

Peanut Pointers

April, 2022

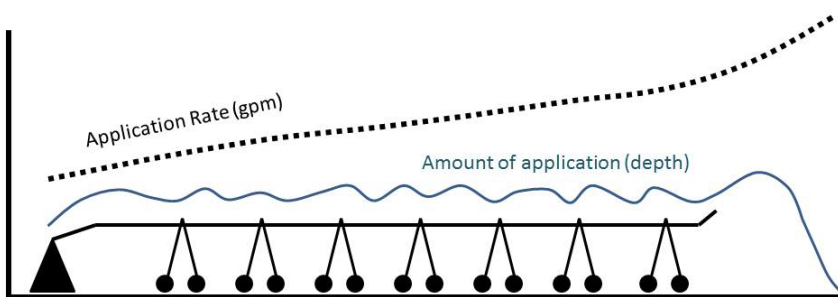


UNIVERSITY OF
GEORGIA

Peanut Team

Irrigation System Prep and Early Season Water Requirements for Peanut Production
By Wesley Porter, Extension Precision Ag and Irrigation Specialist, UGA
David Hall, Extension Water Educator, UGA
Jason Mallard, Extension Water Agent, UGA

We are moving into the time when peanut planting is beginning, countless hours and many dollars have been spent on tillage, spraying and planting equipment to be prepared for another year. However, make sure that you do not overlook one of your largest investments and one that is just as important as any other, your irrigation systems. Now is an optimal time, if you have not already done so, to do routine and preventative maintenance on your irrigation systems to ensure they are in top shape. 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 of 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. 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.

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. 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 you need any further guidance on either of these, or have interest in having an on-farm uniformity test performed, contact your UGA County Extension Agent and 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 the pivot up and running 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's 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 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 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 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. Thus, your actual water/irrigation requirement may vary slightly based on weather conditions and rainfall during the growing season. 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. An additional option is the utilization of USDA-ARS's Irrigator Pro, recent research (Table 1) has shown that the utilization of either sensors or Irrigator Pro maximize Irrigation Water Use Efficiency and yield when compared to other irrigation scheduling methods. For more information about either of these contact your local county Extension Agent.

