UNIVERSITY OF GEORGIA EXTENSION

UGA Cotton Team Newsletter
May 2026

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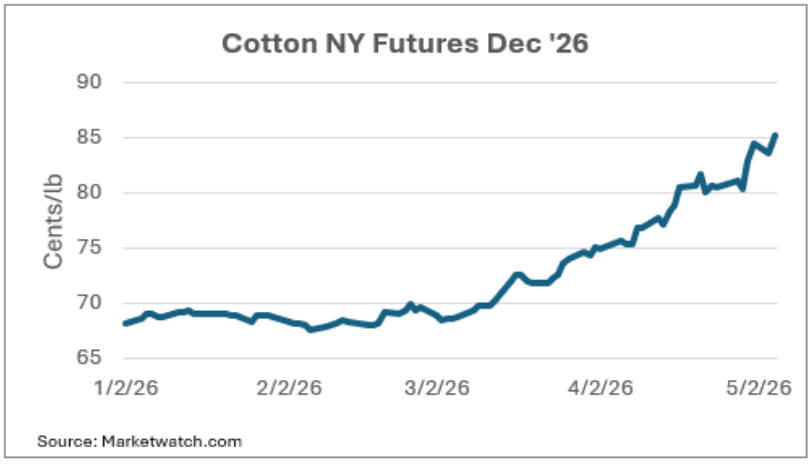
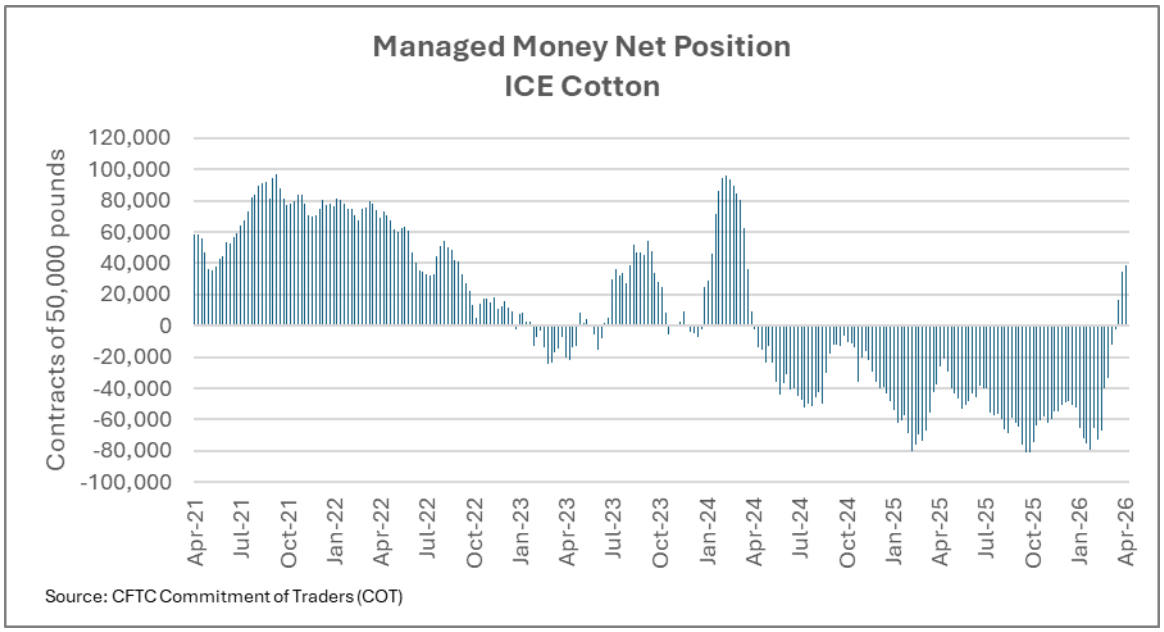
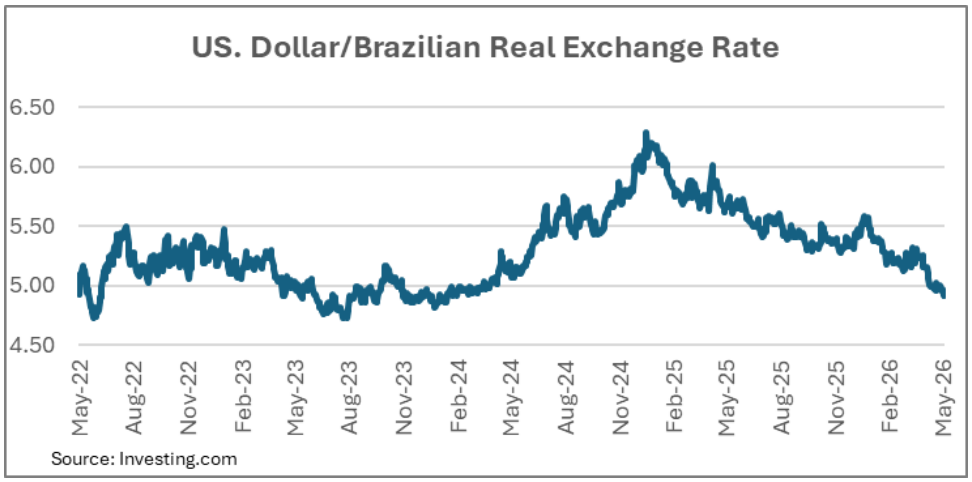
Cotton Market Update: Understanding the Recent Surge in Cotton Prices (*Dr. Jody Campiche, National Cotton Council*): Over the past 8 weeks, cotton prices have risen sharply, reaching the mid-80s during the first week of May, which is the highest level in two years. The rally reflects a shift in market sentiment along with global supply concerns.



The upward movement was largely driven by a reversal in futures market positions. In mid-March, cotton futures speculative positions shifted from a record two-year net short position to a net long position. When speculators hold a net short position, they are betting that prices will fall. In this case, expectations shifted and the extreme net short position left the market vulnerable to a reversal. This led to a large price jump due to short covering (i.e., short sellers buy back contracts to limit losses). This buying pressure pushed prices higher. With the shift to the net long position, traders have a more bullish sentiment and are expecting prices to continue to increase.



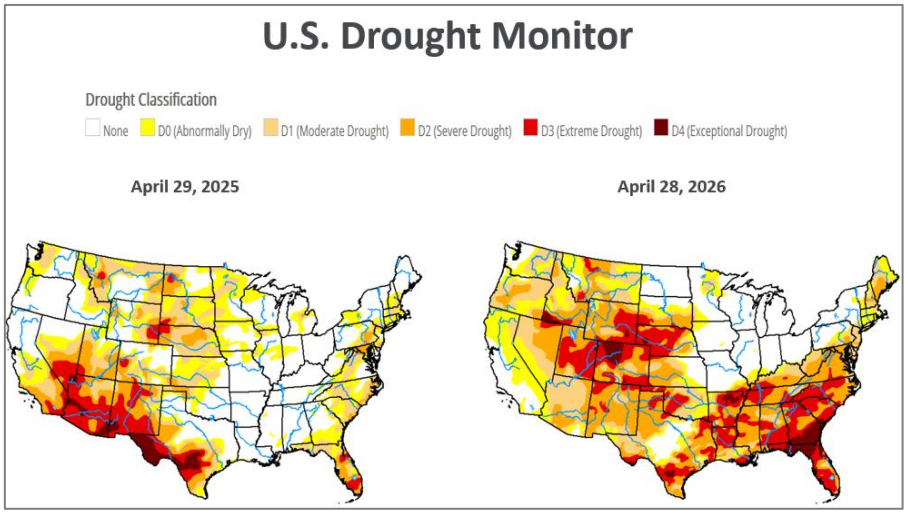
Several factors contributed to this shift, including technical buying, tightening supply expectations, rising input costs, and a weakening U.S. dollar. In 2026, the dollar depreciated against several currencies, including the Brazilian Real and the Australian Dollar, improving the global competitiveness of U.S. cotton.



