



April 7, 2021

Burke County Ag News

Paraquat Training

I have had a number of questions about paraquat training. The new label requires that the only people who can apply paraquat are certified applicators who have also taken the EPA training. The following web sites pertain to the paraquat training. The first one is a list of people who have taken the course and the second will give you access to the training/course.

Website for list of EPA paraquat training attendees:

http://agr.georgia.gov/Data/Sites/1/media/ag_plantindustry/pesticides/files/training/Paraquat-Training-GA-3-21-21.pdf

Website to take the EPA training:

<https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators#q1>

Cold Injury in Wheat

Dr. Corey Bryant, Extension Grains Agronomist shared several points regarding cold injury in wheat.

- 1) Wait at least 4 days after the cold weather before trying to diagnose cold injury severity. Plants take that long to return to normal growth which will allow you to differentiate between slight and severe damage that will not recover.
- 2) The severity of damage will depend on the growth stage, how low the temperature actually gets, and how long it stays at that temperature. A light frost that occurs at temperatures above 32 degrees does not worry me. These plants did not actually freeze and should resume normal growth once weather warms at the first of the week. Research has indicated that yield effects from freeze can be moderate to severe if temperatures drop to 24-28 degrees for two or more hours. However, temperatures of 31 degrees for several hours (4-6) could be just as damaging as 28 degrees for two hours, we will just have to wait and see.
- 3) The most susceptible period is between heading and flowering. Wheat that is still in the boot stage will be provided some protection by the leaf sheaths. Exposed heads are more susceptible to environmental conditions.
- 4) Damage symptoms to look for:
 - a. Leaf discoloration – twisted and light green or yellow with necrosis of the leaf tip. If the flag leaf is still emerging and appears yellow or necrotic this indicates that the growing point has been damaged or killed. If the growing point is killed that stem will not produce a grain head.
 - b. Stem damage – twisted and yellowing or darkening areas of the lower stem. This damage may not directly cause yield loss but can lead to increased lodging that can increase yield loss. If this is the case then a timely harvest is the only option.
 - c. Head damage – bent heads, bleached heads, and light green florets. Bent heads occur by rapid growth during warm weather followed by a sudden decrease in growth rate caused by quick changes in temperature. Bleached heads will be light yellow to white in appearance and are symptom of sterility and a lack of grain in the head, this may affect the entire head or only portions of the head. Light green florets were damaged by the freeze and will most likely become sterile and not produce any grain.



Peanut Planting Decisions: Dr. Scott Monfort

Growers are beginning to make plans on when to start planting. I have already received several calls from growers asking about planting in the first part of April if the soil temperatures and moisture are perfect for planting. In answering this question, there are several key things I would have growers consider.

The first thing for growers to consider is the risk for TSWV. Remember, planting in April is at a higher risk compared to mid-May. This does not mean growers do not need to plant in April, it just means they also need to adapt other strategies for reducing TSWV like: applying Thimet insecticide, planting good quality seed, proper seeding rate, twin row, proper plating speed, in-furrow fungicide, and planting in good soil moisture and temperatures.

Available moisture is another key factor to consider when deciding about planting in April. In recent years, growers have had adequate moisture in late April but waited until May due to soil temperatures being 65 degrees instead of 68 degrees and/or they wanted to reduce their risk for TSWV. The problem was it turned off dry in early May and they had to wait until rains in late May to early June which reduced their overall yield potential. Therefore, if a grower does not have irrigation, has adequate moisture in late April, has a soil temperature of 65 degrees or higher, and the forecast is not favorable for rainfall within the next week to ten days, then it would be advisable to go ahead and plant.

This DOES NOT mean that everyone should be planting in early to mid-April. The risk of TSWV is still very high on early plantings, even if everything else is done right to lower TSWV risk.

Seed Quality and Other Important Planting Information

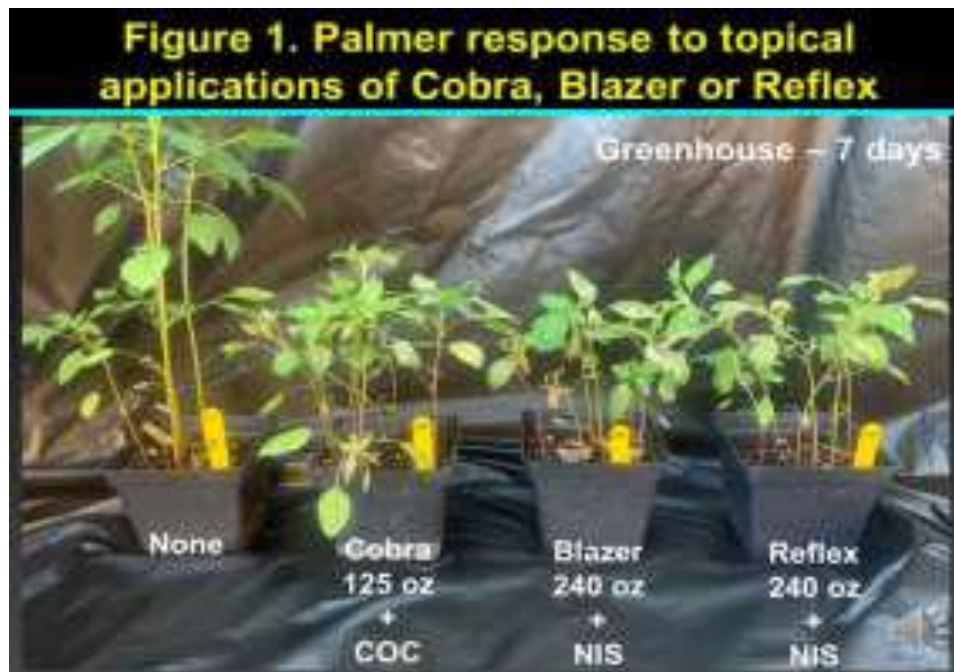
Since all of our meetings were virtual, we did not get a lot of questions in each session. With this in mind, I wanted to share some questions received involving seed quality and planting decisions along with the appropriate answers/recommendations.

