Lee County Telephone (229) 759-6025
P. O. Box 589 Fax (229) 759-3302
Leesburg, Georgia 31763

uge4177@uga.edu

The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension

Lee County Ag Newsletter

September 2022, Volume 22, Number 11

Water Requirement vs Water Supplied (a different perspective)

R. Scott Tubbs & Wesley M. Porter, UGA

When considering monthly rainfall averages, looks can be deceiving. For example, let's look at the rainfall received during the current 2022 growing season at Midville, GA according to the University of Georgia Weather Network (georgiaweather.net). In Table 1, the section labeled A shows the cumulative rainfall based on the standard monthly total. However, if we were to shift the calendar by 3 days earlier, we have results as shown in the section labeled B. The distribution of rainfall appears considerably different when represented this way, even though the season total is the same. Here, the majority of the month of June is much drier (and not shown is the fact that over half of that amount came in a single event – 1.07 inches on June 14). July appears drier, while August is much wetter. Yet if we shift the calendar the opposite direction by merely 1 day later as in section C, the results look substantially different once again. In this case, the majority of the months of June, July, and August appear much more evenly distributed. Hence, in scenario B, August appears to have nearly 4.5 inches (over 3x) more rain than June. Although scenario C shows August to have only around 1 additional inch of rain than most of June. Here, June doesn't look like it suffered much, especially given the stage of the crop with much lower water demands early in the season.

Oh, the difference a few days can make! The point of this exercise is that it is important to assess how the rainfall distribution is occurring in smaller increments rather than larger chunks when trying to meet the crop's overall needs and supplementing with irrigation. It is very important to note, crop water requirements are about timing and distribution of water, not just total amount.

Table 1. Precipitation accumulation at Midville, GA in 2022. Monthly averages represented in three different ways.

Monthly Rainfall (season total = 16.69 inches)

	May 1-31	June 1-30	July 1-31	Aug 1-26
	3.27	2.74	5.60	5.08

Shifting 3 days earli

r (season total = 16. 9 inches)

	Apr 28-May 28	May 29-June 27	June 28-July 28	July 29-Aug 26

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

	3.16	2.04	5.02	6.47

Shifting 1 day later (season total = 16.69 inches)

	May 2-June 1	June 2-July 1	July 2-Aug 1	Aug 2-Aug 26
	3.27	4.02	4.32	5.08

Breaking it down to a weekly distribution, we can get a better understanding of how the crop's overall water demand is being met or missed. For the example below, I am using actual rainfall data from the Tifton, GA weather station and comparing it to the peanut crop's weekly water demand in two different planting scenarios. The water demand curves represented below (dashed blue line in the Figures) are based on the UGA checkbook method, which was developed on historical average rainfall conditions and a planting date of May 1.

Figure 1 represents a peanut field planted during the last week of April. The historical average rainfall (dotted red line) does a fairly nice job of matching the crop's weekly water demand (dashed blue line). It is typically drier early in the season when we need to get equipment in the field to get seed in the ground, and also later in the season when we need to start digging. It is typically wetter during the period of peak fruiting and pod fill. The 2022 actual rainfall data (solid yellow line) is demonstrating similar patterns to the overall crop need and historical averages, despite a few peaks and valleys. There is an overall deficit of 2.66 inches of water if subtracting total rainfall received vs. total water needed at this stage. However, that does not mean that this crop is only behind by 2.66 inches of irrigation water in order to meet the crop demand. Since excess rainfall in one week is typically not available in weeks where there are other deficits, we have to consider irrigation totals on a weekly basis in order to meet the crop's demand for that specific week. When taking that into consideration, a total of 7.69 inches of irrigation would be needed to bring each week with a deficit up to the total crop's need.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

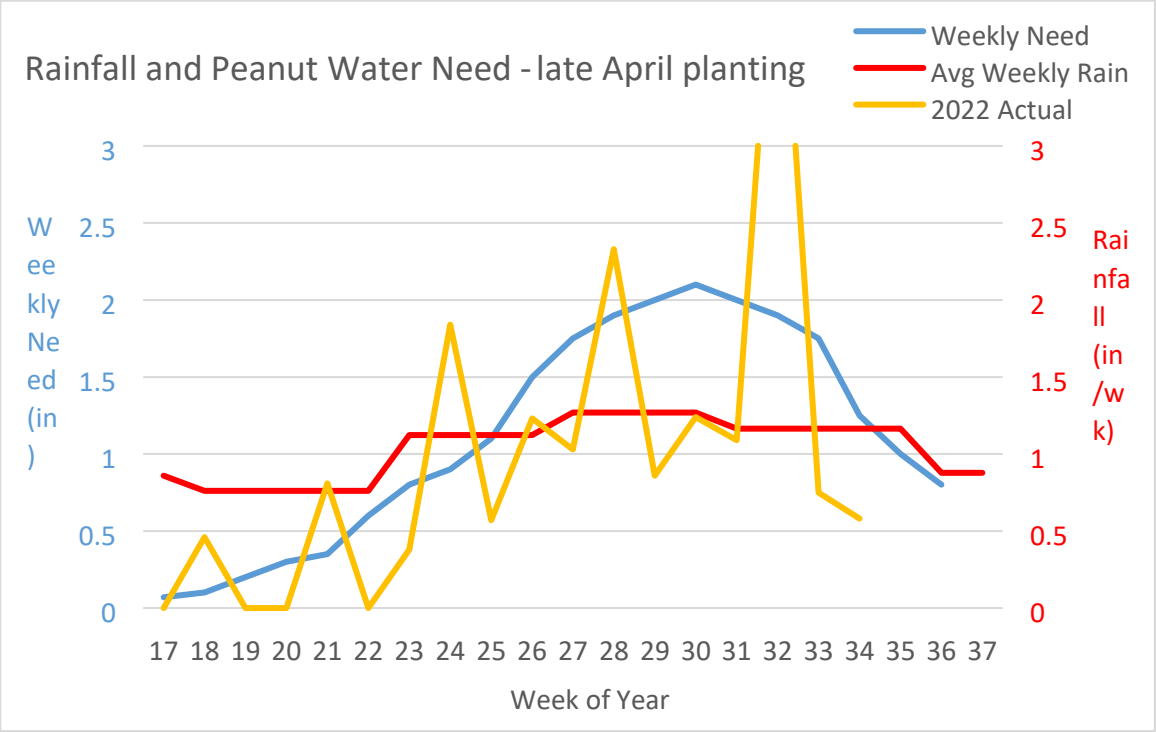


Figure 1. Water requirements of late April planted peanuts with 125-yr average and actual rainfall.

If we shift this same concept to a peanut crop that was planted late in the planting window (i.e. the first week of June), then the crop's water needs do not match the historical average rainfall as closely. The crop's peak water demand comes at a time when rainfall is typically becoming more scarce.

Fortunately, the current rainfall received up until this point in the 2022 season is meeting the crop's needs. There is actually a 7.07 inch surplus of water in total. However, this again does not necessarily distribute to when the crop needs it. In total, the supplemental irrigation needed at this point in the season has been 2.33 inches, although that has all come within the last two weeks as water demand (dashed blue line) is increasing while rainfall received (solid yellow line) has been less than that line on the curve. Hence, the late planted crop should be in good position to produce an excellent yielding crop, based on rainfall up until now. However, with the most critical water demand coming over the course of the next 4-5 weeks, rainfall will need to continue to be above the historical averages if maximum potential production is going to be maintained. Continued consistent rainfall over the next month could position the late planted crop to be better than the early planted crop. However, a dry spell over the next month could spell disaster for the late planted crop while the early planted crop has essentially already maximized production and just trying to maintain what is already on the vines.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