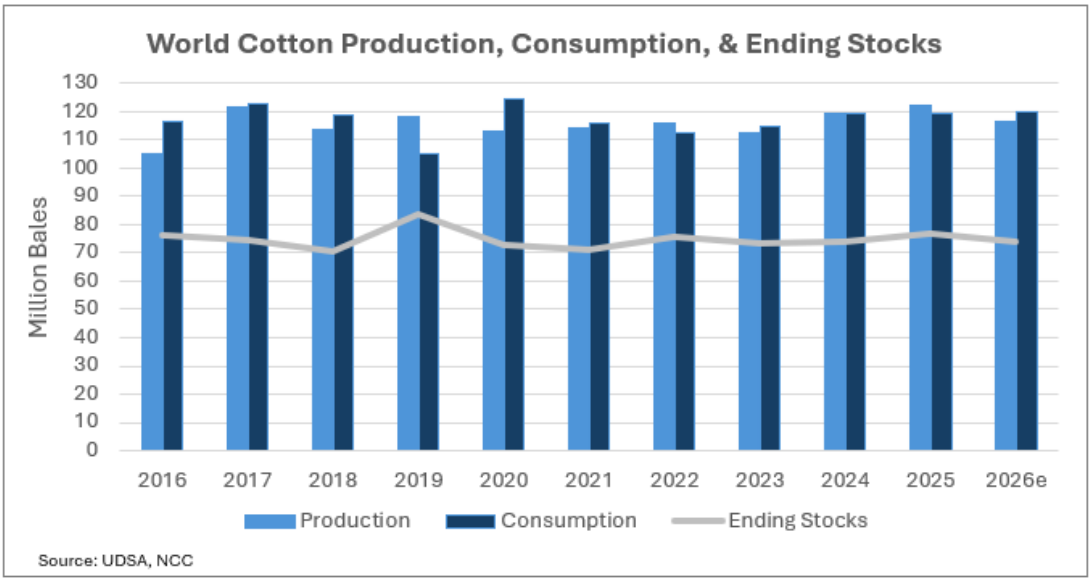
Geopolitical tensions have led to substantial increases in input costs, including energy, fuel, transportation, and fertilizer, while also disrupting supply chains. Higher crude oil prices have increased polyester production costs, as polyester is derived from petroleum.

Polyester prices in China have increased by 30% since early February, with even larger increases likely in other regions due to logistical disruptions, material shortages, and less integrated production systems. The combination of higher polyester prices and supply disruptions could enhance the competitiveness of cotton, potentially leading manufacturers to adjust their product blends to incorporate more cotton.

At the same time, global cotton stocks are tightening as global consumption is projected to exceed production in 2026. Lower anticipated production is primarily due to reduced acreage in Brazil and China along with severe drought conditions across the U.S. Cotton Belt. Rising fertilizer costs along with reduced availability could also shift some acres away from cotton and weigh on yields.



The recent price rally appears to be largely driven by speculative interest. Since net long positions are still below historical extremes, this could suggest room for further upward price movement. However, the sustainability of higher cotton prices will ultimately depend on underlying supply-demand fundamentals. The current outlook suggests that stock levels will decline in 2026, driven by lower world production and higher consumption. Additional supply disruptions could provide further price support.



On the demand side, inventories are lower and mills will eventually need to buy more cotton. While U.S. export sales have been slower this year, the pace has increased in recent weeks. Looking ahead, upside demand risks include stronger-than-expected textile and apparel consumption, increased Chinese import demand, supportive trade policy developments, potential passage of the Buying American Cotton Act (BACA), and a gradual shift away from polyester toward more sustainable fibers.

However, downside risks remain as slower global economic growth and continued geopolitical tensions could weigh on consumer demand for textiles and apparel in the near term.

Although higher prices do offer some relief after four years of low prices and high production costs, the reality is that current price levels may still be insufficient for grower profitability. Production costs are projected to increase further in 2026, driven by elevated fertilizer and fuel prices resulting from ongoing geopolitical tensions.

Strategies for Managing High Fertilizer Costs in Cotton Production (*Doug Amaral*): If there's one thing most cotton growers can agree on heading into this season, it's that fertilizer is not getting any cheaper. Over the past few years, we've seen one disruption after another - from global conflicts to supply chain issues - and those pressures have kept fertilizer prices elevated with little sign of relief. In fact, recent data show that nitrogen prices alone have continued to climb, with 10-34-0 leading the way higher

as the nutrient was 17% higher compared to last month. Urea is now 50% more expensive looking back to last year and MAP is 14%, DAP 15%, UAN32 33%, and UAN28 38%. At the same time, diesel prices have jumped sharply, adding another layer of cost to every field operation.

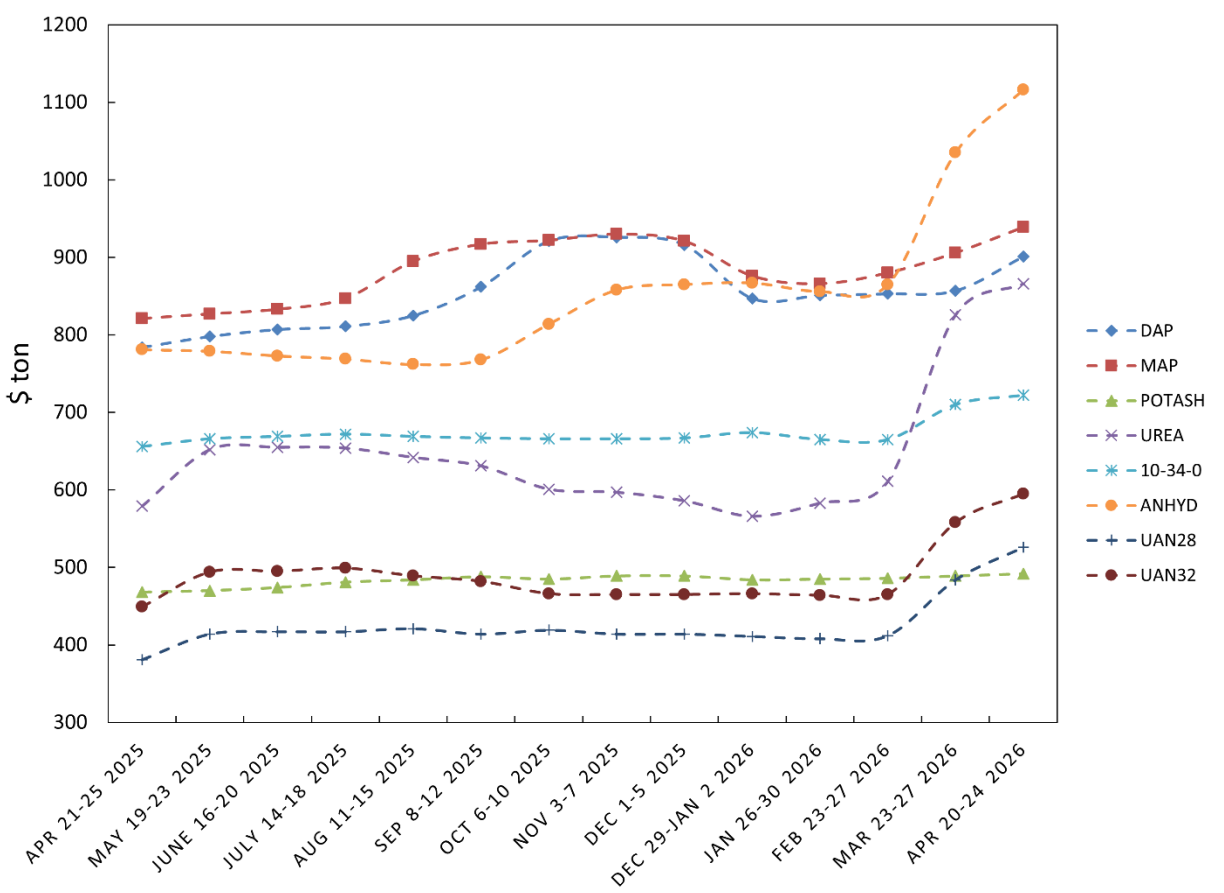


***Fig 1**. Since the escalation of tensions in the Middle East, nitrogen fertilizer prices have risen sharply. Source: DTN Progressive Farmer, April 2026.*

For cotton producers, this matters. Fertilizer typically represents around 16% of total production costs, with nitrogen accounting for roughly 7% on its own. When those costs rise, margins tighten quickly. The reality is that we are likely operating in a "higher-for-longer" input cost environment, so the focus this year needs to shift from maximizing yield at all costs to maximizing return on every dollar spent.

The first place to start is with soil testing. It sounds simple, but it's one of the most powerful tools we have. When prices are high, guessing becomes expensive. A good soil test tells you exactly where you stand and, just as importantly, where you don't need to spend money. Many fields across Georgia already test high in phosphorus. In those situations, applying more of is unlikely to increase yield, but it will

definitely increase costs. Soil testing allows you to eliminate those unnecessary applications and redirect those dollars where they actually matter.

