are shaping up to be over the next few weeks? Especially for a mid to late December planted cover, the next couple of weeks can be valuable for cereal rye as it matures and generates more lignin, which is valuable for stability of the residue on the soil surface over time.