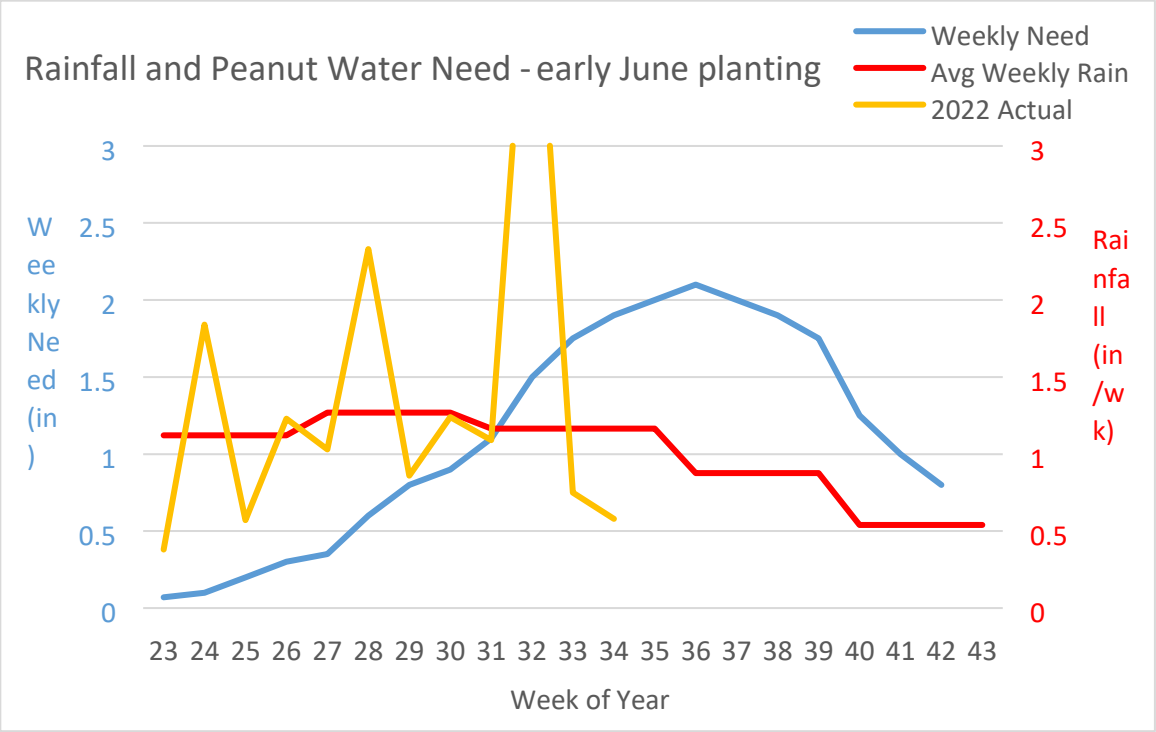


Figure 2. Water requirements of early June planted peanuts with 125-yr average and actual rainfall.

It should also be noted that the checkbook curves shown above are a general guide to demonstrate how water demand increases, peaks, then decreases over the season. However, many other factors are involved in more accurately determining the localized needs of a given field, including soil type/texture, organic matter content, porosity/drainage, and other soil health characteristics. Advanced scheduling techniques have been developed in recent years to assist in meeting the crop's irrigation requirements. There are smartphone apps, web-based schedulers, soil moisture sensors, etc. that are more precise in targeting actual irrigation requirements. These can be very useful in meeting the crop's water demands to reach (and maintain) maximum yield potential.

End of Season Irrigation for Peanuts David Hall, Jason Mallard, and Wesley Porter, UGA

The only thing that is consistent from year to year is that each season is different and variable. While last year had high amounts of rainfall, this year has been very hot and dry from May through the end of June. Since the end of June, we have been getting sporadic rainfall across parts of the state. Thus, you need to monitor what your current soil moisture condition is and make appropriate decisions moving forward. Additionally, keep an eye on the long term forecast and the tropics. Up to this point, we have been getting the sporadic rainfall, but we have been lucky that there have not been any significant tropical events. That can change in a blink of an eye as we focus on the tropics closely this time of year. An ill-timed and slow-moving storm from the gulf can be devasting.

Luckily, we have had some reprieve from the hot and dry weather that we saw early in the spring. Unfortunately, some of the rainfall and high humidity is causing disease issues. Dr. Kemerait has been sounding the horn weekly that the conditions are conducive for costly diseases. With peanut water needs winding down towards the homestretch, the last thing a producer

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

would want to do is schedule irrigation without boots on the ground or moisture sensors relaying real time data, therefore risking increased disease outbreaks or soil drying out. During peak water demand and dry weather, it is fairly simple to schedule irrigation events. This time of the season water demand begins to fall off quickly and most have been receiving ample rainfall. Do not let your guard down if we enter a dry period with dry hot west winds. (We prefer those conditions after digging!) Sandy soils can dry out fast and we are looking at what appears to be a great crop. Remember, heavy downpours that exceed the soil water holding capacities basically become run off. We have received much of that this year.

The month of September is when the majority of our peanuts are dug and most of them are now well past the peak water demand and need less than an inch of water per week. Now is a good time to start thinking about irrigation termination for earlier planted peanuts planted in mid-April to early May. Unlike corn and cotton, we do not have a physiological irrigation termination trigger for peanuts. Once you reach 140 DAP or 2500 GDD's (sometimes these can separate due to extreme temperatures), digging should be considered based on maturity board checks. They can help indicate if you will be digging early, on time or later than expected. This tool can help you tremendously in irrigation scheduling. Hopefully, digging and harvest time will bring favorable weather. In the meantime, if in doubt about moisture these last few weeks, walk your fields, review moisture data, watch the weather closely and consult your UGA Extension County Agent if you would like a second opinion.

One of the biggest concerns with digging peanuts is that too much moisture can cause excessive soil on the shell, especially in heavier soils and too little moisture can making digging difficult. Keep in mind the timing of harvest, your soil type and how much available moisture is actually in the soil if irrigation is needed to aid in the digging of peanuts. In clay type soils you are much more apt to apply too much water and end up having to park the digger for a day, totally defeating the purpose of irrigating to prepare the soil for proper digging when you are ready.

Please refer to Figure 1 below for irrigation requirements, and when to start thinking about terminating irrigation. As always, reach out to your local UGA Extension County Agent if you have any questions.

Peanut Irrigation Schedule			
Days after Planting	Weeks after Planting	Inches per Week	Inches per Day
1 - 7	1	0.08	0.01
8 - 14	2	0.26	0.04
15 - 21	3	0.39	0.06
22 - 28	4	0.55	0.08
29 - 35	5	0.76	0.11
36 - 42	6	0.95	0.14
43 - 49	7	1.08	0.15
50 - 56	8	1.29	0.18
57 - 63	9	1.49	0.21
64 - 70	10	1.59	0.23
71 - 77	11	1.58	0.23
78 - 84	12	1.49	0.21
85 - 91	13	1.40	0.20
92 - 98	14	1.30	0.19
99 - 105			
106 - 112	16	0.97	0.14
113 - 119	17	0.83	0.12
120 - 126	18	0.67	0.10
127 - 133	19	0.49	0.07
134 - 140	20	0.30	0.04
141 - 147	21	0.14	0.02
148 - 150	22	0.01	0.00

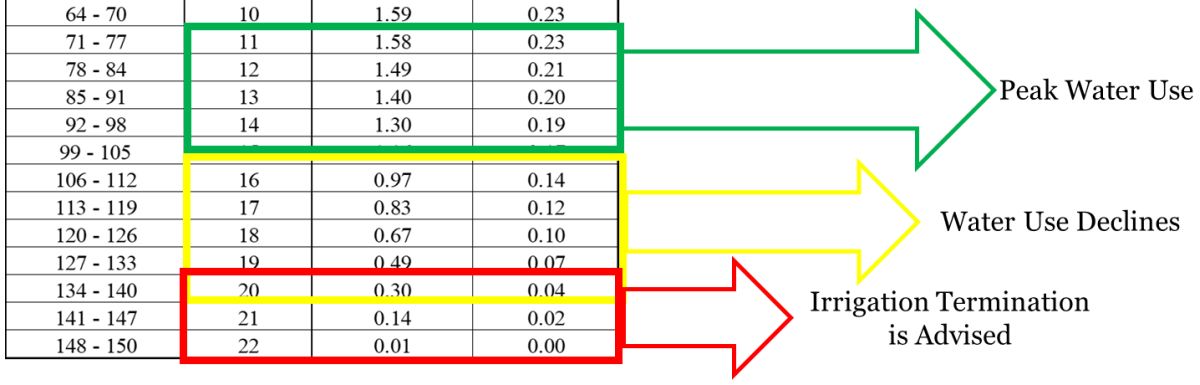


Figure 1. Peanut water requirements, with considerations on irrigation termination.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Weather and Climate Outlook for September 2022 and Beyond

Pam Knox, UGA

Most of the Southeast experienced conditions in August that were wetter and warmer than usual, although as usual there were variations across the region. Some areas are still feeling the impacts of too much rain, while others have experienced dry conditions that have reduced yields in their crops. The humid conditions and lack of sunshine in the areas that have experienced a lot of rain are feeling the impacts in the form of abundant fungal diseases and a difficult time for farmers to get into their fields.

September so far looks like it will be a continuation of warm and wet conditions, although there will be some more seasonal periods and some areas. There will be some periods of dry weather scattered amid the rainy days, so you will need to watch the weather forecasts carefully to find those windows of opportunity to work in the fields.

Later in fall, I expect to see drier conditions appear. This is not unusual in October, since this is the driest month of the year for many parts of the region, but it could be drier than usual as La Niña remains strong and continues to affect our weather over the fall and winter. Generally La Niña has the strongest signal in southern Georgia and Alabama and into Florida, with more northern areas less predictable because the strength of the La Niña is more important in how it affects those regions.

