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The University of Georgia

College of Agricultural and Environmental Sciences
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Lee County Ag Newsletter

Second Week of May 2023, Volume 23, Number 2

Early Season Irrigation Considerations for Peanut Production

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Most if not all peanuts in the state of Georgia should be planted sometime during late April and into early- to mid-May. Once the crop is in the ground it's time to start considering how to manage it, and specifically how to manage irrigation. There are many irrigation scheduling tools available to producers from Checkbook methods, to computer models and soil moisture sensors. Depending on your operation and what your irrigation capabilities are one of these methods may be a better fit than another. The simplest method is the UGA Checkbook in Figure 1 below. UGA Extension has developed 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 Irrigation Reference Guide for Corn, Cotton, Peanuts, and Soybeans | UGA Cooperative Extension. Peanuts typically do not require a lot of 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 you may 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 is turns hot and dry like it has the past few years. The yellow box below represents the first five weeks after planting of peanut water requirements. Keep a track of rainfall and temperature, 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 below 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.

For most of Georgia, we did not receive significant rainfall until the last weekend of April when we had some systems that brought some much-needed rain. However, our humidity has dropped and there is no significant rainfall predicted through the long-term forecast. The temperature predictions for the first week of May are seasonably nice, but keep in mind even though it's cool, the humidity is down and we have had some windy days drying out our shallow soil

moisture. Additionally, if it stays dry and turns hot, irrigation will most likely be needed during the first month after peanut planting. So, don't fall behind early during the season. In addition to early season irrigation, due to the depletion of soil moisture from heat and lack of rainfall, farmers may need to consider pre- and post- irrigating their fields to aid in promoting better seed germination during planting. It is advised not to just 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! For a more in-depth irrigation recommendation it is suggested that you look into 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.

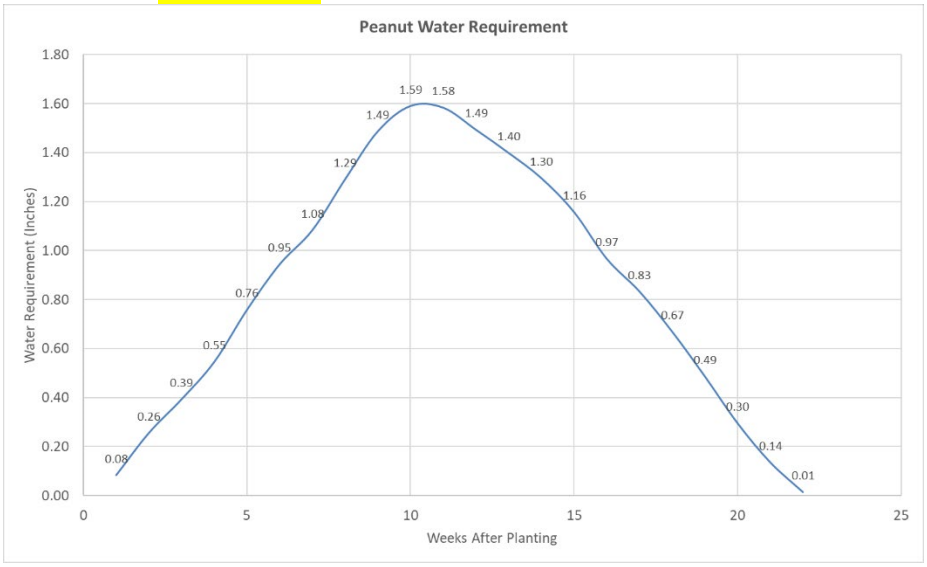


Figure 1. Seasonal Peanut Water Requirement.

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 the peanuts let it start logging data, making decisions from that data and assuming everything is good to go. Unfortunately, we need to make sure we know what is going on in the field before we blindly start following the sensor. 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.

Late April/early May signals planting time for peanuts. One thing is certain in farming, one year from the next is never the same. Weather and available moisture are constant variables. Adding rooting depths and plant needs in 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 fairly shallow in the soil. These combinations of events reflect the plant water needs, as shown in our UGA Checkbook method.