Closely tied to that is soil pH. Maintaining pH around 6.0 is still one of the most cost-effective decisions a grower can make. When pH drops below that range, nutrient availability declines, meaning you get less return from every pound of fertilizer applied. Lime is relatively inexpensive compared to commercial fertilizer, and correcting pH improves the efficiency of everything else you apply. In a year like this, efficiency is the name of the game.

Another shift worth considering is moving away from a "build" mindset and toward a "maintenance" approach. In years when fertilizer was cheaper, it made sense to build soil nutrient levels as a long-term investment. Under current economic conditions, it's more practical to apply nutrients based on crop removal and immediate need. That means focusing on what the cotton crop requires this season rather than maintaining surplus levels in the soil. This approach alone can significantly reduce fertilizer bills without sacrificing yield potential.

Nitrogen management deserves special attention. Cotton is responsive to nitrogen, but it is also sensitive to overapplication. University recommendations across the Southeast consistently show that moderate, well-timed nitrogen applications are more efficient than heavy upfront rates. Splitting nitrogen, applying some at planting and the rest during early growth stages, can improve uptake and reduce losses. If you have a history of legumes such as peanuts or soybeans in rotation, or if you are using poultry litter, you can often credit 30 to 40 pounds of nitrogen per acre and reduce your commercial nitrogen accordingly.

Table 1. UGA nitrogen recommendations to maximize N use efficiency.

Yield Goal	***Suggested N Rate***
750 lb lint	60 lb N/ac
1000 lb lint	75 lb N/ac
1250 lb lint	90 lb N/ac
1500 lb lint	105 lb N/ac

Poultry litter, in particular, continues to be a valuable tool in managing fertilizer costs. It provides nitrogen, phosphorus, and potassium in one application, but it has to be managed correctly. Nutrient content can vary widely, so testing the litter is essential. Timing also matters. Applying litter a couple of weeks before planting allows for initial mineralization and improves early nutrient availability. However, litter alone may not meet peak nitrogen demand, so supplementing with a targeted nitrogen application later in the season, such as at first square, is often necessary to maintain yield.

It's also worth taking a hard look at yield goals this year. High input costs change the economics of production. Pushing for maximum yield may not always be the most profitable strategy if it requires disproportionate increases in fertilizer inputs. Instead, using **realistic** yield expectations based on field history and conditions can help align input decisions with economic return. The goal is not just to grow a big crop, it's to grow a profitable one.

Finally, it's important to be cautious with products that promise more than they can deliver. In times like this, there is often increased marketing of "efficiency enhancers," biologicals, or products claiming to unlock nutrients in the soil. While some technologies have value, many of these products lack consistent, research-based evidence of return on investment. Dollars are better spent on proven practices like soil testing, liming, and properly timed fertilizer applications.

The bottom line is that profitability in cotton production this year will depend less on how much fertilizer is applied and more on how well it is managed. By focusing on soil test data, maintaining pH, adjusting rates to realistic needs, and improving nutrient efficiency, growers can protect yields while keeping costs under control. In a high-cost environment, precision, not intensity, is what will make the difference.

Cotton, Peanut, and Soybean Insect Scout Schools (*Phillip Roberts*): Insect scouting schools will be conducted on June 1, 2026 in Tifton and June 9, 2026 in Midville. Crops covered include cotton, peanuts, and soybean. These programs offer basic information on insect pest identification and damage, natural enemies, and scouting procedures. The training will serve as an introduction to insect monitoring for new scouts and as a review for experienced scouts and producers. Program topics include, Bug and Larval Insect Pests, Beneficial Insects, Scouting Procedures, Safety, and an In-Field Review. Each program will begin at 9:00 a.m. and conclude at 12:30 p.m.

Location	**City**	**Date**	**Time**	**Contact for additional information**
Tifton Campus Conference Center	Tifton GA	June 1, 2026	9:00 am - 12:30pm	Kelley Schauberger (229) 386-3374
Southeast Research and Education Center	Midville GA	June 9, 2026	9:00 am - 12:30pm	Peyton Sapp (706) 554-2119

Grasshoppers: An Unpredictable Pest (*Phillip Roberts*): Grasshopper problems are sporadic, isolated, and almost always associated with reduced tillage fields. We have received multiple calls in the last week regarding grasshoppers. Grasshoppers overwinter in egg cases which were deposited in the soil last fall. Increased overwintering survival and emergence in the spring are associated with dry conditions.

Grasshoppers also appear to be more problematic on lighter soils, often occurring on the same farm from year to year.

Grasshopper damage is unpredictable but can potentially threaten a stand. Grasshoppers may feed on foliage, but most economic damage occurs when grasshoppers feed on the main stem of emerging (in the crook stage, cracking) or small seedlings. Be sure to scout fields infested with grasshoppers as cotton begins to emerge. In some situations, grasshoppers may completely sever the stem, but more often they will chew partially through the stem weakening the plant which often will fall over at the wound site.

Figure 1: Grasshopper feeding on main stem of a cotton seedling.

Figure 2: Cotton seedling completely cut by a grasshopper and an injured plant which is "tipping" over.

In fields infested with grasshoppers, be sure to walk fields looking for immature (wingless) grasshoppers which emerge from the soil. If you are observing immature grasshoppers, it is likely that more grasshoppers will emerge in the next few weeks. Also be aware that adult grasshoppers may be migrating into fields from vegetation bordering fields.

Feeding injury from grasshoppers is unpredictable. We have observed fields with high grasshopper infestations with little feeding on cotton. However, we occasionally walked fields which required a replant, most of the replant situations occurred when it was very dry. Potentially grasshoppers are feeding on the seedlings in search of moisture. Immature or wingless grasshoppers are susceptible to several insecticides. However, adults are much more difficult to control. Higher rates of labeled insecticides should be used when targeting adults. Our most consistent treatment for adult grasshoppers has been 0.75 lbs/acre of acephate. Our standard thrips rate of acephate usually provides control of immatures. In fields with high populations of immature grasshoppers consider including 2 ozs/acre of Dimilin which is an insect growth regulator that provides extended residual and good control of immatures. Dimilin will not control adult grasshoppers. Unfortunately, we do not have a threshold for grasshoppers in cotton. Preventive insecticide applications are a judgment call. As cotton emerges, treatment decisions should be based on seedling damage (i.e. if the stand threatened).

Stand Establishment (*John Snider and Camp Hand*): I hear the term "yield potential" thrown around a lot when discussing the cotton crop. Yield potential is essentially the maximum yield that could be obtained in a given region and is often estimated using physiological principles. In reality, the cotton crop starts out with as much "potential" as it will ever have right before the seed is put in the ground. While it may seem counterintuitive, the job of the producer is not really to increase yield. The job is to minimize the number and severity of stresses experienced by a cotton crop during a growing season, to the extent that it is economically feasible, so that yield is preserved. From a physiologist's perspective, lint yield in cotton is a function of how much solar radiation the crop can absorb during a growing season, how photosynthetically efficient the canopy is at converting radiant energy from the sun into biomass, and how efficiently the crop distributes its biomass to fiber. Provided I can stay on task, one of my goals throughout this growing season is to use this newsletter to focus on specific growth stages and discuss the factors that can affect the different yield drivers noted above. Today, I will start with the stand establishment phase.

What is stand establishment?

Stand establishment encompasses seed germination, seedling emergence, and seeding root and shoot growth. Imbibition of moisture by the quiescent cotton seed is the first step in the germination process. Thereafter, metabolic activity of the embryo increases along with increased oxygen uptake by the seed due to elevated rates of aerobic respiration. Eventually, the radicle will protrude beyond the seed coat, signifying the end of the germination process. Radical protrusion also coincides with lipid movement from the stored reserves in the cotyledons to actively growing areas of the primary plant axis (upward shoot growth, downward root growth). Once the cotyledons are pulled above the soil surface the seedling is said to have emerged. Expansion and greening of the cotyledons marks a shift from dependence on stored seed reserves to photosynthetic self-sufficiency. The rate of addition and expansion of new mainstem true leaves and continued growth of the root system help ensure survival and competitiveness of the seedling as the season progresses.

What factors should be considered during this stage?