- How is the quality of the seed for this year? Seed quality should be significantly better this year as harvest conditions in 2020 were better than in 2019. This does not mean you will not have seed issues. You need to make sure to ask for the % germ for each lot of seed you purchase. Seed storage is also important --- please do not store seed in a place that has significant fluctuations in temperature and relative humidity. If you receive seed over time from the sheller, make sure to adhere to the first in first out rule.
- Will in-furrow fertilizers improve plant stands and emergence? First, this is not a recommended practice in peanut. However, there is an increasing trend of in-furrow fertilizers being sold for in-furrow applications in the last few years. Based on the seed complaint calls that I have been on, I can honestly say in-furrow fertilizers can and will cause significant stand loss and delayed emergence in some situations up to 7 days. I would advise growers to be very cautious in what they put in-furrow with peanut seed. Currently, the only thing recommended in-furrow with seed is insecticides, fungicides, nematicides, and inoculants. Do not put fertilizers in-furrow with seed.
- Does it benefit to apply an inoculant every year? No. Fields in a 3 year or less rotation should have enough residual bacteria in the soil to provide the nodulation and nitrogen fixation needed for high yielding peanut. However, above and beyond our research data, and considering that weather events over the winter can alter bacteria levels in fields from year to year, applying an inoculant each year is one of the best insurance policies you can buy to guarantee adequate nodulation and nitrogen fixation. Most of the inoculants cost around \$8 to \$10 per acre.



Can you survive without Valor, Reflex, and other PPO herbicides? (Stanley Culpepper and Taylor Randell):

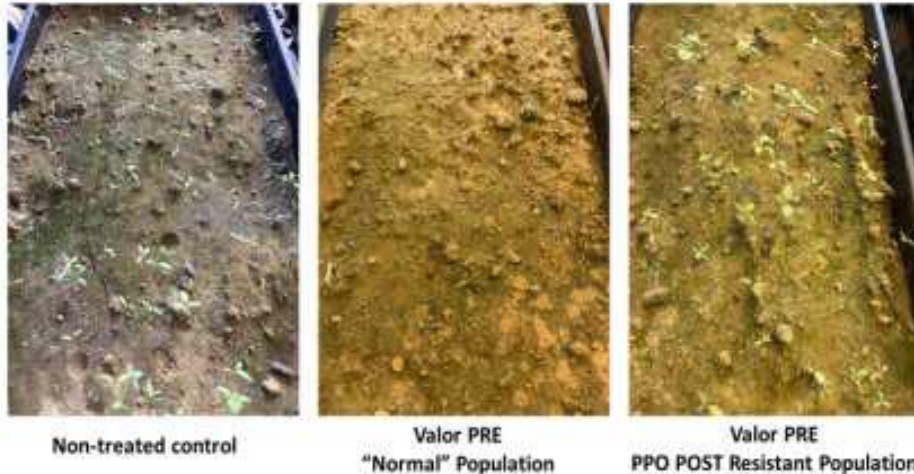
Research over the past three seasons has confirmed a GA population of Palmer amaranth to be resistant to topical applications of PPO herbicides including Reflex, Cobra, and Blazer (Figure 1). For cotton and peanut farmers, the question on everyone's mind is if the residual activity of Valor and Reflex will still control these resistant pigweeds? The initial study results are concerning Figure 2 shares the comparison of a nontreated control in the left photo, the response of a "normal" pigweed population in the center, and the response of the concerning GA population in the right photo (the population with confirmed resistance to topical PPO applications).



Similar results are being observed with Reflex, although symptomology is quite different. Obviously, this is a very serious threat to farm sustainability and must be taken seriously. If you are concerned that you have a field or two with pigweed escaping through the residual activity of Valor or Reflex, contact your Extension Agent or the manufacture to develop a specific management program that limits development and spread. For others, a sound program following the practices below is suggested:



Figure 2. Palmer Response to Valor PRE.



1. No weeds emerged at planting (cover crops, tillage, burndown).
2. Two residual herbicides at planting.
3. Timely POST herbicide tank mix applications.
4. Layby directed or hooded application in cotton.
5. Remove escapes

And finally, one must accept that relying on herbicides alone is futile when managing Palmer amaranth (or ryegrass).....those farmers understanding the value of diversity in their management approach and implementing sound programs will be more sustainable in this battle.

Please give us a call if you have any questions or stop by our office (706)554-2119.

Thank You,

Peyton Sapp, CEC
Burke County Extension