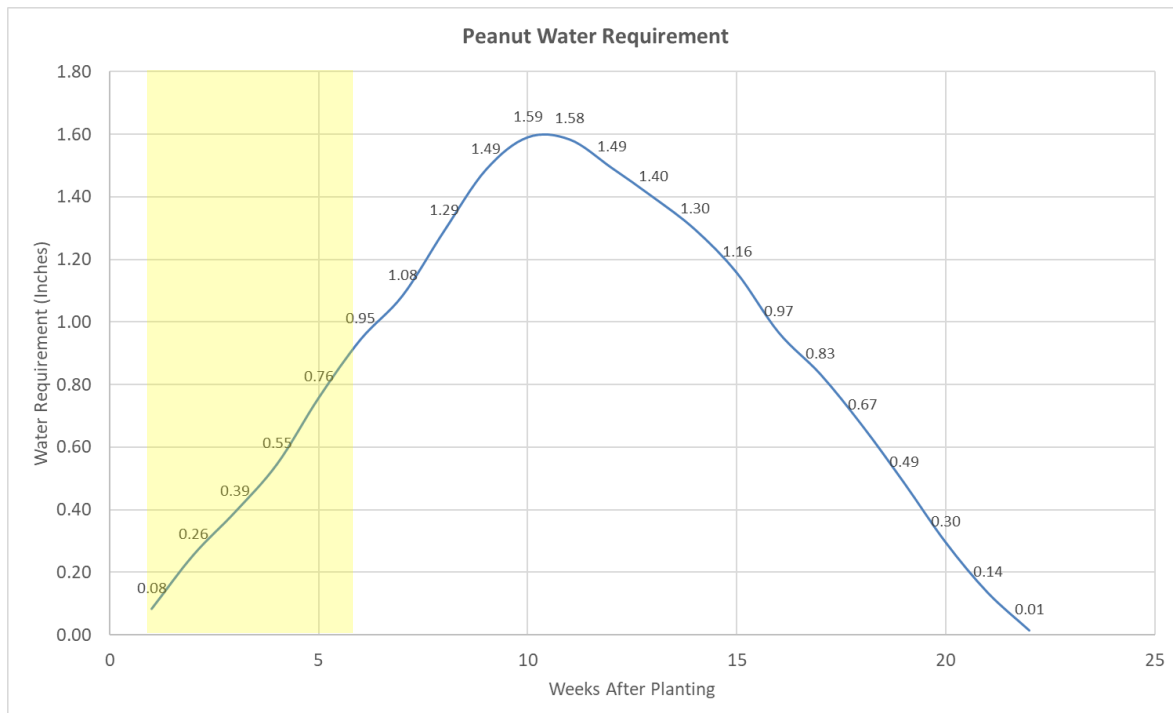


Figure 2. Seasonal Peanut Water Requirement.

UGA Extension's peanut irrigation checkbook, like for most crops, recommends very little water once the stand is established. Once the planters start rolling, farmers continue to plant as fast as possible while sufficient moisture is present to ensure a 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. In doing this, careful consideration to the amount of water applied must be considered using such factors as available moisture, soil type and projected weather. 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 that is laminated and 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](#)

Table 1. Results from Peanut Irrigation Scheduling Studies during 2017 and 2018.

Irrigation Scheduling Method	Irrigation Amount (in)	Total Water (in)	Yield (lb/ac)
2017 Rainfall: 24.30			
Dryland	1.00	25.30	5875
WaterMark (45 kPa)	2.85	27.15	6396
PeanutFARM	5.50	29.80	5936
Irrigator Pro	4.00	28.30	6260
50% Checkbook	6.75	31.05	6262
Checkbook	10.50	34.80	5749
EasyPan	4.75	29.05	5979
2018 Rainfall: 32.43			
Dryland	2.50	34.93	5591
WaterMark (45 kPa)	2.50	34.93	5849
Old Checkbook	7.80	40.18	6204
New Checkbook	6.70	39.13	6147
50% New Checkbook	4.00	36.45	6231
Irrigator Pro (Soil Temp)	6.30	38.68	5996
Irrigator Pro (Sensor)	3.30	35.68	6433
PeanutFARM	4.80	37.18	5984

April Peanut Pointers

By Pam Knox, Agricultural Climatologist

April is expected to be warmer and drier than usual across most of the Southeast in 2022. This continues the pattern seen in the past few months that was caused by a combination of the current La Niña and the trend towards warmer temperatures observed since the 1970s. The last few Aprils have been cooler than the trend would indicate, but with the continuation of La Niña and a look at the mid-range climate forecasts, I don't expect this to happen again this year. There is some indication of a couple of cooler periods within the month, but generally above normal temperatures are expected in most weeks.

While the April monthly precipitation is expected to be drier than usual, several frontal passages will move through the state during the next few weeks. Each one will bring the potential for severe weather as well as the chance of rain. The soil has been relatively dry over the past month, but the recurring rain should help with soil moisture. You will need to watch the forecasts carefully to determine when the best time to get into the fields is likely to be.

La Niña is currently still present in the Eastern Pacific Ocean and is contributing to the current weather pattern. It is expected to weaken and return to neutral conditions by early summer, although forecasts in spring are less reliable than those later in summer. With neutral conditions in place over the summer, we are expected to have another relatively active Atlantic hurricane season. Of course, there is no way to predict where those storms will go, and so there is limited planning you can do for the tropical season at this point. There is a long-term tendency for the summer after a La Niña to have an increased chance of drought, but that certainly did not pan out last year due to the active tropical season so I am hesitant to say we will have one this year. It will largely depend on whether we have tropical moisture over our area or not, since 30 percent or more of summer rainfall comes from tropical systems and if they go elsewhere, we are much more likely to experience drought conditions.