Seed source: Seed vigor is the ability of seed to germinate and emerge over a broad range of environmental condtions, and seedling vigor typically is a measure of a seedling's competitiveness once it has emerged. Cotton is a crop with inherently low vigor when compared with other crop species, but there can be differences in vigor that are driven by cultivar or seed source within a cultivar. Figure 1 illustrates emergence rates for an early April planted crop from two different seed sources (a high vigor source and a low vigor source). Within the context of inherent differences in seed vigor, there are two things worth noting. First, the low vigor seed source had lower maximum rates of emergence (~60%) than a high vigor source (~80%). Second, the low vigor source emerged more slowly, requiring more heat unit accumulation to reach maximum emergence than the high vigor source. This basically just means that seed selection matters for stand establishment. However, cultivar decisions have already been made based on either past experience or lint yield data from on-farm or official variety trials. Additionally, any seed traits that could affect seed or seedling vigor were determined through either selective breeding, seed crop management, environment ecountered during seed development, or conditions during seed processing and storage. In other words, most of these things are beyond the control of the grower and have been determined by the time the grower has a bag of seed in hand. If growers are forced to plant some of their

cotton acreage into less than ideal conditions, planting particular varieties/lots with traits that are indicative of high vigor may be beneficial. The cotton seed industry offers a number of different assessments of seed viability and vigor, which could be used by growers to make early season planting decisions. More importantly, there are certain management practices growers can employ that have a pronounced effect on stand establishment, and we will discuss them in the following sections.

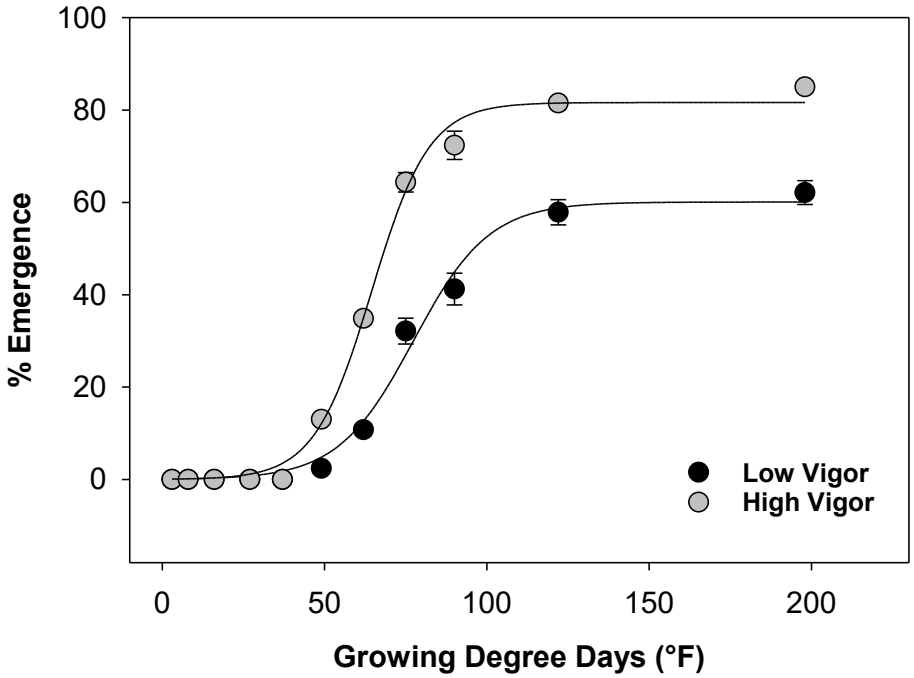


Figure 1: Seedling emergence as a function of DD60 accumulation for two different seed sources with notable differences in seed vigor.

Temperature: Obviously, we can't control the weather, but we can control the temperature at which we choose to plant. Chilling temperatures (above freezing but less than 50 °F) in the initial hours after planting can lead to abnormal root development and should be avoided. The current recommendation is for planting to occur when soil temperatures are 65 °F or above for three consecutive days and when a minimum of 50 DD60s are projected to accumulate within five days after planting. Figure 1 shows that emergence for both seed sources started at ~50 DD60s after planting, which is pretty typical for cotton and in keeping with the recommendation. Keep long term temperature trends in mind as well. It may be possible to get a crop out of the ground, but if temperatures are low in the weeks following emergence, the crop will take longer to develop and canopy growth will be slowed. See Figure 2 for examples of how early season growth temperature effects seedling growth responses in cotton.

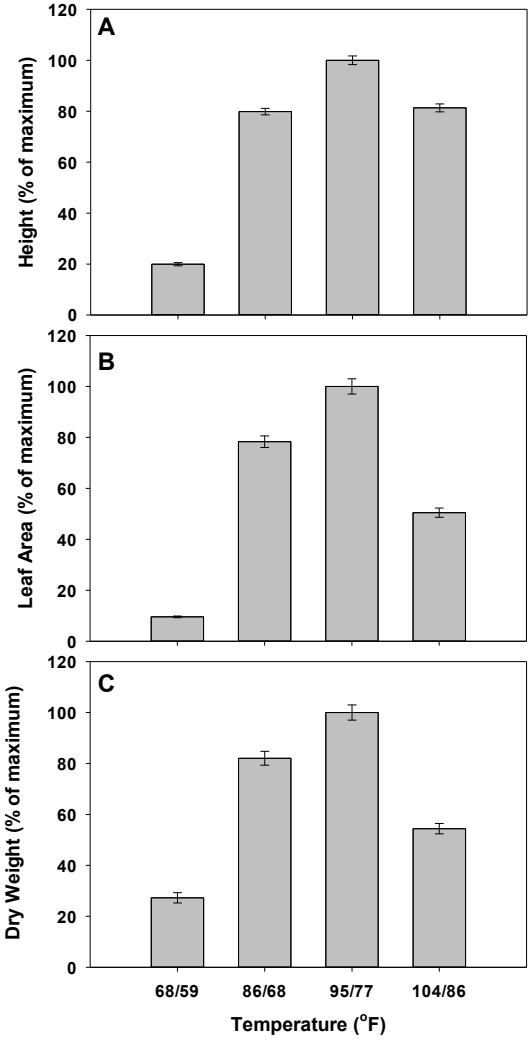


Figure 2. Growth of two-week old cotton seedlings in response to different day/night growth temperature treatments. Parameters measured include plant height (A), leaf area (B) and dry weight (C).

Water: Waterlogging suffocates plants by depleting the soil of oxygen. Having a well-aerated seed bed and avoiding excessively wet soil conditions via planting date selection and knowledge of field history can help lessen these problems. Low soil moisture at planting can lead to seedling desiccation, and obvious remedies for this situation include post-planting irrigation for fields in which irrigation is available or planting into good soil moisture for dryland fields and knocking beds down at planting to minimize water loss from the upper portion of the soil profile before planting. Planting depth affects moisture availability too. The current recommendation in Georgia is to plant seed at a 0.5 to 1 inch depth. Deeper planted seeds have access to more soil moisture, but risk of stand loss increases with depth. Vigor differences between varieties or seed lots will likely matter more in these situations. As many readers know, we went a long time under extreme drought conditions this year, so the rainfall over the weekend

was a welcome occurrence, and many dryland growers will now need to capitalize on the moisture that is currently being held by the soil profile. Just try not to get in too early (see Figure 3).

Figure 3: There are a number of different ways to determine if there is enough moisture in the soil profile to ensure stand establishment. Getting a tractor stuck wouldn't be my first choice. You'll notice we've got a pretty full soil profile here in Tifton after the rain.

Crusting: Crusting is when a thin compacted soil layer forms over a field. The reason this is a problem is because the cotton seedling often cannot exert enough pressure to break through the crust. If this crust isn't broken up in time, the grower may be looking at a replant situation. A rotary hoe would only be used where crusting was a widespread issue in the field, but timing matters. As a general rule, a rotary hoe should be run within 10 days after planting to ensure that plants don't just sit under the soil surface and rot. However, I have also had good luck using a rotary hoe as late as 15 days after planting, provided the seedlings I dug up exhibited normal development (a well-developed seedling radicle, pronounced

hypocotyl hook, and no visual evidence of disease). The best thing to do is dig up some plants and see what you're dealing with before making the decision to use a rotary hoe.

