Peanut Pointers

August, 2023

UNIVERSITY OF GEORGIA

Peanut Team

Weather and Climate Outlook for August

- Pam Knox, Agricultural Climatologist

As I am sure you all know, the weather this year has been quite variable, although at the moment we are in fairly rainy conditions after a mostly warm and dry July. Growing degree days have been above normal across southern parts of Georgia, especially the southeast quadrant, leading to more rapid growth. With more rainy conditions returning, we can expect the temperatures and solar radiation to drop somewhat in August, leading to a little slower growth. The outlook for the rest of August shows wetter conditions are likely to continue through at least the first two weeks of the month, but after that there is not much indication of what we will get.

The tropics have shown some signs of life, but so far nothing is threatening for the next couple of weeks. There are tropical waves coming off of Africa, as we expect this time of year. But nothing is developing due to the combination of Saharan dust keeping the atmosphere stable and the El Nino's wind shear, which is blowing the top off of anything that shows signs of growing, especially in the Caribbean and western Atlantic. However, Atlantic Ocean and Gulf of Mexico surface water temperatures are much warmer than normal, so if anything does break through the wind shear, it could intensify rapidly. If that happens in the Gulf, you may only have a day or two to prepare, so keep watching forecasts carefully for any signs of storms approaching as we enter the peak Atlantic hurricane season from mid-August to the end of October.

With the El Nino firmly in place through next spring, we can expect a cloudier, cooler, and wetter winter than normal. That could start to occur by late fall, so you will not want to let your crops sit out in the field for long once they are ready to harvest. It does bode well for the soil moisture next spring, which is usually in good condition (sometimes too wet for field work, though) for next planting season.

August 2023 Peanut Pointers-Irrigation Update

- David Hall, Jason Mallard, Phillip Edwards, Daniel Lyon, and Wesley Porter

Each season brings its own challenges and farmers must find the best strategy, tools, techniques, and technology to help address these challenges. One of the biggest issues I have heard this season is that it seems like the cooler and wetter weather earlier in the season slowed peanut growth and development. Similar to cotton, as I drive around the state, I see peanuts that are already lapped, growing well and that have most likely moved through their peak water use period. However, I also see many peanuts that are still very small, have a narrow canopy and are still not close to being lapped. This makes estimating exact irrigation reqirements on a broad basis difficult. Seasons such as this are perfect for using an advanced irrigation scheduling method, such as an app or a sensor to let you know exactly when and how much to water your crop.

For weekly peanut water requirements, please refer to the graph in figure 1 (the UGA Checkbook). Keep in mind that these requirements are for peanuts that were planted between mid-April and mid-May and that they are for both irrigation and rainfall. This graph should give you a good idea on where we stand for the month of August. Most growers that planted in this time frame will reach peak water use during the month of August and then the daily water use will slowly start to decline. **DO NOT** get behind on irrigation as the weather can just as easily become hot and dry over the month of August. If you fall behind with hot and dry weather it is difficult to catch up with irrigation only during peak demand. For those of you using a soil moisture sensor or Irrigator Pro as your irrigation scheduling method, they will definitely let you know if you get behind on irrigating and it will be a difficult challenge to get that soil moisture back up with irrigation alone, especially with the deeper depths.