The big question mark in all of this is the tropics. After a very quiet July and August (the quietest since 1941!), we are seeing some life in the tropics as we enter the peak of the Atlantic tropical season. The storms that are expected to form early in September are all predicted to turn north before they get close to the East Coast so won't provide much impact to us. However, there is still more than half the season to go, and some years, like 1961, had quite a few storms in the second half compared to the first half, so don't write off the season just yet. The eventual path and strength of the storms will determine what impacts we are likely to see, and of course we don't know where any storms that develop will go at this point. The best I can say is to keep watching the forecasts to make sure you know what is coming in time to make preparations well ahead of any rain or landfall that might occur.

Peanut Digger-Shaker-Inverter Setup and Operational Considerations Simer Virk and Scott Monfort

With peanut harvest approaching, growers will start digging peanuts soon across most of the state. Along with considering when is the right time to dig peanuts, proper setup and operation of peanut digger-shaker-inverter is also important to minimize harvest losses and to ensure optimal equipment performance and efficiency during harvest. Below are few considerations for growers to keep in mind when digging peanuts to prevent any mechanically induced yield losses due to improper digger setup and/or operation:

- Using an RTK Guidance system/Auto-Steer on the tractor while digging peanut helps in maintaining the digger path directly over the row center or over the planting path and results in approximately 10% reduction in yield losses compared to when digging peanuts with a tractor without an auto-steer system.
- Before beginning harvest and making any adjustments specific to the harvest conditions, inspect the digger carefully for any broken, bent or missing parts as well as the sharpness of the blades. Dull blades fail to cut the tap root resulting in dragging roots or dislodging pods from the plant.
- Make sure that tire pressure in the tractor tires as well as the rear gauge wheels on the digger is adequate and same in both tires. Also check if both tires are the same size.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

- Adjust the digging angle (and therefore depth) by adjusting the length of the top link on the digger. Digger blades should be set at a slight forward pitch and at the depth where they cut the tap root just below the pod zone. Both an excessively shallower and deeper depth of the digger blade can result in significant digging losses.
- Blade angle/depth is also dependent on soil type and texture. Any considerable change in soil type within or among the fields will also require a change in blade angle/depth adjustments as clay soils usually need a more aggressive angle whereas sandy soils require a less aggressive blade angle.
- Digging speed should be optimized based on the prevalent in-field conditions at harvest. Generally, the optimal ground speed for digging peanuts is between 2.5 and 3.5 mph. Speeds above 3.5 mph can result in an increase in digging losses and therefore should be avoided.
- Set the rattler conveyor speed to match or just slightly above the forward travel speed of the tractor while digging peanuts. Conveyor speeds slower or too fast than the tractor speed can both result in increased pod losses.
- The conveyor depth should also be adjusted where it picks up vines with its teeth just clearing the soil. Additionally, if needed, adjust the knocker wheels up or down to regulate the amount of shaking where is enough to remove the soil from the vines.

Remember, properly dug and inverted peanut plants will form a uniform, fluffy, well-aerated windrow with very few pods touching the soil so make sure to keep a close watch on the digger operation in the field and adjust settings accordingly as and when needed.

September Peanut Pointers
Scott Monfort, UGA

I wanted to thank everyone who attended the Cotton Defoliation/Peanut Maturity trainings this week. After the meeting, I found the questions that would be helpful to draw out more information from your growers about each field. This information will help you in making recommendations as well as learn more about the practices of your growers. I am also providing the peanut development chart along with the maturity calendar to help you. Please let me know if you need me to visit your county to assist with your maturity checks. You can also send me pictures and we can discuss over the phone.

Common questions/comments that need to be considered during a Peanut Maturity Clinic

1. What is the field name?
2. What is the peanut variety?
3. How old are the peanuts? What is the planting date?
4. Are the peanuts Irrigated or Non-Irrigated?
5. What are the conditions of the Plants/Vines?
    a. Encourage growers to bring plants not just pods 6. Are there any disease issues?
7. What is the short and long range weather forecast?
8. Remind growers that 200 pods are needed. This would be off several plants pulled from a representative spot(s) of the field.
9. The more information you have, the better prediction of maturity you can make.
10. How much TSWV do you have in this field?
11. What insecticide did you use?

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Points to Consider for Late-Season Disease Control in Peanuts
Bob Kemerait, UGA

Late-season disease recommendations for a peanut crop are often confusing. Reasons for this include A) digging/harvest dates are not "set in stone", B) the incidence of one disease versus another affects choice of fungicides, C) disease can be cryptic, as in the case of underground white mold, D) there are a number of fungicide options that can be deployed, and E) approaching rains can make it necessary to quickly change management plans. While there may not be a single "best" recommendation, some solutions are better than others. These solutions have three things in common: a) timeliness, b) use of the right products (emphasis that there is often more than one "right" product), and c) use of the right products at the right rates. Late-season management decisions are more important now than they ever have been as much of Georgia's peanut crop remains in the ground for nearly 150 days. Our historic "spray every 14 days for a total of 7 sprays" may not go the distance anymore.

Growers often request advice on adjusting digging dates based upon disease in the field. Generally, it is best to wait until harvest maturity is reached in order to assure maximum grade, rather than digging the peanuts early. For example, though tomato spotted wilt may be severe in a field in 2022, I generally recommend waiting until harvest maturity to dig the peanuts, unless other diseases, like white mold, are "piggy-backing" on top of the plants already affected by the tomato spotted wilt. However, where defoliation from leaf spot is severe, as it is in some field now, then it may be critical to digging earlier than planned in order to protect yield. Georgia-06G can withstand defoliation of 50-60% IF digging is NOT delayed past maturity. Any unexpected delays in digging will result in yield losses. Where white mold is severe, for example greater than 50% incidence, the grower should consider digging early. Significant defoliation from leaf spot diseases and severe outbreaks of white mold can increase digging losses by weakening peg-strength.

NOTE: A critical consideration for choice of fungicides late in the season is that pre-harvest intervals (PHI) vary among fungicides. For example, Alto has a 30-day PHI, and Elatus and Convoy have 40-day PHI, compared to 14-day PHI for other fungicides such as Provost Silver and Fontelis. Growers must always check the label to make sure on all of these.

Below are some typical situations that peanut growers may find themselves in and suggestions for control:

Grower is 4 or more weeks away from harvest and currently has excellent disease control.

- **Suggestion –** I recommend the grower apply at least one more fungicide for leaf spot control with an inexpensive white mold material mixed with it, for good measure. It is generally helpful to use a mix of a protectant leaf spot fungicide (like chlorothalonil) mixed a leaf spot fungicide with some curative activity (e.g., Alto, Domark, Topsin) for best protection.
- **Suggestion –** Given the low cost of tebuconazole, the grower may consider applying a tank-mix of tebuconazole + chlorothalonil for added insurance of white mold and leaf spot. ○ **NOTE 1:** If white mold is not an issue, then the grower may stick with a leaf spot spray only. ○ **Note 2:** If grower has planted Georgia-06G or Georgia-12Y and the plants are leaf spot-free at 4 weeks prior to the anticipated digging date, an additional fungicide application for leaf spot may not be needed if grower is willing to watch/scout the field for other

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

disease, for example peanut rust, and put a fungicide out if harvest is unexpectedly delayed, as with the approach of a hurricane.

Grower is 4 or more weeks away from harvest and has disease problems in the field.

- If the problem is with leaf spot – Grower should insure that any fungicide applied has systemic/curative activity. If a grower wants to use chlorothalonil, then they would mix a product like thiophanate methyl (Topsin M) or cyproconazole (Alto), with the chlorothalonil. Others may consider applying Priaxor, if they have not already applied Priaxor twice earlier in the season. Provost Silver from Bayer Crop Science has become a "go to" product for helping to protect peanuts from leaf spot diseases late in the season. Provost Silver is NOT a "silver bullet" but it has performed very well. A tank-mix of Provysol + tebuconazole may also be appropriate.

- If the problem is white mold – Grower should continue with fungicide applications for management of white mold. If they have completed their regular white mold program, then they should extend the program, perhaps with a Fontelis, Provost Silver, or tebuconazole/chlorothalonil mix. If the grower is unhappy with the level of control from their fungicide program, then we can offer alternative fungicides to apply. Where white mold AND leaf spot are late-season problem, then adding a little extra to the Fontelis for additional leaf spot control may be beneficial.

- If the problem is underground white mold – Underground white mold is difficult to control. Applying a white mold fungicide ahead of irrigation or rain, or applying at night, can help to increase management of this disease.

Grower is no more than 3 weeks away from projected harvest and does not currently have a disease issue.

- Good news! This grower should be good-to-go for the remainder of the season and no more fungicides are required. **SEE NOTE BELOW ABOUT HURRICANES**

Grower is 3 or fewer weeks away from harvest and has a problem with disease.