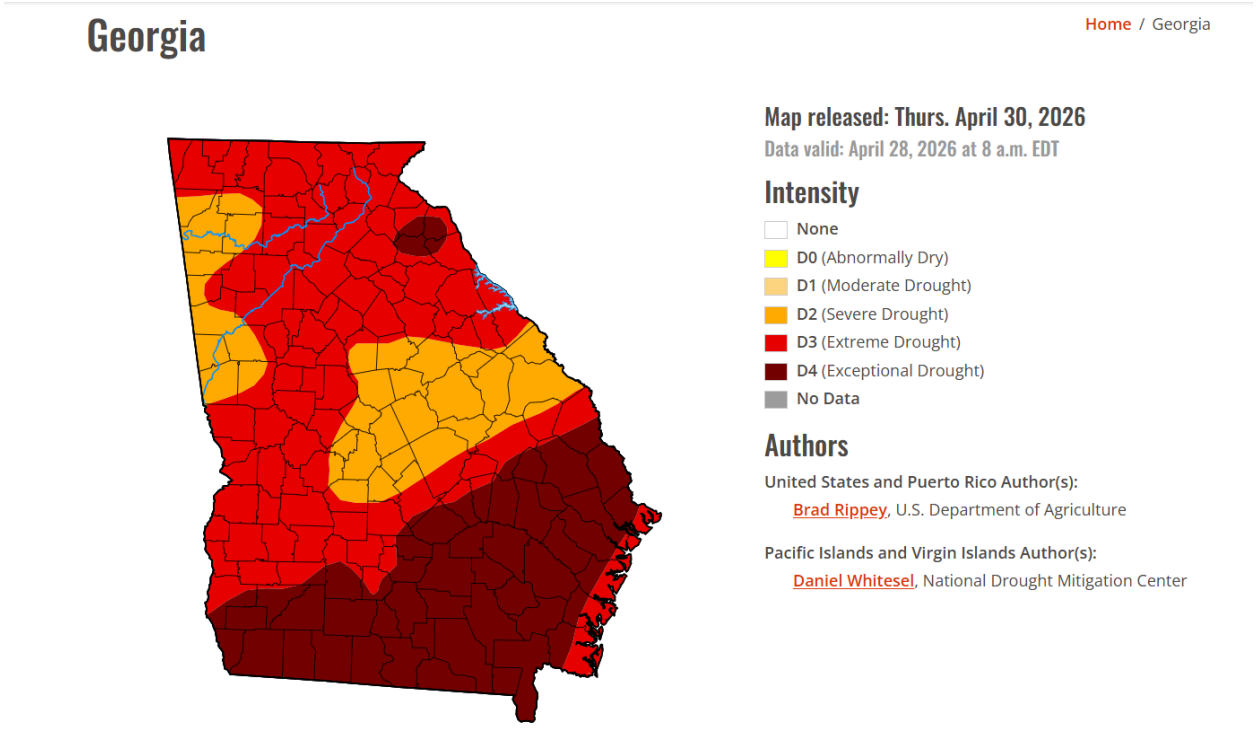
Planter settings: Incorrect planter setup can lead to 1) poor seed to soil contact, which could limit imbibition and germination and 2) inaccurate depth settings which could result in embryo dehydration if planted too shallow or inability of the seedling to reach the surface if planted too deep.

Yield drivers affected?
As almost anyone who has worked in cotton long enough will tell you, poor stand establishment may not always equal reduced yields because the cotton crop has the ability to compensate for reductions in plant population. However, we have documented yield-limiting reductions in plant stands if plant populations are sufficiently low. In these instances, the primary mechanism by which poor stand establishment and low rates of early season growth limit yield is by reducing the area of photosynthetically active leaves available to capture incoming solar radiation. This is because the crop will continue to grow at a suboptimal rate until the canopy can intercept 95% of incoming solar radiation. The faster the crop can get there, the more yield potential is retained. However, for yield potential to be realized, a balance between vegetative and reproductive growth will also need to be maintained, but that is another topic for another newsletter.

Take-home message: Cotton varieties and seed lots can vary in their potential for rapid and uniform emergence across a range of conditions (seed vigor) or their potential for post-emergence seedling growth and survival (seedling vigor). *Potential* is the key word here, meaning that uniform emergence and vigorous seedling growth are not guaranteed, even for bags of seed with the potential for "high vigor." A vigorous lot of seed that is planted too deep or when it's too cold, too wet or too dry can still fail to emerge. If early seedling pathogens are not considered prior to closing the furrow (as Dr. Kemerait will undoubtedly tell you), high seed vigor becomes irrelevant as uniformly emerged seedlings begin to die off, leading to skippy stands. Plant and insect pests can reduce seedling growth and survival, even if plant stands are close to their potential. Readers are referred to other portions of this newsletter and the Georgia Cotton Production Guide for more detailed, early-season crop management considerations.

Early Season Irrigation Requirements for Cotton (*Wes Porter, David Hall, Jason Mallard, Phillip Edwards, and Savannah Beasley*): As we already know, we are in extreme drought conditions. While we have received some rainfall and are predicted to have a more wet May, we need to keep in mind that we are significantly behind on rainfall, and it will take significant rainfall to move us out of the current condition. Thus, independent of what late spring and early summer bring, we need to have a plan in place on when our critical water needs are, how we plan to logistically manage our irrigation applications. A good plan will ensure that we are prepared for what the upcoming season is bringing. Just like with any of our crop management, we need to be prepared to make changes and adjust the plan according to what the season is bringing. A scientific irrigation scheduling strategy will ensure that you are comfortable moving through the season.

As shown in the most recent US Drought monitor map for Georgia, most of the southern portion of the state is currently in the exceptional drought category. Thus, as you start to plant and consider crop management it is important to closely monitor the weather, soil moisture conditions, and weather forecast to make the right decisions for this year's challenges.



Depending on conditions as we move through May, you may need irrigation to aid with crop establishment. In this case it is ideal to pre-irrigate at a rate of 0.5 to 0.75 inches. Then depending on conditions irrigation may be required to activate herbicides and promote germination and emergence. It is also important to note that to receive the maximum benefits from recommended pre-emerge chemicals, another irrigation application should be planned shortly after planting. This of course depends on the expected weather. It has been documented that cotton seedlings receive less damage if the chemicals are incorporated with around 0.5 inch of water soon after the radical has formed but before emergence. This is a tight window so be prepared to be timely if needed. Ideally, a majority of the cotton across Georgia should be planted during late-April or early- to mid- May. Similar to peanuts, cotton does not require very much irrigation during the first month of plant development. With that stated, if no rainfall is received, irrigation may be needed but don't fall into a trap of over-irrigating just because you feel like it's dry or the crop needs it. Rely on scientific and proven irrigation scheduling tools. If you are not using tools such as moisture sensors or apps, it is highly encouraged to at least put boots on the ground and do some digging to see your moisture standings. The main point here is to not blindly irrigate! Even when using these tools, it is a good idea to ground truth your field as often as possible.

In some cases, if adequate rainfall is received, cotton can go up to squaring and even bloom without additional irrigation applications. The UGA Extension Checkbook (Figure 1) method shown with the highlighted early season water requirements in the red box should help to estimate early season water requirements. UGA Extension has an Irrigation Reference guide for use as a quick and easy irrigation scheduling guide which can be found at https://fieldreport.caes.uga.edu/publications/C1189/irrigation-reference-guide-for-corn-cotton-peanuts-and-soybeans/.

The red box below represents the cotton water requirements for the first five weeks after planting. It is important and critical to keep 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 in the figure is irrigation plus rainfall, and the weekly water requirement recommendation was developed based on a historical average 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 consider implementing either a computer scheduling model such as the SI CropFit mobile app, or soil moisture sensors.