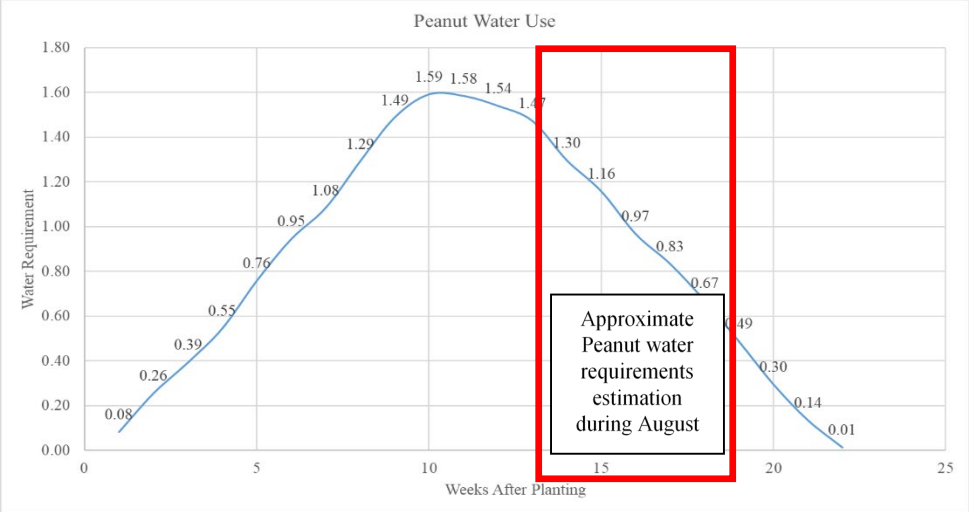

Figure 1. UGA Checkbook for Peanuts with the estimated August water requirements highlighted.

June was much cooler and wetter than normal until the end and July seemed to be very hot and dry. While we have gotten very hot and have dried out, overall, we have not needed irrigation, or as much irrigation as it may have seemed. We have just now began triggering our recommended treatments in our peanut irrigation studies. While, some areas have gotten rainfall, others have remained dry. However, figure 2 shows our current US drought monitor report as of the last week of July.

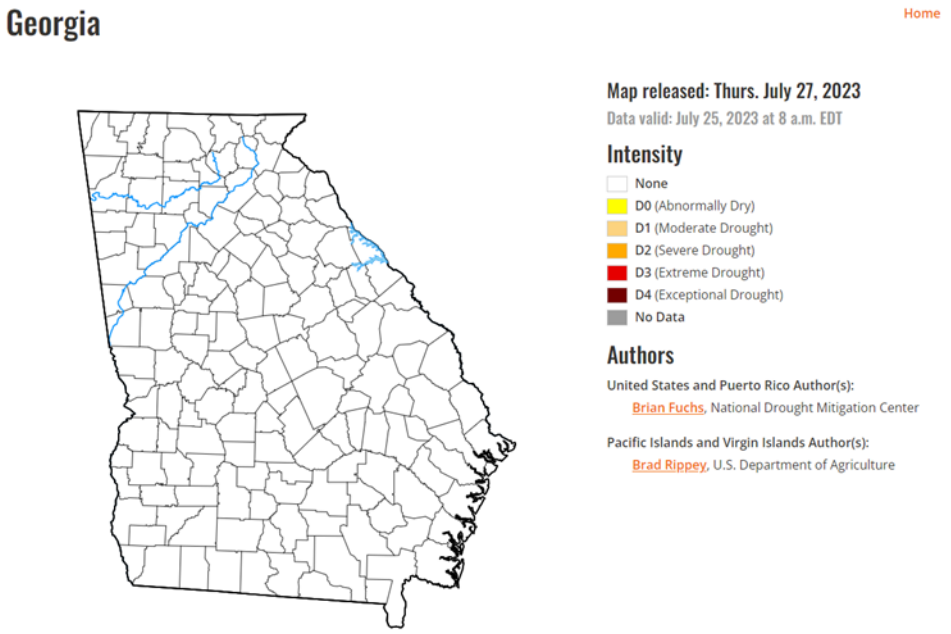

Figure 1. Current US Drought Monitor conditions for Georgia.

One point to keep in mind about using Irrigator Pro, especially if you're a new user and this is your first year running it, if you planted in the mid-April – mid-May window, you will hit the "R3 – Drying Out" growth stage during the month of August, if you haven't already. According to the crop model, this growth stage will occur at roughly 95 DAP. You will notice that the app will tell you to stop irrigating for about a week. This is to intentionally withhold water once a maximum fruit load occurs on the plant and to stress the peanut plants so that it will stop flowering and allocate resources to maturing the peanuts that are already on the plant. So, if you see this occur and feel like your field is getting dry, don't panic its part of the model and how the soil moisture needs to be handled to ensure the plant reacts appropriately physiologically.

Though some areas have received adequate rainfall, there are areas where rainfall was seriously diminished in the month of July. When we have very wet conditions during plant development plant roots sometimes do not enter those deeper depths. It is important to maintain adequate moisture within the active root zone. Through monitoring soil moisture sensors in certain areas, we are noticing, a majority of moisture is being utilized from the shallower depth sensors. In this situation if you aren't seeing moisture being utilized from the deeper depths be sure to maintain good moisture where the plants are utilizing moisture. It's times like these situations when one may question the accuracy of a moisture sensor. Watermark sensors, for example, can be checked to ensure confidence in the readings. If it's a volumetric sensor or you simply do not

have a meter, the tried and tested method of using a 1-3-inch diameter auger and drilling down near the sensor while noting the moisture level can help validate the data being logged and transmitted.

It seems this season as we have received rainfall several times it has been in large rain events. When these heavy downpours happen, we need to keep in mind two things which impact how much of that rainfall we capture and are able to utilize for our crops. They are the water intake rate and water holding capacity of our soils. When we receive those 3" rainfall events we may only "bank" 0.75" or 1" of it according to rainfall intensity and soil conditions.

If you have further questions about irrigation requirements, scheduling, or or other related questions reach out to your local UGA County Extension Agent.

July Peanut Pointers

- Scott Monfort

UGA Cotton Defoliation, Peanut Maturity, & Precision Agriculture Trainings-
August 29th – Midville Research and Education Center
August 31st -- Tifton Campus
We will send out an agenda in the next week.

UGA Cotton & Peanut Research Field Day - September 6th
The annual UGA Cotton & Peanut Research Field Day will be held Wednesday, September 6th at the UGA Tifton Campus. Dr. Camp Hand and I will be finalizing the agenda very soon and will e-mail the final schedule to all of you. In the meantime, please promote this event to your producers. The program will start at 8:00 am.
IMPORTANT: In order to have enough food at lunch we need a close head count. **Please call Ashley Golden at 229-386-3366 by September 1** with the number of individuals from your county that will be attending. Be sure and invite anyone else in your county involved in cotton and peanut production to attend as well. The UGA Cotton and Peanut Teams will provide an overview of the current research projects in both crops.

Crop Situation
The peanut crop is improving on a daily basis in the areas that have received rain. The temperatures have remained more typical for this time of year allowing the crop to continue to bloom and peg. I have received several pictures of 100-day old peanut pull up and they look better than I expected. This gives me a lot of hope for our yield potential if temperatures remain in the low to mid 90's and continue to get widespread rain showers through August. The table below provides a glimpse into the heat units accumulated since May 1. It showed the 2023 season to be behind until this past month where it seems that we have caught up compared to previous years. This is good news but you have to remember most of our crop was planted later into May and they virtually did not grow much due to the wet and cool weather. With this in mind, I would expect we are several hundred heat units behind. You can get a better idea of the heat units in your area by going to the degree day calculator (http://www.weather.uga.edu/?content=calculator&variable=dd&type=dt) at the UGA Weather Network and choose the station nearest you. Keep in mind this calculator does not adjust for irrigation or rainfall.

TSWV Survey
I wanted to thank everyone in advance for doing the TSWV survey in your county. This is very important information and we appreciate all of your efforts. Please let myself, Bob, or mark know if you need any help or you have questions.