- If leaf spot is a problem and 2-3 weeks away from harvest, a last leaf spot fungicide application may be beneficial. If leaf spot is too severe (more than 25% defoliation already occurs), then a last application will not help. Tank mixing chlorothalonil with a systemic fungicide, like thiophanate methyl, Domark, or other appropriate systemic fungicide, could be beneficial.
- If white mold is a problem and harvest is 3 weeks away, then it is likely beneficial to apply a final white mold fungicide. If harvest is 2 weeks or less away, then it is unlikely that a fungicide will be of any benefit.
    - **NOTE: If harvest is likely to be delayed by threat from a hurricane or tropical storm, then the grower may reconsider recommendations for end-of-season fungicide applications.**

Finishing "strong" in the 4th quarter of the 2022 peanut season is important. Finishing "strong" means timely applications, ahead of rains or storms if necessary,using the right fungicide combination at the right rate. Your yield depends on it.

High Abandonment Acres for U.S. Cotton Projected Due to Drought (*Yangxuan Liu*): Every year, the U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS) releases its projected harvest acres for U.S. cotton starting in August. The report provides updated information about

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

expected U.S. cotton production. In 2022, the U.S. planted 12.3 million acres of upland cotton, the highest in 3 years, which was mainly due to historically high cotton prices during the decision-making and planting window.

However, in 2022, the overall U.S. abandonment rate for upland cotton is estimated at 43.4%, which is the highest on record since 1953. The abandonment rate, which measures the percentage of unharvested acres compared to total planted acres, provides an estimate of the number of failed acres versus the number of acres that will be harvested. Severe drought conditions hit the largest cotton production regions in the Southwest (Texas, Oklahoma, and Kansas) and the West (California, Arizona, and New Mexico). The abandonment rate for Texas (Figure 1A) reached 69%. Texas planted 7.1 million acres of cotton in 2022 – by far the largest of any state – representing 57.6% of total U.S. planted acres (Figure 1B). By contrast, drought impacts were less severe in the Delta (Missouri, Arkansas, Louisiana, Mississippi, and Tennessee) and Southeast (Alabama, Georgia, Florida, South Carolina, North Carolina, and Virginia).

As a result of the drought conditions this year, upland cotton harvested acreage in the U.S. is projected at 7.0 million acres, which is the lowest amount of harvested acreage in over 150 years. The projected high abandonment rate in the U.S. reduced expected cotton production to 12.2 million bales, compared to the 10-year average of 16 million bales, according to USDA's Foreign Agricultural Service. If realized, it would also be the smallest U.S. crop since 2009. U.S. cotton demand (mill use plus exports) for the 2022 crop is forecast at 14.3 million bales, exceeding production. As a result, ending stocks in the U.S. are expected to decline to 1.8 million bales, the lowest on record since 1960. The low supply of U.S. cotton provides support for domestic cotton prices. For the 2022/2023 marketing year, upland cotton prices are forecast at 97 cents per pound. If realized, it would be the highest price on record since 1909.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

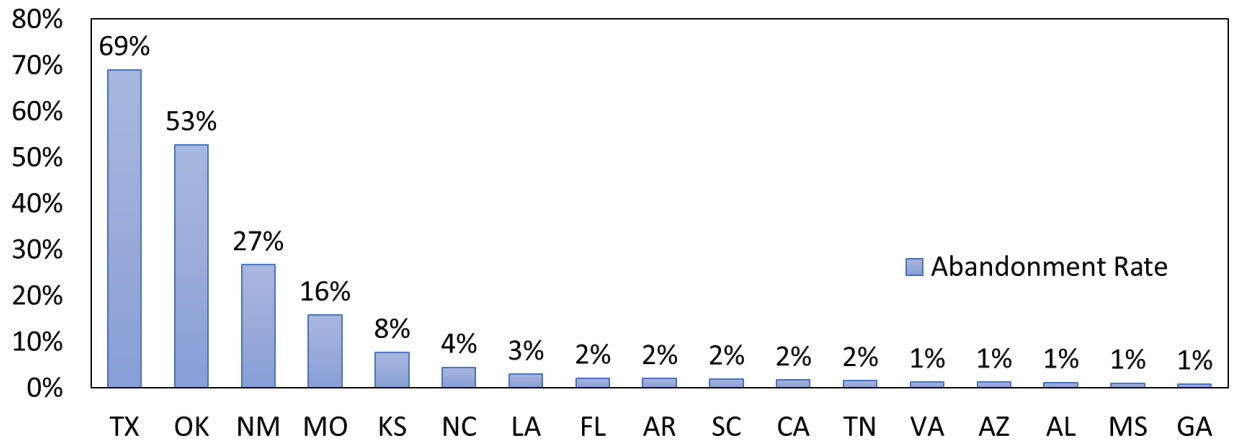


Figure 1A. Abandonment rate for cotton-producing states in the U.S. in 2022. Abandonment Rate = 1 – Harvested Acre/Planted Acre.

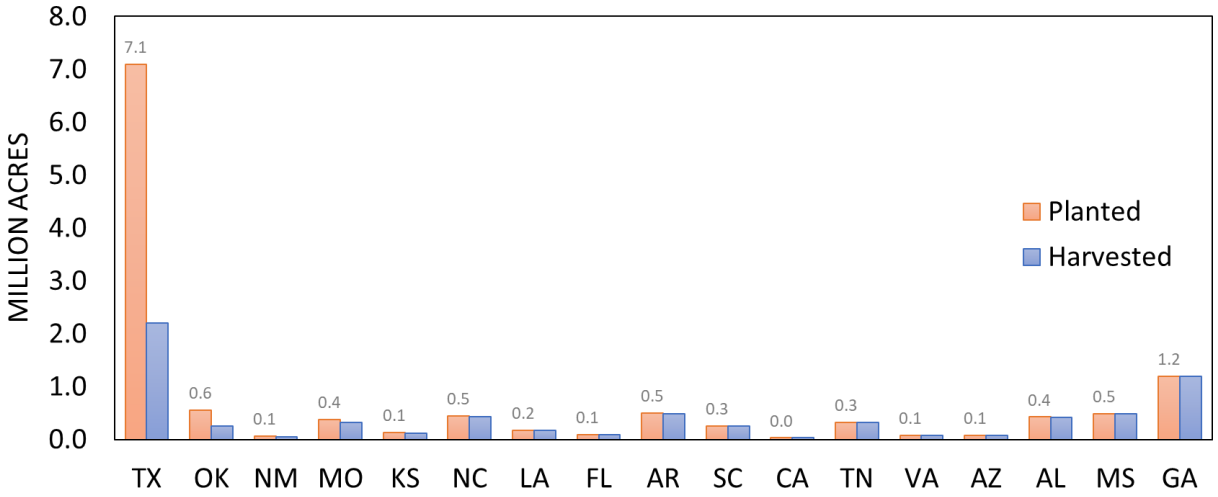


Figure 1B. Planted acres and projected harvest acres of cotton in 2022.

Importance of End of Season Irrigation Termination and Disease Control in Cotton (*Bob Kemerait, Wesley Porter, David Hall, Jason Mallard*): As we approach the end of the growing season we are around 16 to 20 weeks after planting moving through September and into October based on a May 1 planting date. On average, we will be around 14 to 18 weeks after planting throughout the month of September. This will put our water usage past peak and on the decline. UGA Extension cotton irrigation scheduling guidelines, like all other guides, must be used in conjunction with current field and atmospheric conditions. That means boots on the ground or moisture sensors to assist you in determining available moisture in the soil. September is historically dry with low humidity leading to soils drying out faster. We have been wet throughout most of July and August this year, causing high instances of disease issues. Growers should

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

keep in mind that the cotton plant moisture uptake is low, but there still is a need for some moisture in the soil to aid in finishing out those last harvestable bolls. At this point if the rainfall keeps up, there will be very little if no need for additional irrigation.