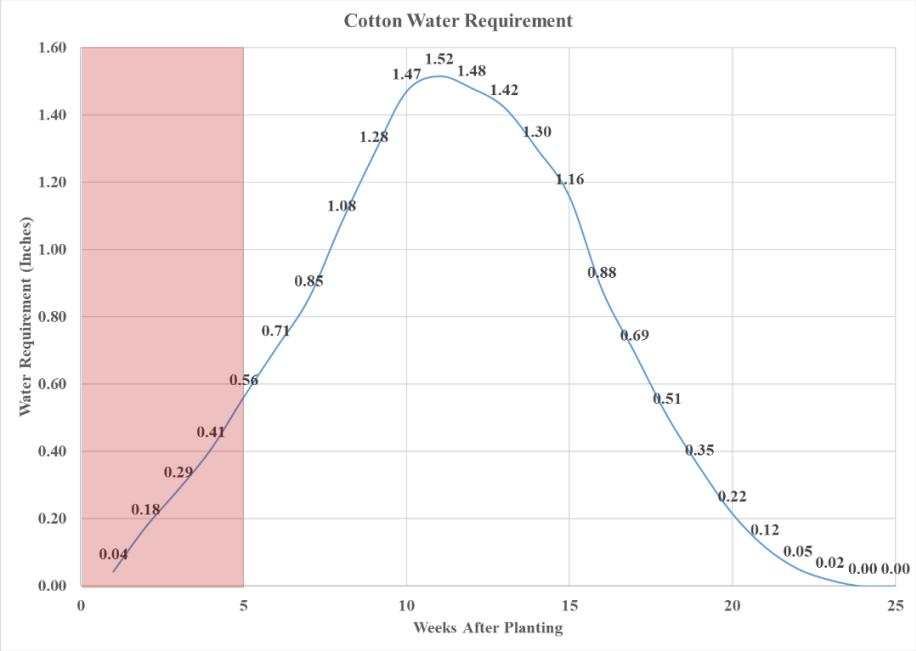


Figure 1. Seasonal Cotton Water Requirement.

For cotton farmers who utilize tools such as soil moisture sensors in their irrigation scheduling, there are a few key details to keep in mind. We tend to visualize the above ground plant biomass and forget what is growing below the surface. We can sometimes be guilty of placing a sensor in the field and not double checking periodically to ensure the sensor is collecting reliable data. Unfortunately, we need to know what is going on in the field before we blindly start following the sensor. If the sensor is installed correctly, it should be representative of the root zone of the plants around it, so it is important to return to

the field to ensure a healthy plant stand is developing around the sensor. You may also discover after a large rainfall event that the sensor was installed in a wash, or that the soil settled into a "divot" around the probe. These things should be corrected before using that sensor to make irrigation decisions. Keep in mind that you can uninstall and reinstall the sensor in a more representative area at any given time if needed. Based on when you planted certain fields, cotton may be spread in age by several weeks while some are still in the bag. This is a good time to think about "weighting sensor depths" according to rooting depths.

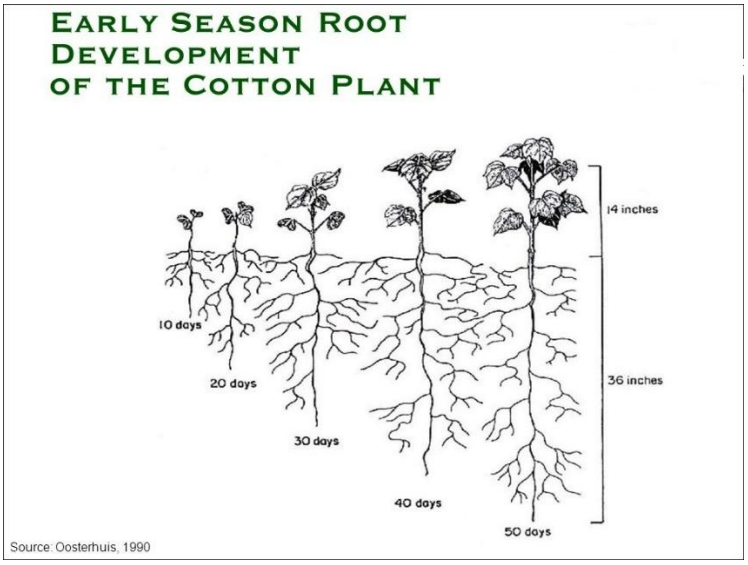


Figure 2. Visual development of root development as the cotton plant progresses in age.

As the plant's rooting depth increases and seasonal water requirements change, it is important to change how we interpret the data from a soil moisture sensor. Early in the season, we generally have cool nights and afternoon temps are "normally" around the low to mid 80s. The evaporation rate is low in comparison to the dry hot summer days and nights. The root profile for the first month develops shallow in the soil. The plants' water requirements change throughout the season and are dependent on these environmental factors as well as the plants' phenological stage, as reflected by the UGA Checkbook method. Most sensors read soil moisture at three or more depths. We should give each depth a different "weight" depending on the depth of the crops root zone at that stage. This is called "weighting" the sensor. Modern Capacitance sensors have almost eliminated the need for the user to manually weigh sensors. Some use historical models to predict the active root zone and others analyze slight changes in the moisture readings at each depth to determine real time if the root zone has reached that far. In the case of the model, it is important to follow the projected depth of the root zone and compare it to the above ground actual plant mass and developmental stage. You should have an option in most cases to manually change the root zone to what you believe is accurate. If the sensor is not displaying an accurate root zone, the sensor may call for less irrigation than needed because it is assuming that the roots are able to reach deeper moisture. Some sensors may not be weighted at all and just show the data for each depth and an average of them all. For example, if a 16" depth is showing dry soil while the 8" sensor is reading adequate moisture, the average of these two depths may persuade you to irrigate regardless of if there are even roots at 16". If the

cotton plant has just fully emerged, then its root zone is likely no deeper than 10". In this scenario, you do not need to irrigate. Now, considering the rooting depth let's weight the 8" sensor by an 80% value and the 16" sensor by 20%. Now since the average is weighted higher on the shallow sensor irrigation may not be needed. You should not begin to fully use deeper sensors for irrigation scheduling decisions until you see water use occurring at those depths. Weighting moisture sensors is an important part of irrigation management but can do more harm than good if not done correctly throughout the season. If you are interested in weighting sensors, below are UGA Extension suggestions to consider for weighting sensors during the growing season:

D1 = shallow sensor D2 = middle sensor D3 = deepest sensor

- Early-Season: 80% * D1, 20% * D2, 0% * D3
- Early-Mid Season: 60% * D1, 30% * D2, 10% * D3
- Mid-Season: 50% * D1, 25% * D2, 25% * D3
- Late-Season: 40% * D1, 30% * D2, 30% * D3

Soil moisture sensors have proved to be one of the most profitable methods of irrigation scheduling. Nothing can beat the in-season real time data from a soil moisture sensor if utilized correctly. If you have further questions about irrigation requirements or scheduling for your cotton, reach out to your local UGA County Extension Agent.

Early Season Disease and Nematode Considerations (*Bob Kemerait*): There are some things in a cotton crop that can only be managed early in the season.

Bacterial blight can only be managed by planting resistant varieties. Symptoms of bacterial blight on the leaves and eventually the bolls are not visible until later in the season.

Plant-parasitic nematodes can only be managed by planting resistant varieties or with judicious use of nematicides. Damage from nematodes, to include stunting and interveinal chlorosis ('tiger striping') are most pronounced later in the season, but, under severe pressure, can be observed early in the season as well.

Fusarium wilt of cotton in Georgia is always associated with plant-parasitic nematodes, primarily the southern root-knot and sting nematodes. The only chance to manage Fusarium wilt is to reduce the damage to the cotton roots from the plant-parasitic nematodes. Fusarium wilt, characterized by stunting, vascular discoloration, foliar symptoms, and even plant death, can occur throughout the season.

Avoidance of bronze wilt symptoms is most effectively managed by selection of variety and an early planting date.

The peak of cotton planting is upon us and cotton growers are once again reminded that careful decisions made now are critical to protecting the crop and yield potential for the rest of the season.

Nematodes, especially root-knot, reniform, and sting, can cause serious damage to a cotton crop. The best, and sometimes the only, management options are spent once the furrow is closed. Where root-knot and/or reniform nematodes are an issue, growers are reminded that they can plant nematode-resistant varieties. Planting resistant varieties will protect the plants from damage without the use of nematicides and will also help to reduce growth of nematode populations that will affect the cotton crop next season.

Growers who choose not to plant nematode-resistant varieties, for whatever reason, are encouraged to use nematicides judiciously. No nematicide can provide season-long protection to the cotton crop and certainly will not have any effect on nematode populations for next season. (Only planting resistant varieties or rotating away from cotton to a non-host crop will reduce populations for next season.) However, use of an appropriate nematicide at the appropriate rate will allow a cotton plant to get a "head start" and begin to develop a robust root system before the inevitable damage occurs. Protecting that young root system for 4 to 6 weeks early in the season can have lasting benefit on yield and profit.

Below are several key points to getting the most out your investment in use of a nematicide.