Table 1. Degree Day Heat Unit Accumulation from May 1 to August 6th

From May-1	To May-31	DDU Total	From June-1	To June-30	DDU Total
2023	2023	**473**	2023	2023	**617**
2022	2022	**578**	2022	2022	**756**
2021	2021	**487**	2021	2021	**643**
2020	2020	**482**	2020	2020	**648**
56 <= Temp <= 95 °F			56 <= Temp <= 95 °F		

From July-1	To July-31	DDU Total	From August-1	To August-6	DDU Total
2023	2023	**772**	2023	2023	**155**
2022	2022	**739**	2022	2022	**150**
2021	2021	**698**	2021	2021	**122**
2020	2020	**750**	2020	2020	**151**
56 <= Temp <= 95 °F			56 <= Temp <= 95 °F		

Peanut Insect Concerns for the Final Months of the 2023 Growing Season

- Mark Abney

1. **Spider mites:** Spider mites are sporadic pests of peanut and rarely reach treatable populations in irrigated fields or in fields where rainfall is plentiful. Hot, dry conditions put fields at increased risk for mite infestation, and when a broad-spectrum insecticide like acephate or a pyrethroid is applied, the risk goes up even higher. Mites are currently abundant in cotton in GA, and this suggests that we could see mites in peanut if conditions become favorable. Mites can be moved from field to field on equipment, and growers should be cautious about moving from fields with known mite populations to peanut fields that are at high risk (dry and/or treated with a pyrethroid). Finding and treating infestations early are important for achieving good control. I recommend spray volumes of at least 20 gallons per acre when treatment is needed.
2. **Caterpillars.** Foliage feeding caterpillars will be present in Georgia peanut fields over the next two months. There will be a mix of species with velvet bean caterpillar (VBC) and soybean looper (SBL) likely being the most common. VBC is easy to kill, SBL is not. Proper pest identification and insecticide selection can save a grower a lot of money. VBC can defoliate a field FAST, but there is no reason for this to happen if we are scouting every week.
3. **Three cornered alfalfa hopper:** OK, this one is not a major concern of mine, but the insect can be VERY abundant in August and September, and growers can get understandably nervous about it. Can TCAH cause yield loss? Yes. Will it be noticeable? Probably not. Anything we can afford to spray on TCAH will increase the risk of spider mite infestation in a year when that risk is already elevated. My advice is to leave TCAH alone in all non-irrigated fields. If there are high numbers of nymphs in an irrigated field, adding a pyrethroid to a fungicide spray could pay for itself, but it is not a sure thing.
4. **Lesser cornstalk borer:** You are tired of reading about LCB, and I am tired of writing about LCB. There are still some lessers out there, and if a field is at threshold, it needs to be treated. Late planted, non-irrigated fields with sandy soil are the ones I would check first as they are most likely to be infested at an economically important level.
5. **Rootworms:** I don't have a good sense for how rootworm pressure in 2023 compares to recent years. Depending on who I ask, the adult beetles are either as abundant, more abundant or less abundant than last year. Our trials in Plains (beside the highway and not close to corn) definitely have fewer larvae and less pod injury than we usually see this time of year. On the other hand, a trial that is at the back of the farm and near corn is very heavily infested. I received a report of heavy rootworm pressure in some fields in Berrien County; this is a county that has little or no history of rootworm problems in peanut. Options for management are few, and efficacy is inconsistent. Please let me know if growers contact you with questions, and we can try to work through what options are available.

Threat and impact from diseases during the second half of the peanut growing season

- Bob Kemerait

If the growing season was like a football game, many of our growers would now be early in the 3rd quarter. Our home team is the "Peanut Crop" and today we would be playing the "Pests", a team primarily composed of weeds, insects, diseases, and nematodes. The "Pests" tend to put the diseases an nematodes on the field during the second half of the game. Winning the game requires both early detection of the diseases as they take the field and an effective play-calling to beat them

At a UGA football game, it is a very good feeling is to be "way ahead of the opposing team" as one moves to the 3rd and 4th quarters of a game. In terms of a peanut crop, being "way ahead" means that little or no disease of consequence can be found in a field and what little disease that is present is contained with an integrated disease management program. At this point, growers are well on their way to a harvest for which disease has little impact, other than the cost of the fungicide program. For growers who enter the month of August without disease issues in the field, I recommend the following.