Growth Stage	DAP	Weeks after Planting	Inches/Week	Inches/Day
Emergence	1 - 7	1	0.04	0.01
Emergence to First Square	8 - 14	2	0.18	0.03
	15 - 21	3	0.29	0.04
	22 - 28	4	0.41	0.06
	29 - 35	5	0.56	0.08
First Square to First Flower	36 - 42	6	0.71	0.10
	43 - 49	7	0.85	0.12
	50 - 56	8	1.08	0.15
First Flower to First Open Boll	57 - 63	9	1.28	0.18
	64 - 70	10	1.47	0.21
	71 - 77	11	1.52	0.22
	78 - 84	12	1.48	0.21
	85 - 91	13	1.42	0.20
	92 - 98	14	1.30	0.19
	99 - 105	15	1.08	0.15
	106 - 112	16	0.88	0.13
	113 - 119	17	0.69	0.10
First open boll to >60% Open Bolls	120 - 126	18	0.51	0.07
	127 - 133	19	0.35	0.05
	134 - 140	20	0.20	0.03
	141 - 147	21	0.12	0.02
	148 - 154	22	0.05	0.01
	155 - 161	23	0.02	0.00
Harvest	162 - 168	24	0.00	0.00
	169 - 175	25	0.00	0.00

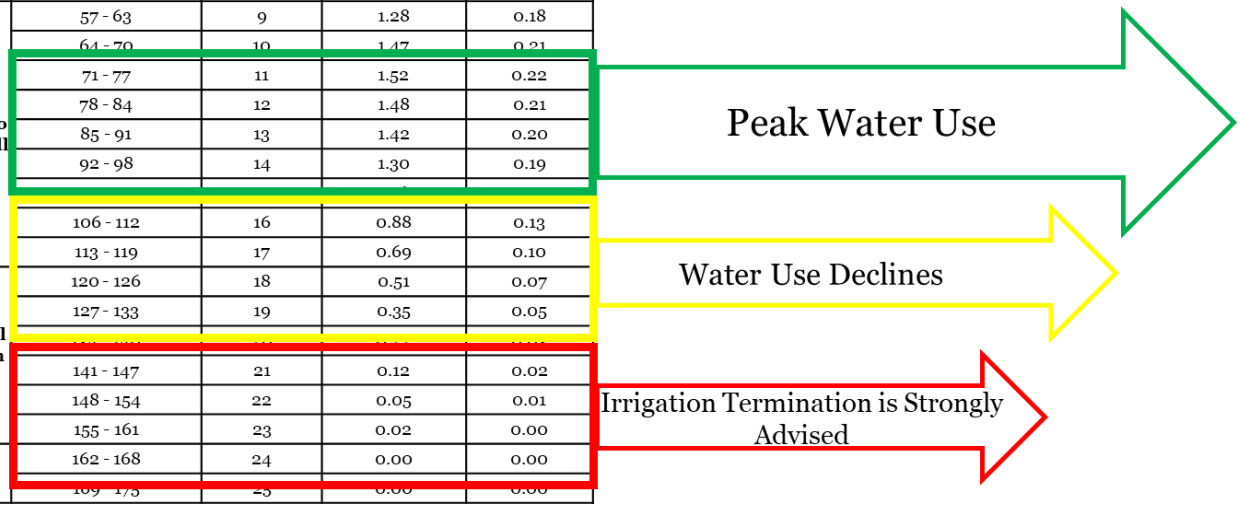


Figure 1. Seasonal cotton water usage with peak, decline and irrigation termination highlighted.

As water use declines, it is necessary to closely monitor your fields for cotton bolls that are beginning to open. UGA's official irrigation termination recommendation for cotton is at an average of 10% open boll across a field. 10% open is not a high number of bolls on a plant that are open to start considering irrigation termination. A plant with 12 harvestable bolls means you need to be looking at the available soil moisture if 1.2 bolls are open. September 2019 was abnormally hot and dry. Bolls were beginning to open but our available water in the soil was depleted very rapidly due to the environmental conditions. Due to dry soils, hot temps and long-term dry weather forecasts, one last irrigation event(s) was(were) needed to help finish the crop. The low humidity and sunny conditions helped to prevent open bolls from being damaged. Currently, we are seeing high levels of moisture and boll rot similar to what we witnessed during 2020 because heavy dews, high humidity and plentiful rainfall are excellent conditions for it. Do not self-inflict or worsen boll rot issues if sufficient soil moisture is present. In times when an application of irrigation is needed, soak the soil sufficiently so that you can limit your irrigation events to as few as possible. Frequent small irrigation events will only exacerbate or flare boll rot. Paying attention to the long term and short-

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

term forecast is critical in your irrigation scheduling decisions as always. The tropics have a way of surprising us with pop up storms or even hurricanes this time of year.

Figure 2. Boll rot picture courtesy of Dr. Bob Kemerait

Mother Nature cannot be controlled but your irrigation applications can be. Two weeks from now we could be very dry, which would be very good for reducing new boll rot instances. The main point for irrigation termination on cotton is upon reaching that 10% open boll stage, do not over irrigate and increase boll rot, observe the current and long-term weather forecast, know your soil moisture content and use good judgement on terminating irrigation. Good moisture in the soil and 10% open bolls means the end of another irrigation cotton season!

An updated value by boll positioning chart was produced by Whitaker (2019) showing the importance of those lower and first position bolls.

Fruiting Location	Value
1st Positions	72%
2nd Positions	18%
3rd Positions	5%
Vegetative	5%
Nodes ≤10	60%
Nodes 11-15	31%
Nodes ≥ 16	9%

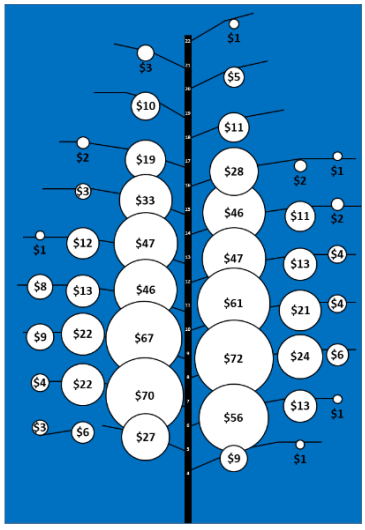


Figure 3. Boll position and value of boll position along the cotton plant, courtesy of Whitaker (2019).

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

This boll value tree really emphasizes the importance of first setting those high dollar bolls early in the season with proper management. Nearing the end of the growing season, overwatering and irrigating your crop with a higher than 10% open boll in an effort to make young upper position low value bolls open in the top will lead to losing or damaging your most valuable bolls and reducing yield and profitability. Not to mention, those young bolls probably will not mature enough to be harvested anyway. If you have questions about finalizing irrigation make sure you reach out to your local UGA County Extension Agent.

Weather and Climate Outlook for September 2022 and Beyond (*Pam Knox*): Most of the Southeast experienced conditions in August that were wetter and warmer than usual, although as usual there were variations across the region. Some areas are still feeling the impacts of too much rain, while others have experienced dry conditions that have reduced yields in their crops. The humid conditions and lack of sunshine in the areas that have experienced a lot of rain are feeling the impacts in the form of abundant fungal diseases and a difficult time for farmers to get into their fields.

September so far looks like it will be a continuation of warm and wet conditions, although there will be some more seasonal periods and some areas. There will be some periods of dry weather scattered amid the rainy days, so you will need to watch the weather forecasts carefully to find those windows of opportunity to work in the fields.

Later in fall, I expect to see drier conditions appear. This is not unusual in October, since this is the driest month of the year for many parts of the region, but it could be drier than usual as La Niña remains strong and continues to affect our weather over the fall and winter. Generally, La Niña has the strongest signal in southern Georgia and Alabama and into Florida, with more northern areas less predictable because the strength of the La Niña is more important in how it affects those regions.

The big question mark in all of this is the tropics. After a very quiet July and August (the quietest since 1941!), we are seeing some life in the tropics as we enter the peak of the Atlantic tropical season. The storms that are expected to form early in September are all predicted to turn north before they get close to the East Coast so won't provide much impact to us. However, there is still more than half the season to go, and some years, like 1961, had quite a few storms in the second half compared to the first half, so don't write off the season just yet. The eventual path and strength of the storms will determine what impacts we are likely to see, and of course we don't know where any storms that develop will go at this point. The best I can say is to keep watching the forecasts to make sure you know what is coming in time to make preparations well ahead of any rain or landfall that might occur.

Late Season Management Considerations for Diseases and Nematodes (*Bob Kemerait*): Though the 2022 season is not over yet, cotton bolls are beginning to turn fields across Georgia snowy white. It won't be long until pickers are back in the field and modules, lint is scattered along the roadsides, and round-bales fill the gin yards. Diseases and nematodes continue to steal yield from you, as they do every season. This was and continues to be, in large part, due to the frequent rain events and wet weather throughout much of

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

the season, though I am more than a little surprised that target spot and, especially, areolate mildew have not been more severe in the wet second half of the 2022 season. Certainly, spread of fungal and bacterial diseases is favored by the rains we have encountered since July.

There are eight primary disease/nematode conditions affecting Georgia's cotton fields now, though each may not be present in every field. There is not much to be done about them now (unless you are more than a month away from defoliation in which case management of areolate mildew matters), but still growers should watch for them as harvest approached so as to make the best management decisions in 2023.

1. Stemphylium leaf spot is present in most, if not all, fields and is identified by small-to-moderate sized lesions, often encircled by a dark, purple ring, on leaves showing signs of nutrient (potassium) deficiency. Stemphylium only occurs in conjunction with a potassium deficiency in the plant and can lead to rapid defoliation and significant yield loss. Stemphylium leaf spot is a very important problem in the state and is likely overlooked as growers have either become too familiar with it or do not think that there is much that can be done. Stemphylium leaf spot typically occurs in the same areas of a field year after year- sandier areas, sometimes infested with nematodes. Grower should take special steps to manage soil fertility (and nematodes) to reduce losses to this disease. Fungicides are NOT effective in the management of Stemphylium leaf spot.