1. Know the type of nematodes and the size of the population in your fields. This is best accomplished with samples taken after harvest in the previous season. Some nematodes, such as the ectoparasitic sting nematode, may be an easier target because they stay outside the root and are more exposed to the nematicide. Knowing the population size helps to determine which nematicide, fumigant (Telone II), granular (AgLogic 15G), liquid (Velum), or seed treatment (e.g. AVICTA, Copeo, BIOst, or Trunemco) is likely to best provide the needed protection to the cotton crop.
2. Once the furrow is closed, the only additional option for nematode management available to growers in a foliar application of oxamyl (Vydate-CLV or ReTurn XL) at about the 5th true leaf stage to possibly extend the protective window of nematicides applied at planting.
3. Newer products are available to cotton growers for management of nematodes. Averland FC nematicide (active ingredient abamectin) is such a product as is Outreach from Valent.
4. Getting the most out of a nematicide requires using the right product at the right rate. It also requires consideration for environmental conditions as well. For example, fumigation with Telone II is affected by soils that are too wet or too dry at time of application and by significant rain events after fumigation. Likewise, granular products such as AgLogic 15GG require some soil moisture to be activated and also taken up into the roots.

Though the 2026 cotton season has only just begun, protecting a cotton crop against nematode now will have lasting benefit throughout the season. Growers are encouraged to make the best management decisions now.

The First Forty Days of Cotton and Why It Matters (*Wade Parker*): Early in my career, I received a Cotton Incorporated/National Cotton Council publication, "The First Forty Days, The Most Critical Period in Cotton Production." I realize a lot has changed since the late nineties, but at the same time many of the agronomic concepts are the same. I still catch myself referring to it from time to time.

The first forty days after planting establish the cotton plant's yield potential and set the foundation for the entire growing season. The five main growth stages of cotton are: germination/emergence, seedling development, leaf and canopy formation, and reproduction. As of the time of this writing, farmers are itching to get into the field and get started. Even though soil moisture has improved, pay close attention to the long-range forecast and monitor soil temperature and moisture. Optimal soil temperature for emergence is $65\text{-}70^0$ F (4-5" depth for three days) followed by warm air temperatures. Cool and wet conditions are not good for the few days of development. Roots are developing rapidly during these initial stages depending on soil moisture and temps. If emergence stalls due to lack of soil moisture, quick applications of low amounts of water will break soil crust and hopefully limit herbicide injury from pre-emergence products. Achieving a uniform stand and adequate plant population has a season long impact on crop growth and management and allows for easier management decisions when the plants are at the same stage of growth.

After emergence, monitor close for thrips, seedling diseases, and weeds. We have been told for years that allowing thrips to gain ground on seedling cotton will result in yield reduction, even if eventually controlled. In dry springs, it is common for Ag Logic (Aldicarb) to not get activated in dry weather but soil moisture being good enough to get emergence. This situation results in no protection being available until rain is received. Thrips damage the plant's growing points, resulting in stunting and delayed maturity. The same concept holds true with early deer feeding. Eliminating weed competition is important for seedling development. Cotton is not a competitive crop early in its life, emerging quickly if good conditions prevail but often slows as the first several true leaves begin to form. Weeds at the same time are naturally fast emergers and grow fast, often far outpacing cotton.

Toward the end of the forty days, canopy management, and development come into play. Having basic growth and development knowledge of the variety planted and how to manage it is important. Fruiting branches have many growing points, which usually begin at the fifth or sixth node. The more aggressive varieties could start fruiting a little higher. Plant stress, plant population, variety, temperature/moisture all influence the early fruiting period. The early fruit is also the most valuable in terms of weight and dollars received. Extreme lower node fruiting can often be attributed to stress and will result in a shorter plant with reduced yield. On the other hand, too much moisture can result in a bushier plant with higher fruiting nodes. This could delay maturity.

While the knowledge of the variety selection does come into play for the first forty days, the actual selection process is made pre-planting. Most questions received in the last week have focused on variety selection, so always provide growers with the necessary tools needed to choose the right variety. This may be the single most important choice to make.

The first forty days are important for the success of a cotton crop. I realize many of the concepts I mentioned are elementary to many of us. The point of my article is to get your mind set on the fact that yield must be preserved and maintained, and what happens early does matter. Mother Nature has a lot to do with crop success or failure. However, the management growers provide to their crop goes a long way in addressing many concerns and issues that arise. Cotton is a forgiving crop in terms of some stress factors, but stress early in its life does take its toll.

Spring Sprayer Readiness (*Lauren Lazaro*): Ensuring your sprayer is properly maintained and calibrated is essential for timely and effective pesticide applications. Taking time now to prepare equipment can prevent costly delays and improve application accuracy once field conditions are favorable.

Start with a thorough inspection of the sprayer. Review the operator's manual for recommended service intervals and specifications. Check that all machine fluids are at proper levels, filters are clean, and moving parts are adequately lubricated. Pay close attention to boom suspension components, as proper lubrication and function are critical for maintaining consistent boom height and spray uniformity. Tires should also be carefully inspected—sprayers often operate at higher speeds with heavy loads, so tires must be in good condition, properly inflated, and free of damage to ensure safe operation.

Before cleaning or servicing any part of the sprayer, always wear the appropriate personal protective equipment (PPE). Sprayer cleanout is a critical step in preventing contamination and crop injury. Following each use—and especially prior to the season—thoroughly rinse the tank, lines, and boom. Residual chemicals left in the system can lead to unintended crop damage or reduced product performance.

Nozzle selection and setup are equally important. Nozzles directly influence spray coverage, droplet size, and drift potential. After determining your pest management program, confirm that your nozzle selection aligns with the products you plan to apply. Some herbicides, such as dicamba, have strict nozzle and droplet size requirements, while others offer more flexibility. Prior to spraying, run clean water through the system to evaluate nozzle performance and ensure uniform output across the boom. This step helps identify worn, plugged, or damaged nozzles that could compromise application accuracy. Calibration should also be verified before the season begins. Common approaches include using a handheld calibration tool (e.g., Spot-On calibrator) or the 1/128th acre method. Regardless of the method, accurate calibration ensures that the intended application rate is delivered across the field.

Finally, evaluate the sprayer plumbing system. Inspect hoses for wear, cracks, or sagging that could restrict flow or trap spray solution. Ensure all hoses are properly secured and replace any that are damaged. Clean strainers regularly to prevent debris from reaching nozzle tips, and check boom end caps for buildup. Disassemble and inspect nozzle bodies, including strainers, screens, and O-rings, for wear or debris. Clean all components thoroughly and replace any parts that show signs of deterioration. Consistency across the boom is essential for uniform applications. Inspect fittings and connections for leaks, and recalibrate the flowmeter if needed to maintain accurate rate control.

A well-maintained sprayer is a key component of an effective cotton production system. Investing time in preseason inspection, cleaning, and calibration will help ensure accurate applications, reduce the risk of crop injury, and keep your operation running efficiently throughout the season.

Preparing for the Season – the stuff we don't always think about but should! (*Taylor Singleton*): While this month's newsletter will highlight preplant/early season considerations for you to think about, there's no doubt you are making a ton of decisions right now. As you think through what the season will likely have in store, and how to prepare for these challenges ahead of time, I would encourage you to think about your recordkeeping practices. One of the most important things you can do to protect yourself, your farm, and steward pesticide use is by keeping good records of what you do during pesticide applications.

If you don't already have a good pesticide record keeping system, I encourage you to reach out to your county agent soon and work with them to get something set up that fits you and your operation. There are lots of tools available, including both digital and paper-based. It's important to pick something that's easy for you to keep up with when the season gets hectic. If you like paper forms, consider making yourself a notebook to keep in every sprayer/spray tractor. For more information about what records are required for private vs. commercial license-types, and when you need to document, see "**Pesticide Regulations**" in the 2026 Georgia Pest Management Handbook. Keep in mind, if you are using the in-crop dicamba products, there is an extensive record-keeping requirement to use these tools. The Georgia Department of Agriculture has created a dicamba **record keeping form** to make this a little easier.

It doesn't matter how good our records are, if we aren't safe in the way we use pesticides, then that means game over for the ability to continue using them in the future. Every pesticide label includes what PPE is required to be worn during mixing, loading, and application – but you can always wear more. Be sure to check the label of the product(s) you are applying, but generally long sleeves, long pants, closed toe shoes plus socks, and waterproof gloves are standard. These items form the basis of not only protecting our skin, but also preventing the accidental spread of pesticide residues to other parts of the body and our surroundings – think truck doors, seats, etc. Respirators (required for Engenia applications this year), protective eyewear, and chemical resistant aprons while mixing can help further that protection. Remember, PPE is also necessary if entering the treated area before the REI has expired.