Planter Preparation

By Simerjeet Virk, Extension Precision Ag Specialist, UGA & Wesley Porter, Extension Precision Ag and Irrigation Specialist, UGA

There are few more weeks until peanut planting begins across the state, so this is a perfect time for growers to start checking their planters and perform any required maintenance to ensure they are ready for the field. While some of the planters may have already been used to plant corn, it's important to note some significant changes in settings to ensure accurate metering and seed placement for peanut. Planter malfunctions in the field or mistakes at planting can become costly, especially with the input prices this year so it is important to ensure that the planters are dialed in for peak performance. A planter checklist is available here [Planter Checklist \(UGA\)](#) for growers to utilize and go thoroughly over the planter to check if any parts need replacement or adjustment before heading to the field. When growers get in the field, it is also important that they get out of the tractor during first few passes and check seed depth and spacing behind the planter to check if everything is setup and functioning properly for the given field conditions. Here are few other key points to consider related to planter setup and performing in-field checks when planting peanuts:

- 1. Seed depth** – Recommended seed depth for planting peanut is 2.0 to 2.5 inches. Verify seed depth before planting both on a hard surface and in the field. Mechanical seed depth settings can vary among the row-units on the same planter so take the time to check planted seed depth for each row-unit and make necessary adjustments.
- 2. Downforce** – Proper planter downforce is important to achieve target seeding depth so make sure the downforce system (whether utilizing mechanical or active system) is set to apply adequate downforce on each row-unit. A downforce of 100 to 200 lbf is generally considered adequate for planting peanuts. Remember these downforce requirements can vary with soil type, texture and moisture so make sure to make those adjustments as field conditions change from one field to another or within the same field.
- 3. Seeding Rate** – Recommended seeding rate for peanuts is 6 to 7 seed/ft, which is higher than the nominal seeding rates for corn and cotton (2 to 3 seed/ft) and requires seed meter to singulate seeds at considerably higher speed (rpm) even at normal planting speeds. Therefore, it is important to ensure that the seed meter is setup and functioning correctly to attain the desired population in the field. Unnecessary skips or multiples will result in poor or uneven stand establishment, which can further impact yield if stand is reduced significantly. Peanut seed is also larger than corn and cotton seeds and requires higher vacuum, so make sure to adjust the vacuum appropriately to avoid skips and multiples.
- 4. Seed Placement and Seed-to-Soil Contact** – Proper setup and functioning of row-cleaners (when planting in conservation systems), double-disc openers, gauge-wheels, and closing wheels for prevalent field conditions is critical to attain adequate seed placement and proper seed-to-soil contact. Make sure that the double-disc openers are creating a true V-shape furrow, gauge-wheels are running tightly (but not rubbing excessively) against the opening-discs, and closing wheels are aligned perfectly behind the planter and set to apply adequate pressure on the furrow. Check for any signs of improper furrow formation when doing field checks behind the planter and make necessary adjustments. It is important to have both good seed placement and seed-to-soil contact for timely and uniform emergence.

5. **Planting Technology** – Issues with planting technology in middle of the planting season can cost significant time and money. Make sure to perform a thorough and timely inspection (at least a week or more) before planting to check status and functioning of all technology components including GPS, seed monitor, wiring harnesses, seed tube sensors, rate control module, electric seed meters, and active downforce system (if available) as well as for any subscription or latest firmware updates for the GPS and the in-cab display.

Peanut Pointers

By Scott Monfort

Peanut acreage has remained above 700,000 acres for several years causing growers to plant a portion of their peanuts in April. This is not an issue as long as growers understand the risks of planting early.

Weather is one of the most important factors that can negatively impact stands when planting early. Remind producers to monitor soil temperature closely over the next two to three weeks. The UGA recommendation is for the average four-inch soil temperature to be above 68 for several days (3+ days) and there is no forecast for an approaching cold front. Tomato Spotted Wilt Virus (TSWV) is another important risk factor to take into consideration when planting in April. Although all varieties have some resistance to TSWV, GA-12Y, TifNV-HIOL, and GA-14N have the highest level of resistance to the virus. This does not mean you cannot plant other varieties in April. However, planting a more susceptible variety in April means a grower will need to lean more on the remaining recommended practices in the **Peanut RX** to aid in reducing the risk of TSWV like plant twin row, use recommended seeding rates to ensure 4 + plants per foot of row is achieved, apply Thimet in-furrow, etc. If your risk is high for TSWV based on the Peanut RX, I would avoid planting GA-18RU, GA-09B, TUFRunner 511, and Florun 331 and in April.