2. Target spot has been less problematic this season than I had expected, despite extended periods of wet weather. This may be because cotton growers in areas most affected by target spot and areolate mildew are now more likely to use preventative fungicide applications than they have in the past. Use of fungicides is not always profitable if the level of target spot is low because of hot and dry conditions. However, I believe most growers who protect their cotton crop with fungicides in a wetter season like this has been will see economic benefit in doing do.

3. Areolate mildew has been problematic again in the cotton production region of Georgia, though perhaps less widespread than in 2021. I am hoping that this disease does not become an every-year occurrence and problem for our cotton producers. However, all data from field trials demonstrates that where areolate mildew occurs early enough in the season, judicious use of fungicides increases yields by as much as 400 lb/lint per acre.

4. Bacterial blight became established in some fields very early in the season on varieties that we know to be "susceptible" to this disease. Statewide, bacterial blight has been a very minor issue in 2022, demonstrating that the development and spread of a disease can be difficult to predict. Growers are reminded to be careful in their selection of varieties for 2023 as resistant varieties are THE most important measure for managing this disease.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

5. Fungal boll rots have been absolutely devastating in some fields in Georgia this season, especially in fields with excessive, rank growth. Growers are understandably frustrated at the losses, and even more frustrated at the fact there is little to be done to reduce the threat from boll rot. Fungicides are not an effective management tool for control of boll rot. We in UGA Extension continue to seek to develop improved recommendations for management of is complex of diseases.

6. Fusarium wilt is becoming an increasing problem in Georgia's cotton fields. I don't know if this is because the problem is spreading or simply because growers are paying greater attention to it. Nonetheless, at this point Fusarium wilt can ONLY be managed in our fields by managing the parasitic nematodes associated with it, often by treating the field with a nematicide.

7. Nematodes in general (root-knot, reniform, sting and lance) continue to be a significant problem in our cotton fields. Growers are encouraged to make time after harvest and before cold weather hits to take soil samples from areas of poor growth in order to determine if nematodes are indeed a problem. Growers can also look for the tell-tale "tiger striping" on leaves of affected plants that give good indication that nematodes are present. In addition to use of nematicides to protect cotton from nematodes in the 2023 crop, growers also can select cotton varieties that are resistant to the southern root-knot and the reniform nematodes.

8. Cotton leafroll dwarf virus continues to be present in fields across Georgia, though of minimal importance. With the exception of extreme symptoms found on some varieties, especially on varieties such as DG 3615 and DG 3799, this viral disease can be a challenge to confirm based upon

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

visual observations only. I cannot explain why CLRDV is not more of a problem in our cotton, but I am glad that it is not.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Taking stock of these eight disease and nematode issues now may not add value to the 2022 crop, but it will help growers to make more effective management decisions for 2023.

Terminating Insecticide Applications (*Phillip Roberts*): The decision to terminate insect controls can be challenging in some fields but a few basic considerations will assist in that decision. When evaluating a field a grower must first identify the last boll population which will significantly contribute to yield (bolls which you plan to harvest). In some situations the last population of bolls which you will harvest is easy to see (i.e. cotton which is loaded and cutout). In others, such as late planted cotton, the last population of bolls you will harvest will be determined by weather factors (the last bloom you expect to open and harvest based on heat unit accumulation). Once the last boll population is determined the boll development or approximate boll age should be estimated. Depending on the insect pest, bolls are relatively safe from attack at varying stages of boll development.

The table below list approximate boll age in days which bolls should be protected for selected insect pests. Cooler temperatures will slow plant development and subsequent boll age values may increase in such environments. It is assumed that the field is relatively insect pest free when the decision to terminate insecticide applications for a pest is made.

Insect Pest(s)	**Approx. Boll Age (days)**
Corn Earworm Tobacco Budworm	18-20 bolls fully sized
Stink Bugs	25
Fall Armyworm	bolls near maturity
Sucking Insects whiteflies aphids	harvest (honeydew accumulation on lint)

Defoliate in a Timely Manner to Manage Silverleaf Whitefly Populations and Preserve Yield and Fiber Quality (*Phillip Roberts, Camp Hand*): Silverleaf whitefly (SLWF) infestations have been common in some cotton producing areas. Historically, SLWF infestations are highest in areas which grow both cotton and vegetables. In these areas we grow crops 12 months out of the year which SLWF feeds and reproduces on. The primary cropping systems that drive overall SLWF populations in Georgia include:

1. Winter vegetables such as cabbage, collards, and kale.
2. Spring vegetables including cucurbits (cantaloupe, cucumbers, watermelons, and squash) and fruiting vegetables (tomato and egg plants), and others.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

3. Agronomic crops such as cotton and soybean.
4. Fall vegetables which include a similar crop mix as spring vegetables.

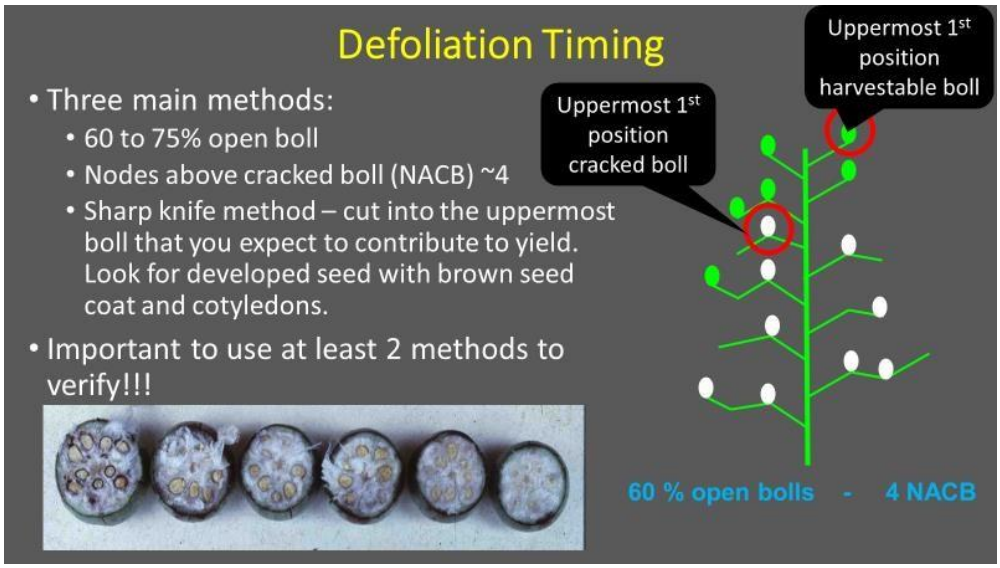
Management of SLWF in these individual cropping systems affects infestations in subsequent crops as SLWF move from one cropping system to the next. Failing to properly manage SLWF in any one of these systems can have negative consequences for subsequent cropping systems. It is important that we properly manage SLWF in all cropping systems to manage the overall SLWF population. The SLWF population is somewhat like a snowball and just grows larger and larger during the summer. Have you ever considered how many SLWF are produced per acre if we defoliate 1, 2, or 3 weeks late? Timely defoliation will also lower the risk of having fiber quality problems related to whiteflies. Ultimately how we manage SLWF now will have impacts on us in 2023. By in large, Georgia growers have done a good job managing SLWF in cotton. Keeping in mind that SLWF requires management until harvest, one of the best practices is to defoliate in a timely manner. For more information on this subject see the following publication: *Cross-Commodity Management of Silverleaf Whitefly in Georgia* at the following website: https://secure.caes.uga.edu/extension/publications/files/pdf/C%201141_1.PDF

Defoliation Considerations for 2022 (*Camp Hand*): As we roll into September, it is time to start thinking about defoliating our cotton crop. As I have driven around the state in the month of August, I have already seen a number of fields ready to defoliate, particularly dryland fields in Southwest Georgia that were planted in late April/early May. I know that the weather in the past few weeks has put a damper on the crop as a whole, but it is time to start preparing for defoliation and harvest. Generally, I would say that the crop has been trending early, especially if you planted in May, so the best thing you could do is get out and look at your crop to make sure you defoliate at the right time. I've heard multiple growers this year say something along to the effect of they have never spent as much money on a cotton crop as they have in 2022. With that being said, my mindset is let's get this crop defoliated on time, harvested in a timely manner, and on the gin yard so our growers can get paid on this crop.