So just a friendly reminder that now is a great time to make sure you have everything you need PPE-related on hand for any pesticide handlers (including mixers, loaders, applicators, anyone who does maintenance on or washes the equipment). Make a kit and keep it in the tractor, sprayer, truck, at the fill station. **Your health, and the health of your family, is worth more than feeling uncomfortable when wearing PPE** (and I agree that it is uncomfortable!). It takes me 6 seconds (I actually timed myself) to put on a pair of chemical-resistant disposable gloves before I spray….and I know I can spare that time to protect my health long-term. I challenge you to do the same!

As we get ready to enter into a new growing season, remember the challenges that pesticides have faced in previous years….pesticide use and availability are not a given. We must be smart with our actions and

collectively work together to steward pesticide use. It starts and continues with being SAFE in the way we use these critical products and being conscious of our recordkeeping practices. If you have any questions or need help dialing in the pesticide safety or recordkeeping practices you implement on your farm, please reach out to your local extension agent. Have a great (and safe) planting season!

Steps to Improve On-Target In-Crop Dicamba Applications in 2026 (*Stanley Culpepper, Taylor Singleton, Jenna Vance*):

1. All applicators must hold a private or commercial pesticide applicator license to purchase **and apply** the restricted-use herbicides Engenia, Stryax, and Tavium. **No other dicamba product is labeled for in-crop cotton or soybean use.**

2. Applicators in Georgia must complete the state-specific 2026 UPW classroom training before applying Engenia, Stryax, or Tavium.

3. Avoid applications near sensitive crops or plants. Fig. 1 shares the sensitivity of a few Georgia crops to dicamba. Labels clearly prohibit applications of these herbicides with any sensitive crop or plant adjacent downwind.

4. Do not exceed 1 lb a.e. dicamba per acre per calendar year and do not exceed 0.5 lb a.e. per individual application in tolerant cotton or soybean. **Two applications of Stryax at 22 oz/A, Engenia at 12.8 oz/A, OR Tavium at 3.53 pt/A are allowed.**

5. DO NOT mix AMS with dicamba!

6. DO NOT apply dicamba with an AIRPLANE OR DRONE!

7. Boom height can be no higher than **24 inches** above target pests or crop canopy. Off-target drift can potentially be cut in half by lowering the boom from 48 to 24 inches above target (Fig 2).

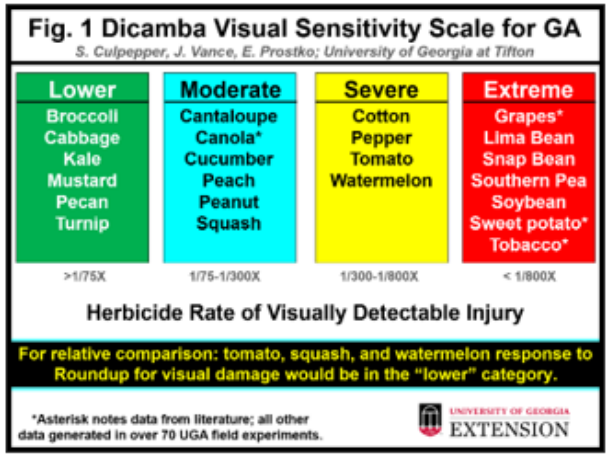
8. Wind speed during application must be between 3 and 10 mph.

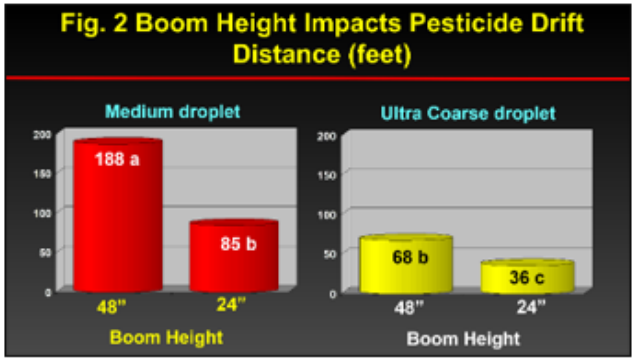
9. Application time of day: 1 hour after sunrise through 2 hours before sunset.

10. Avoid inversions (see images below). Both application time of day and wind speed restrictions help avoid inversions, but common sense must also be utilized.

11. Application gallons per acre: 15 GPA

12. Sprayer speed: Suggest < 10 mph for less drift and better weed coverage; label allows up to 15 mph.





13. A Downwind Spray Drift Buffer of 240 feet is required for all in-crop dicamba applications. Two options are available to avoid having the buffer extend into the field being treated. **Option 1:** Utilize spray drift credit options to reduce buffers (Fig. 3). **Option 2:** Utilize managed areas to "place the buffer" on those specific exempted areas (Fig 4). Both mitigation credits **and** managed areas can be used to reduce the buffer.

14. In-crop dicamba applications must include an oil emulsion **Drift Reduction Adjuvant (DRA)** at a concentration of 0.3% volume-to-volume of the final spray.

15. Volatility Reduction Adjuvants (VRA) must be included in all in-crop dicamba applications, rates are twice as high as in previous years. Visit the website or QR code shared at the bottom to determine products and rate of each product approved for use.

16. Label Specific Requirement: The label requires the user to check the website of the product being applied no more than 7 days before application for additional labeling requirements. Website addresses are provided below.

17. Volatility Temperature Restrictions: Before making an in-crop dicamba application, applicators must check for the two-day maximum predicted temperature from the National Weather Service and then follow the restrictions noted in Fig. 5. Once entering the site through the QR code or web address shared in Fig. 5, type in your zip code to view the predicted high temperatures for the next two days.

18. Endangered Species Act Runoff Mitigations: 3 points of mitigation credit are required outside a pesticide use limitation area (PULA) and 6 points inside the PULA. Obtain applicable bulletin from Bulletins Live! Two (BLT).

Fig 3. Overcoming Downwind Buffer of 240 Feet (Option 1).

Mitigation Option	Reduction in Buffer Distance
Downwind drift barrier	
Basic – 1 row of trees or 4+ ft strip of vegetation, 2+ ft tall	50%
Advanced – 2+ rows of trees or 13+ ft strip of vegetation, 14+ ft tall	75%
Application through hooded sprayer	
Over-the-top	50%
Row middle	75%
Sprays below crop canopy	
Layby/drop nozzles	50%
Small Fields/Spot Spray	
<1 acre	75%
1-4 acres	35%
4-10 acres	15%

Fig 4. Overcoming Downwind Buffer of 240 Feet (Option 2).

Managed Areas Immediately Downwind to Treated Field
Untreated area of the treated field
Roads, paved/gravel surfaces
Mowed areas, bare ground, plowed areas
Downwind drift barriers (trees/shrubs/non-woody vegetation)
Contained irrigation ponds/basins
Areas maintained as ESA mitigation area (field borders, grassed waterways, etc.)

QR Code For Approved VRA Products and Rates

Stryax (Bayer) Engenia (BASF) Tavium (Syngenta)

Website For Approved VRA Products and Rates

Engenia: www.EngeniaHerbicide.com/VRA
Stryax: www.stryaxapplicationrequirements.com
Tavium: www.TaviumApplicationRequirements.com

Fig 5. Volatility Temperature Mitigation Requirement

Two Day Max Predicted Temperature	DRA	VRA	Additional Mitigations?
0 - 85°F	Yes	Yes	No
85.1 to 95°F	Yes	Yes	Do not treat more than 50% of acres managed by grower within county
95.1°F +	APPLICATION NOT PERMITTED		

Website address: www.weather.gov

National Weather Service (NWS) Forecast

Scan and type in your zip code for extended forecast in your area

Important Dates:

Georgia Cotton Commission Mid-Year Meeting - Statesboro, GA – July 29, 2026
Attapulgus Research and Education Center Field Day – Attapulgus, GA – July 30, 2026
Southwest Research and Education Center Field Day – Plains, GA – August 5, 2026
Southeast Research and Education Center Field Day – Midville, GA – August 12, 2026
Cotton and Peanut Research Field Day – Tifton, GA – September 2, 2026
Georgia Cotton Commission Annual Meeting and UGA Cotton Production Workshop - Tifton, GA – January 27, 2027