1. Continue the current fungicide program, insuring that it includes appropriate fungicides for management of soilborne and leaf spot diseases. I use the word "appropriate" as from Peanut Rx, not all fields need to be treated in the same way. (See peanutrx.org for more information.)
2. Where conditions become more favorable for diseases, especially as we enter the "hurricane season", anticipate the need to adjust dates of fungicide applications in order to maintain timeliness. Growers should take advantage of rain event to redistribute fungicides and to time fungicide sprays ahead of rainfall that could keep the tractors out of the fields for a period of time.
3. Scout your fields to ensure that you know what diseases are present not only for your management program this season, but also to anticipate fungicide programs in future seasons.
4. Evaluate your fungicide program not only for efficacy, but also to ensure that it is appropriate from a risk standpoint and from a fungicide resistance management standpoint. We want to make sure that fungicides are used (and not overused) to prolong their usefulness into the future.
5. Recognize that "perfect" control and disease-free fields are nearly impossible to achieve and are not necessary to maximize profits. For example, white mold "hits" confined to the size of dinner plates likely means the fungicide program is working; a jail-break of white mold running down the row means it is not working.
6. If no disease, or very little disease, is found in a field within three weeks of projected harvest, then growers may be able to further modify their fungicide program to reduce costs and maintain yield potential. For peanuts that are dug 135 days after planting, a "7-spray program" is likely enough. For peanuts that are dug 140150 days after planting, an 8th spray may be beneficial.

Like in a football game,being "way behind" during the second half can be a very difficult deficit to overcome. Being "behind" also has significant impact on disease management decisions. "Getting behind" in a disease management program simply means that either one is late in timely fungicide applications or, more urgently, disease is now established in the field. "Established" does not

necessarily mean “severe”. “Established” simply means that the grower, agent or scout can walk through the field and find, without too much trouble, signs and symptoms or white mold, leaf spot, Rhizoctonia limb rot, CBR, etc. Reasons why growers can get behind in their disease management program include the following.

1. The crop is at “high risk” because of short rotation.
2. The crop is at “high risk” because a susceptible variety has been planted.
3. The 20232 crop is particularly at risk to white mold because of hot humid days and warm humid nights. *Sclerotium rolfsii* thrives under such conditions.
4. The disease management program is complicated because there has been abundant rainfall that is favorable for development of disease and that keeps the grower from making timely fungicide applications.
5. Rainfall or irrigation has occurred to quickly after a fungicide application and the fungicide was washed from the leaves to quickly, increasing risk to leaf spot. Typically I hope that growers will have at least 8 hours before a rain or irrigation event following a fungicide application and not more than 24 hours if the material is to control white mold as well.
6. Rainfall or irrigation does not happen within 24 hours when a fungicide is applied for management of white mold and other soilborne diseases. Such can greatly reduce, but not eliminate, the efficacy of the product.
7. Less-effective products were applied when more effective products were needed OR lower rates were used when higher rates were needed.

As in a football game, growers who are behind into the second half of the season likely need to change the game plan and be more aggressive in their management program. A “more aggressive” strategy could include tactics such as switching to more effective fungicides which could improve control (and also increase cost). More effective products could have increased systemic activity within the plant or could be more “active” against the pathogen/disease. Another tactic would be to shrink the spray interval from every 14 days to every 10-12 days, especially if weather conditions favor diseases.

In addition to being more aggressive in a field to improve disease management, there are two critically important considerations for the grower. The first is to recognize the need for FUNGICIDE RESISTANCE MANAGEMENT considerations, especially when disease is present in the field. When a grower feels behind in a disease program, he or she is often tempted to “throw the best fungicides at it” and to “worry about now; let tomorrow take care of itself”. Such could be a critical mistake. To protect the usefulness and longevity of a class of fungicides, farmers much limit use to appropriate number of applications and timings of applications. The second factor is to “know when to say when”. When disease is so bad in a field that there is little hope that control can be improved with an application of fungicide, then it may be time to adjust the program to avoid expenses that cannot be returned with increased yields. Most importantly, growers in this position should learn from problems this year , whether it is excessive tomato spotted wilt, nematode damage, leaf spot, or white mold, so as to avoid the same programs in the next season.