Other than soil temperature and TSWV risk, growers need to monitor soil moisture in the top 3-4 inches of the soil profile. Seed should be planted 2-2.5 inches deep and you want at least an inch of moisture above the seed. DO NOT plant seed 3 inches or deeper chasing moisture. All you will do is increase your potential of stand loss and increase the risk of TSWV as a result of erratic emergence. If moisture is a limiting factor, make sure growers know the importance of adding moisture before they plant. They run the risk of shocking the peanut seed if they plant into dry soil and then add moisture afterwards, especially in hot conditions. This will also cause emergence to be erratic which increases your risk of the virus.

Finally, remind your growers “UGA doesn’t recommend the use of in-furrow fertilizers for peanut”. Our research has shown a 20 - 40 % reduction of stands with the 2-3 gal/A rate of fertilizers applied in-furrow with the seed. We have also observed a delay in emergence of 3-5 days with rates between 0.5 and 1 gal/A. Growers need to understand the risks of using these types of products. Please call me if you have any questions or comments.

Seed Quality

Based on information from the Georgia Department of Agriculture’s Seed Laboratory in Tifton, this year’s peanut seed quality is very good. This is not to say there won’t be an occasional situation where seed quality might be less than expected. With this in mind, growers need to also know the germination % of each lot of seed they purchase. This way, they can adjust seeding rates appropriately. UGA recommends planting 6-8 seed per foot in order to achieve at least 4 uniform plants per foot of row. Planting more than 7 seed/ft on singles can increase seed rot. Remind them that when they purchase seed and take possession of the seed they must keep it in a cool, dry, well ventilated location until planting. Growers and Buying points need to make sure to adhere to the 1st in:1st out rule. And always, plant seed under optimal temperature and soil moisture conditions to ensure good stands are achieved.

Important Dates to Remember:

The deadline for the demonstration grant application is **May 2, 2022**

The deadline for the GACAA award application is **May 15, 2022**

County Agent In-Service Row Crop Field Day in Tifton on **June 9, 2022**

GA Peanut Achievement Club will be on **August 12-14, 2022**

East Georgia Cotton Defoliation and Peanut Maturity In-Service Training on **August 30, 2022 – Location TBD**

West Georgia Cotton Defoliation and Peanut Maturity In-Service Training on **August 31, 2022 – Location TBD**

Cotton and Peanut Research Field Day on **September 7, 2022**

Checklist to Start the Season

By Bob Kemerait

It is nearly time to begin planting our 2022 peanut crop. Growers are reminded that many important opportunities for successful disease and nematode management occur at the beginning of the season. Growers are advised to consult the 2022 Peanut Rx (available online at www.peanutrx.org, in the UGA Peanut Production Update, and in Peanut Rx cards from a number of chemical companies) to better understand the risk they face to leaf spot, white mold, and Tomato spotted wilt disease in each field and steps that can be taken to reduce this risk.

Varieties: Though 'Georgia-06G' remains the most widely-planted variety again in 2022, growers are encouraged to plant other varieties as well. In careful selection of varieties in addition to Georgia-06G, growers can capitalize on the disease and nematode resistance found in newer varieties. For example, 'TifNV-HiOL' is nearly immune to the peanut root-knot nematode and 'Georgia-12Y' has better resistance to white mold than does Georgia-06G. Growers should strongly consider planting more-resistant varieties in addition to the Georgia-06G they will plant.

Bottom line: Planting TifNV-HiOL eliminates the need for use of nematicides to protect the peanut crop from peanut root knot nematodes (but not the lesion nematode which can be problematic at times). Using Peanut Rx as a reference, growers can also choose to plant varieties which have improved resistance to Tomato spotted wilt disease, leaf spot diseases, and white mold.

Tomato spotted wilt and Peanut Rx: Tomato spotted wilt can be a serious threat to every field of peanuts every year. I am concerned for the 2022 crop as our warm(er) winter could impact the biology of the thrips that transmit the Tomato spotted wilt virus to the peanut plants. The combination of factors found in Peanut Rx, to include variety, planting date, plant population, and choice of insecticide to manage thrips, has a significant impact on the risk to this disease. Once the furrow is closed, management options for Tomato spotted wilt disease are basically finished.

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 protect against seed rot. You seedlings need to be protected from fungal pathogens as well, primarily *Aspergillus niger* and *Rhizoctonia solani*. Environment has a HUGE impact on seed rots and seedling diseases. Planting into cooler and wetter soils increases risk to seed rot and seedling disease caused by *Rhizoctonia solani*. Planting into hot and dry conditions greatly increased 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 favor disease. Growers can reduce threat to these diseases by avoiding planting in cool soils and by using irrigation, if available, to cool hot and dry soils. Fungicide seed treatments (preferably Rancona or Trebuset) are a first line of defense to minimize impact of seed rots and seedling diseases. Growers can also use in-furrow products, to include azoxystrobin, Velum, and Proline to protect the crop.

Nematicides are an important consideration for growers who have a problem with the peanut root-knot nematode by who do not plant TifNV-HiOL. 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 and with Velum. But these critical management options must be deployed before the furrow is closed.

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.

Again, growers are reminded that many important opportunities for successful disease and nematode management occur at the beginning of the season. Don't miss the opportunity.

April, 2022 Peanut Pointers

By Mark Abney

It is peanut planting time again, and the hot topics when it comes to insect management at planting don't change much from year to year. Thrips are the most consistent insect pest in Georgia peanut: pretty much every field will have them. Most of thrips management and all of tomato spotted wilt management is over when the seed furrow closes. We spent a lot of time at the county grower meetings this winter talking about thrips management options, and I hope growers are prepared to make good decisions to start 2022.

We all know scouting is the best way to prevent insect management mistakes, and we also know that a lot of peanut acres will not be scouted. There are a number of reasons for the lack of scouting; most of them are simple, and some are very reasonable. Below are some key points that we should try to help growers remember as they work through the 2022 season. If you remember the message from grower meetings this winter: killing insects does not make you any money. The goal is to prevent losses and keep as much of your money in your pocket as possible.

- Applying an insecticide when insect populations are below threshold is a waste of money.
- Pest identification is important, and in peanut it is usually not difficult.
- Choosing the correct insecticide is very important. Efficacy, cost, and risk of flaring secondary pests should be considered every time an insecticide is applied.
- Proper sprayer calibration saves money.
- Nothing works 100% of the time.

There is no revelation here, but a great deal of insect management frustration occurs each year because someone forgot one or more of the five points listed above.

The following is a reminder about calibration that is becoming a regular part of my April Peanut Pointers article (if it stops being a problem, I will stop repeating it).

There are a lot of things a grower must consider at the start of planting season each year. One important chore that can easily be overlooked in the rush to get seed in the ground is calibrating insecticide application equipment. Calibration is not generally a task folks enjoy doing (or writing or reading about for that matter), but it matters...a lot. Most Georgia peanut growers will be putting insecticide in the seed furrow for thrips management. The application technology used to accomplish this task will vary widely from farm to farm, but the one constant is that properly calibrated equipment will save growers money and reduce the risk of thrips injury.

"It worked fine last year", "I don't have time for that", "That's good enough, let's roll", "It should be fine" are some phrases that are all too commonly heard when it comes to calibrating sprayers or hopper box applicators. What might seem like a small rate increase can lead to thousands of dollars in extra insecticide costs and possible crop injury in addition to potentially being off label. Applying less than labeled rates can result in poor pest management and can increase the risk of insecticide resistance.

Growers should be encouraged to calibrate their equipment before they start planting the 2022 peanut crop; the time (and sometimes frustration) will be worth it.