There are a few things I have been talking about as I venture around the state talking about defoliation, and some of the high points are below:

1. Make sure the defoliation "trigger" is pulled at the right time. There are many ways to determine the appropriate time to defoliate your cotton crop – 60 to 75% open boll, 4 nodes above cracked boll (NACB), and the "sharp knife" method. It's always good to use two methods to determine the correct timing as a way to double check yourself. To determine % open boll, count the number of open bolls, the number of unopened (harvestable) bolls, divide the number of open bolls by the total bolls and multiply by 100. For NACB, count the number of nodes from the uppermost first position cracked boll to the uppermost first position harvestable boll. When that number is 4, on average you are good to pull the trigger. And lastly, for the sharp knife method cut into the uppermost boll you intend to harvest and look for a black seed coat with developed cotyledons inside, and you want the lint to string out.

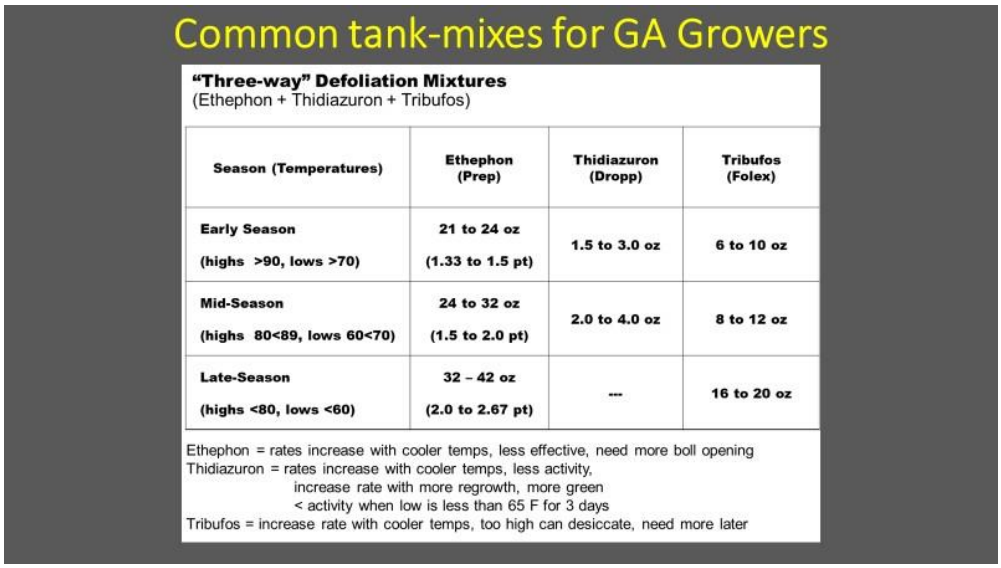
An Equal Opportunity, Affirmative Action, Veteran, Disability Institution



2. Make sure you are using the correct products and rates to accomplish your intended goals. There are 3 main goals in defoliation – leaf removal (juvenile and mature leaves), regrowth prevention, and boll opening. Determining which goals you are trying to accomplish, as well as the environmental conditions surrounding defoliation, will assist in the decision on products and rates. For regrowth control and juvenile leaf removal, thidiazuron containing products will be needed in the tank mix. Thidiazuron alone is available under many trade names (Dropp, Freefall, Klean-pik, etc.), and there is also a premix of thidiazuron + diuron (Ginstar, Cutout, Adios, etc.). Mature leaf removal can be accomplished with a number of products. The main one utilized in Georgia is Folex (tribufos), but there are a number of PPO inhibiting herbicides that can be utilized as well (Aim, ET, Sharpen, Reviton, Display, Blizzard, Resource). Lastly, your boll opening products contain ethephon. Whether it is ethephon alone (Boll Buster, SuperBoll, Setup, etc.), ethephon + urea sulfate (Cotton Quik, First Pick), or ethephon + cyclanalide (Finish), these will all open bolls.

   The most common tank-mixture utilized by Georgia growers includes thidiazuron (Dropp), tribufos (Folex), and ethephon (Prep). Below is a table to assist in rate selection for each product from early to late season.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution



For ethephon and tribufos, as the season progresses and it gets cooler, rates should increase to get the desired effects. Whereas once we get to the end of the season, thidiazuron is removed from the tank-mix because as it gets cooler outside there is a lower risk of regrowth. Keep in mind that you can substitute tribufos for any of the aforementioned PPO inhibiting herbicides, and I would follow the same trends with rate selection (lower rates when it's warmer outside, increase as it gets cooler). Recommended rates on each product discussed here throughout the season can be found beginning on page 148 of the 2022 UGA Cotton Production Guide, which is at the following link: http://www.ugacotton.com/production-guide/. Also, I will be in constant contact with our UGA County Extension agents throughout defoliation and harvest season, so if you have questions about products or rates feel free to reach out to your local UGA County Extension Agent.

3. Zero Tolerance for regrowth in 2022!!! Dr. Phillip Roberts has already discussed this in his newsletter entry, but keep in mind that one of the best things you could do to manage whiteflies in 2022 and assist in management for 2023 is defoliate your cotton crop in a timely manner. Below is a picture I took in some plots in Tifton. It is clear that the bottom crop is ready to defoliate, but with recent rains it has started regrowing and blooming. While many would try to "put a top" on this, we decided to defoliate it. Investing more money to try to make a top crop doesn't seem worth it for a couple of reasons – first, we have enough money tied up in this crop as it is, and waiting on that top to finish will cause the bottom crop to deteriorate. Let's get what's there and call it a year. Second, if we let that regrowth keep going, that young growth is like cotton candy to whiteflies (circled in red below). They will keep feeding and reproducing there, and will contribute to the population going into the winter time and consequently into next year. Let's defoliate this crop in a timely manner.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

4. One shot vs. two shot – what are the benefits? I get this question a good bit during defoliation time. In Georgia, we primarily use 1 shot for defoliation and it works very well. Rarely will I ever recommend a second shot unless something went wrong on the first. So keep in mind the amount of money already invested in this crop – a second shot at defoliation means more chemical costs, as well as diesel fuel/application costs. Let's get it done right the first time and get the crop out in a timely manner.

5. Mo' water is mo' better. A higher sprayer output (gallons per acre) works better than a lower sprayer output with respect to defoliation (even if you decide to use dicamba nozzles). Let's shoot for 15 GPA if you're defoliating with a ground rig to get defoliant down in the canopy.

6. KEEP DEFOLIANTS ON TARGET!!!! I talked about this a lot last year. It is imperative that we apply all pesticides responsibly, let's not forget that at the finish line. Keep the lessons from Using Pesticides Wisely trainings at the forefront of your mind as we apply all pesticides, including defoliants. Keep in mind what is around your fields, the wind speed and direction at the time of and after application, keep the spray booms 24" above the crop canopy, and use nozzles that produce larger droplets with a higher spray output. It is important from the aspect of reducing pesticide drift in general, but also from the standpoint of protecting the chemistries we use. You have likely heard myself and other specialists discuss the petition submitted to the EPA to revoke all tolerances and cancel registrations for all organophosphate pesticides. On the lists of pesticides included in the petition are a lot of important ones – acephate (Orthene), dicrotophos (Bidrin), phorate (Thimet), malathion, and many others. But one of the most common defoliants in used in the cotton belt, tribufos (Folex), is also on that list. It is of vital importance that we apply Folex and these other pesticides responsibly so that we will have them in the future. If you

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

would like to submit a comment to the EPA stating how important these chemistries are to you and your

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

operation, please contact your local UGA County Extension Agent. They all know how to do this, and I promise that the EPA reads these comments and values input from producers.

7. Timely defoliation and harvest are key to producing a high-quality crop. Only defoliate what you can come back and harvest in about 10 to 14 days. This helps preserve crop quality and can reduce the likelihood of an extraneous matter call. And speaking of extraneous matter, handle your modules carefully and be sure to get grocery bags/balloons out of your field prior to harvest to reduce the likelihood of plastic contamination. It's a 2X deduction from the classing office and our friends at the gin don't like plastic. Let's do our part to reduce plastic contamination.

I hope that everyone has a safe and prosperous defoliation and harvest season. As always, if you ever have questions or need anything please don't hesitate to reach out to your local UGA County Extension Agent. They, along with us specialists, are here to help!

Georgia Grain News 8-19-22

Farmer Alfatoxin Testing

The Georgia Department of Agriculture can test for aflatoxin in harvested corn for farmers at the Tifton Lab. Here's the contact information if you have a need for it.

Ametra Berry

Feed and Fertilizer Laboratory Director/ Manager

Georgia Department of Agriculture

3150 U.S. Hwy 41 South, P.O. Box 1507 | Tifton, GA |31793

Office: 229.386.3142

ametra.berry@agr.georgia.gov

Small Grain Varieties Recommended for 2022 by UGA

Here's the new list.