Moisture sensors generally default to an average of using sensors available on the probe for a 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 actually 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%. Now since the average is weighted higher on the shallow sensor it can be seen that 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 scheduling on your peanuts reach out to your local UGA County Extension Agent.

In-Field Planter Considerations

- Simer Virk
- Wes Porter

As peanut planting ramps up across the state, it is important to re-emphasize the value of proper planter setup and operation to attain a timely and uniform stand establishment. The previous article on planter preparation covered key points on planter inspection and maintenance that could be performed before heading out to the field. While it provided a good opportunity to prepare for planting, an important aspect of ensuring good planter performance is regular in-field checks and adjustments to different planter components as needed for the prevalent field conditions. Planter issues are common during planting but can be mostly avoided by paying attention to the planter operation and catching issues before or as they occur in the field. Here are few additional points to consider while planting peanuts to minimize or prevent any potential planter related issues in the field:

- If you haven't started planting peanuts yet, there is still time to **perform a thorough planter inspection** using the checklist available here Planter Checklist (UGA). Remember to take care of any major issues or parts that needs to be replaced before getting out in the field and plant. Neglecting minor issues now can result in greater downtime and/or major problems later in the season.
- If you are out in the field planting peanuts, make sure to **get out and dig behind the planter** to ensure that the desired seeding rate (seeds per foot), seed depth, and seed-to-soil contact are attained across every row. Seeding rate and/or depth variability is very common among the row-units on the same planter so checking each row is important to have a uniform stand across the field.
- Variability in planting conditions within the same field or among the fields is again common and will require **adjustment to planter settings based on the existing conditions**, with special consideration to variability in soil texture and moisture. A change in crop such as from cotton to peanuts or corn to peanuts would require adjustments to vacuum (due to seed size) and seed meter settings to ensure proper seed metering with good singulation.
- When you notice any seed singulation, spacing, or depth issues in the field while planting, make sure to **properly identify and fix planter issues before continuing to plant** across the whole field with the same planter. It doesn't take long for small seed metering or spacing issues to translate into much bigger emergence problems later.
- Always keep a **visual on important planting parameters** including vacuum pressure, row-unit bounce, operation of row-cleaners, gauge-wheels and closing wheels from the tractor cab during planting. Small planter issues – which can affect seed placement and emergence – during planting are often the hardest to catch and often go unnoticed until they become a problem.
- When using a seed monitor or any other planting technology such active downforce, **pay attention to the planting feedback for each row** instead of looking at the overall population and other averaged planting

metrics. Planting issues are usually not consistent across the whole planter but more specific to individual row units so they are easy to identify and fix when viewing by-row feedback.

2023 Peanut Pointers May

- Bob Kemerait

Seed rot and seedling diseases are a threat to peanut plants in every field.

Peanut seed must be protected from a number of fungal pathogens to reduce the threat of seed rot. One of the most common seed-rot fungal pathogens is *Rhizopus*, though there are others as well. If not effectively managed, the rotted seed in a now soft and putrid form will fail to germinate.

Poor quality seed is at increased risk to both rot and seedling disease. Damaged or poor-quality seed is more likely infected with fungal pathogens than would be "healthy seed"; low vigor from poor quality seed will also put the compromised seedlings at further risk to stand loss. Young plants need to be protected from fungal pathogens, primarily *Aspergillus niger* and *Rhizoctonia solani*.

Environment has a HUGE impact on risk to seed rots and seedling diseases. Planting into cool and wet soils increases risk to rots in general and to seedling disease caused by *Rhizoctonia solani*. Planting into hot and dry conditions greatly increases risk to Aspergillus crown rot. To reduce risk to these diseases, growers are encouraged to consider environmental conditions at planting and to delay planting if conditions now in the next week favor disease. Growers can reduce threat to these diseases by avoiding planting into cool soils or by using irrigation, if available, to cool hot and dry soils.

Fungicide seed treatments (preferably Rancona or Trebuset) are a first and critical line of defense to minimize impact of seed rots and seedling diseases**. In 2023, some seed will have been treated with a liquid polymer rather than the dry dust that has been used seemingly since time began. The polymer has a blue-green color; though the color is different the efficacy is stout and unchanged.**

Where there is elevated risk to seedling diseases, perhaps because of concerns over seed quality, or conditions at planting, growers may consider use of an in-furrow product to protect young plants against seedling disease and later against Cylindrocladium black rot (CBR) and perhaps white mold.

in-furrow products, to include azoxystrobin, Velum, Propulse, and Proline can be used to protect the crop from disease. **Note: Just because a grower CAN use an in-furrow product does not mean a grower will make more money by doing so. Care must be taken in the decision process.**

Azoxystrobin: 6 fl oz/A to 12 fl oz/A (3-6 fl oz/A under twin rows): very effective against Rhizoctonia seedling disease, much less effective now against Aspergillus crown rot disease.

Velum: used primarily as a nematicide at a rate of 6.5-6.84 fl oz/A (3.4 fl oz/A under twin rows), Velum also has outstanding activity against Aspergillus crown rot if this is needed. Use of velum also helps growers with a good start to early season control of leaf spot diseases, even though it is applied in the furrow. **NOTE: Because of the cost, I do not believe that in the absence of peanut root-knot nematodes, most growers will benefit from use of Velum if it is ONLY applied for control of seedling diseases.**

Proline: used in-furrow primarily if there is concern for management of CBR or, perhaps, early season white mold control. 5.7 fl oz/A under single rows, 2.85 fl oz/A under twin rows.

Use of Proline in-furrow is our best option for management of Cylindrocladium black rot (CBR) and Proline applied in-furrow may have some benefit for management of early season white mold as well.

An in-furrow application of Proline is not as effective as a banded application of Proline 3 to 5 weeks after planting; but it should have some efficacy.

Propulse: this product is a pre-mix of fluopyram (Velum) and prothioconazole (Proline) and is used at a rate of 13.6 fl oz/A (single rows) and 6.8 fl oz/A (twin rows). Propulse would be used for reasons similar to Velum or Proline. Note: it is necessary to spike Propulse, 13.6 fl oz/A with 1 fl oz/A of Velum to have equivalent rates in an application. Again, growers should consider carefully what they are trying to manage with use of Propulse in-furrow at planting time on peanuts.

Nematicides are an important consideration for growers who have a problem with the peanut rootknot nematode by who do not plant TifNV-HiOL or Georgia-14N. Fumigation with Telone II (4.5-6 gal/A) 10-14 days prior to planting is our most effective nematode management option. However, growers can also successfully manage nematodes with AgLogic 15G (7 lb/A) and with Velum. (6.5-6.84 fl oz/A). Vydate CLV (34 fl oz/A) has also proven to be effective in the management of root-knot nematodes on peanut. But these critical management options must be deployed before the furrow is closed.

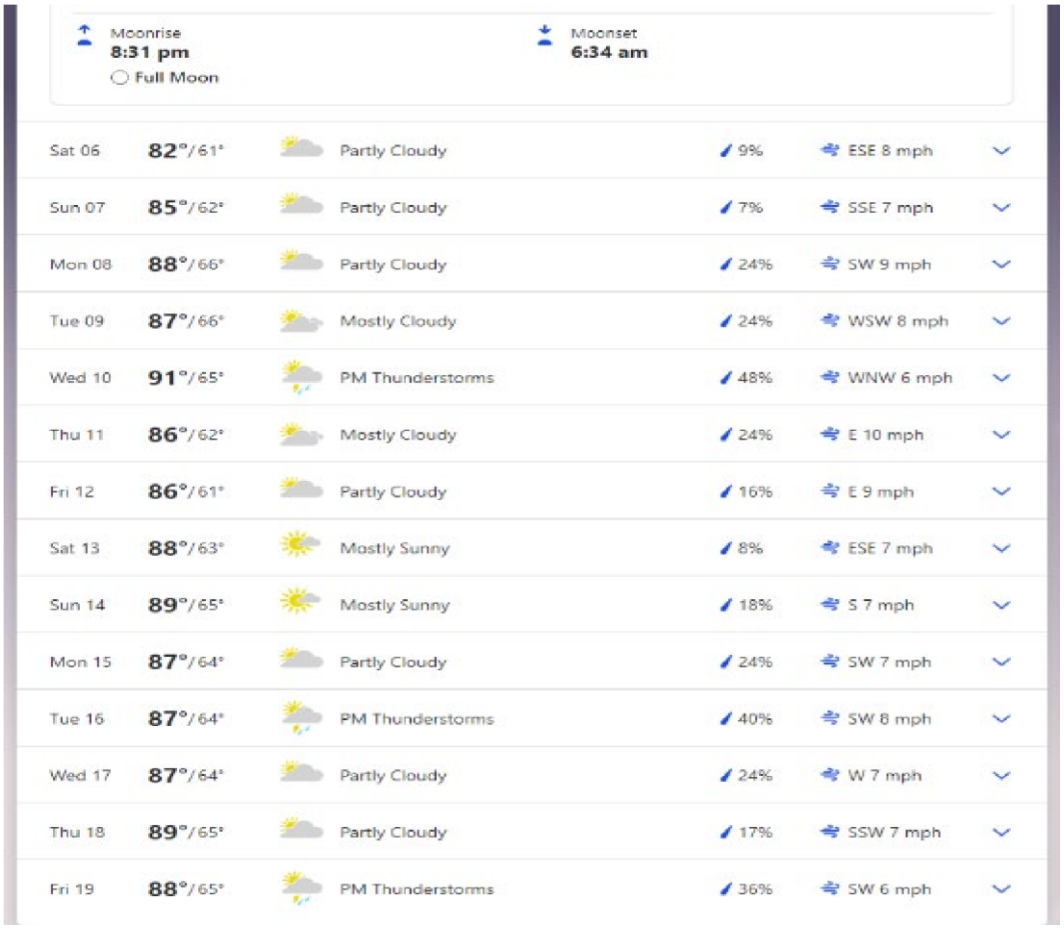
Final note: Use of AgLogic and Vydate at labeled rates provide effective control of thrips but to not aide in management of Tomato spotted wilt disease.

Use of azoxystrobin, Velum, Proline, or Propulse requires additional management of thrips, likely with Thimet or imidacloprid.

Only Thimet effectively reduces risk to Tomato spotted wilt.

The weather conditions will improve for the rest of May which will help with germination and emergence. I have had several calls this week regarding poor emergence for fields planted 1-2 weeks ago. I expect there will be more based on what I have heard. With this in mind, you may want to take a look at the fields that have been planted. Like Kemerait mentioned in his peanut pointer article there is a new liquid polymer seed treatment being used this year instead of the dry seed treatment. Although this is a great advancement for the industry, it is new and we need to keep a watch out for any issues that might develop. Therefore, keep this in mind when you are making field visits in regards to emergence. Things you need to know in this situation are: the variety, planting date, %germ of the seed, type of seed treatment, what was applied in-furrow with the seed, and do they have any of the seed left to send for a germination test.

Another thing to keep track of the next two weeks is soil moisture. Encourage your growers to make use of the moisture and plant the dryland fields ahead of the irrigated. The high temps with only slight to moderate rain chances means somewhere is going to get dry in the near future. See 10-Day forecast for Tifton



District Winners of the GA Peanut Achievement Club:

I wanted to thank everyone for submitting applications this year. This was the best county agent participation that I have seen in a long time. You submitted over 35 applications for the GA Peanut Achievement Club. Please tell all of the applicants I really appreciate their willingness to apply. The UGA Peanut Team hopes to see their applications again next year. Below are the district winners for the 2022/23 growing season:

District Winners for the 2022/23 GA Peanut Achievement Club	
District 1	
Mike Newberry	Early County
Wes Gaston	Sumter County
Trey Jones	Webster County
Jerry Jones	Webster County

District 2

Adam Tabb	Miller County
Judson Hornsby	Seminole County
John Gaines, Jr.	Baker County
4 Miller Farms	Seminole County

District 3	
Larry Ray Walker	Ben Hill County
Kerry/Lisa Hodges	Screven County
Charles Smith, Jr.	Jefferson County
Buckhead creek Farms	Jenkins County
David Selph	Wilcox County

District 4	
J. Brandon Dewitt	Brooks County
Hulen Reeves, Jr.	Irwin County
Chase Farms	Macon County
Nellwood Farms	Bulloch County

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