Go to the UGA Variety testing website for yield and more info. https://swvt.uga.edu/

Recommended Grain Varieties for Winter 2022-2023

Barley	Atlantic (P)	Secretariat (S)	Thoroughbred (S)
Oat	Graham (S)[2]	Horizon 306 (S)[2]	Horizon 720 (C)[2]
Wheat	AP 1983 (S)	Dyna-Gro 9002 (P)	*Pioneer 26R94 (C)
	AGS 2021 (S)	Dyna-Gro Blanton (S)	SH 5550 (S)[4]
	AGS 2024 (S)[2]	Dyna-Gro Plantation (S)	SH 9310 (C)
	AGS 3015 (S)[3]	Dyna-Gro Riverland (C)	*SY 547 (P)[3]
	AGS 3026 (S)[3]	Dyna-Gro Rutledge (C)	*SY Viper (P)[3]
	AGS 3040 (S)	Go Wheat 2032 (S)[2]	USG 3329 (P)[2]
	AGS 4023 (S)	Johnson (S)[2]	*USG 3536 (P)[2]
	AGS 4043 (S)	LW2026 (C)	*USG 3539 (P)[3]
	*AM 473 (P)	*LW2848 (P)	*USG 3640 (S)
	AM 481 (C)	*PGX 20-15 (C)	USG 3752 (S)
	Dyna-Gro 9701 (P)[2]	*Pioneer 26R41 (P)[2]	#BULLET (P)
	Dyna-Gro 9811 (P)[3]	Pioneer 26R45 (P)	#TURBO (P)[3]
Triticale	Trical 342 (S)	TriCal 1143 (C)[2,3]	

1. P = Piedmont; C = Coastal Plain; S = Statewide.
2. Consider using a labeled fungicide; highly susceptible to powdery mildew, leaf rust, stripe rust, or crown rust.
3. Susceptible to some Hessian fly; consider using an insecticide.
4. Consider using a labeled fungicide appropriate for Fusarium head blight.

* To be dropped from list for 2023-24.

Ultra Late Soybeans Growing

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Here’s some soybeans planted after corn harvest that are coming along. First field was planted in 7.5 inch rows with a grain drill. Then we have a field planted with a 30 inch planter, and the last photo is one where they used the 30 inch planter but burned the corn stalks. 50 pounds of N was applied to get these all growing tall, fast.

Grower will need to spray herbicide soon, if varieties are roundup ready that will be useful but not for the volunteer corn which is also roundup ready so a regular grass herbicide will be needed. Close scouting is a must on these beans as Dr. Roberts says whiteflies may be a problem along with our usual suspects, caterpillars and stinkbugs and lessers. There’s a section in the UGA Corn Production Guide concerning these beans.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Georgia Grain News 8-25-22

Corn Yield Test Results

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Here's some corn hybrid plot yield test results sent to me. Thanks for the hard work in getting these done. In choosing hybrids to plant it is good to look at as much data as possible including state yield tests and any local data.

Grady/Decatur Corn Hybrid Test

UGA Grady/Decatur County Corn Variety Trial - 2022					
Grower: Jerry & Jan Jones					
Irrigated					
Planted: 3/30/2022					
Harvested: 8/17/2022					
Plant Population: 29,000					
4 rows wide, 36 in. rows					
Variety	**Length**	**Moisture**	**Weight**	**Test Wt.**	**Yield**
Croplan 5760	686	17.20%	2906	59	267.4
Agrigold A643-52	627	16.10%	2570	59	262
Pioneer 1870	656	17.90%	2700	60	261
Pioneer 2042	574	17.90%	2382	60	259.8
DynaGro D58VC65	638	16.20%	2540	60	254.4
Croplan 5550	672	16%	2636	58	251.2
Croplan 5340	560.5	16.30%	2190	58	249.3
Dekalb 68-95	668	17.40%	2636	59	249
DynaGro D54VC14	679	15.20%	2588	59	246.4
Dekalb 68-69	560	18.10%	2208	60	246.2
Local Seed 1577	608	15.70%	2326	59	246
NK 1838	660	17.50%	2570	55	245
Dekalb 68-48	618	17.20%	2394	59	244.6
Local Seed 1898	644	15.50%	2416	59	242
DynaGro 57VC53	588	17.50%	2258	58	241.6
Croplan 5678	624	15.80%	2348	58	241.6
Agrigold A645-16	567	16.40%	2130	59.5	239.7
Dekalb 62-08 (Check)	581	15.90%	2122	59	234.2
Pioneer 1289	556.5	17%	2054	59	233.6
Local Seed 1307	556.5	16.20%	2016	56.5	231.5
NK 1748	595	17.80%	2190	59	230.7
NK 1677	556.5	17.50%	2036	57	230.1
Dekalb 62-08 (Check)	650	15.70%	2328	59	230
Dekalb 62-08 (Check)	556.5	15.60%	1916	59	221.6

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Contact Cale Cloud in Grady county or Clark Higgins of Decatur county for more info.

Appling County Corn Hybrid Test

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Rep 1	Yield Bu/A at 15.5% moisture
Dekalb 6895	242.9881454
Agrigold 64612	236.1703277
Dekalb 6869	233.676069
Pioneer 1289	231.6317457
Pioneer 2042	231.362397
Agrigold 64352	230.7489434
Dekalb 6208	226.1997255
Dekalb 6848	225.9371422
Pioneer 1847	221.0089878
Integra 6342	217.0054652
Agrigold 64735	213.4729531
integra 6410	211.3836886

Rep 2	Yield Bu/A at 15.5% moisture
Pioneer 1847	237.3742585
Dekalb 6895	236.9288023
Pioneer 2042	234.8000133
Dekalb 6848	234.6165517
Agrigold 64612	230.430783
Dekalb 6208	225.0376784
Dekalb 6869	222.3846619
Integra 6342	222.3086884
Agrigold 64735	219.8058882
Agrigold 64352	217.1740877
Pioneer 1289	212.4591828
integra 6410	210.3297648

Rep 3	Yield Bu/A at 15.5% moisture
Dekalb 6895	243.8510057
Pioneer 1847	231.4344222
Pioneer 1289	229.4597574
Dekalb 6848	227.9163063
Dekalb 6208	226.8202059
Agrigold 64612	225.2998802
Agrigold 64735	221.944364
Agrigold 64352	221.3939777
Pioneer 2042	217.2694484
Integra 6342	216.5744104
Dekalb 6869	216.2309282
integra 6410	215.1736055

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Contact Shane Curry in Appling county for more information and complete results.

Pecan Crop Needing Some Sunshine

Lenny Wells

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

With the exception of some scab pressure throughout July, we've had pretty good growing conditions all season to this point and the appearance of the crop shows it. Growers have done a fine job of protecting the nuts from scab throughout the rainy periods. Industry forecasts currently have Georgia estimated at about 130 million lbs. But, as we have learned in years past, just because we can see the finish line, doesn't mean we've crossed it.

We have been in a similar position as recently as last year when we had low solar radiation season-long. But, the most serious blow to the 2021 crop came from cloudy weather during the kernel filling stage. The sunniest part of the year in our part of the world usually runs from September 11-December 10. If you recall, crop development in 2021 was somewhat late. For these purposes, solar radiation is measured in energy units known as megajoules per square meter (MJ/m^2). During that time period from July-September, anything over 20 MJ/m^2 represents good solar radiation on a sunny day. As we reached the final stages of kernel filling for most mid-season maturity cultivars during the 7 day period of September 16-22, 2021, solar radiation levels were, for some locations, half of what they should have been. During this period in 2021, Ft. Valley's solar radiation averaged 10.1, Cordele averaged 12.7, Tifton averaged 12.9, and Albany averaged 12.1. Thus, it appears that we simply did not get the solar radiation at the time we needed it to fill the kernels properly.

This year, we had good solar radiation up through shell hardening of most mid-season harvest varieties. For the last week, we have seen nearly continuous cloudy weather over much of the pecan producing region of the state. From August 1-August 16, solar radiation averaged 21.65, 22.33, 20.1, 19.04 MJ/m^2 for Cordele, Ft. Valley, Tifton, and Albany, respectively. Since August 16, these same locations have averaged 16.1, 14.7, 15.7, and 15.06 MJ/m^2 .

Our crop appears to be relatively on time this year, if not a week or so early. Pawnees have completed kernel filling. We should see a normal kernel filling period of August 15-September 15 for our mid season harvest varieties.

Kernel filling is an extremely energy demanding process. Even under optimum conditions, pecan trees can be somewhat depleted of energy during the carbohydrate manufacturing process by which the kernels are filled. However, when one of the 2 key ingredients (soil moisture and sunlight) is missing there is often not enough energy to finish out this process. The heavier the crop load on the tree, the more demanding the process.

The good news at this point is that we still have some time. We still have a ways to go before the kernels are done filling and this means if we can get some clear, sunny days over the next few weeks and accumulate some better solar radiation levels, it will help to fill the crop out and leave the trees in better condition for next year.

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

Doug Collins
Lee County Extension Coordinator
P. O. Box 589
Leesburg, GA 31763
229-759-6025
229-759-3302-FAX
229-344-8031-cell
collinsd@uga.edu

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution