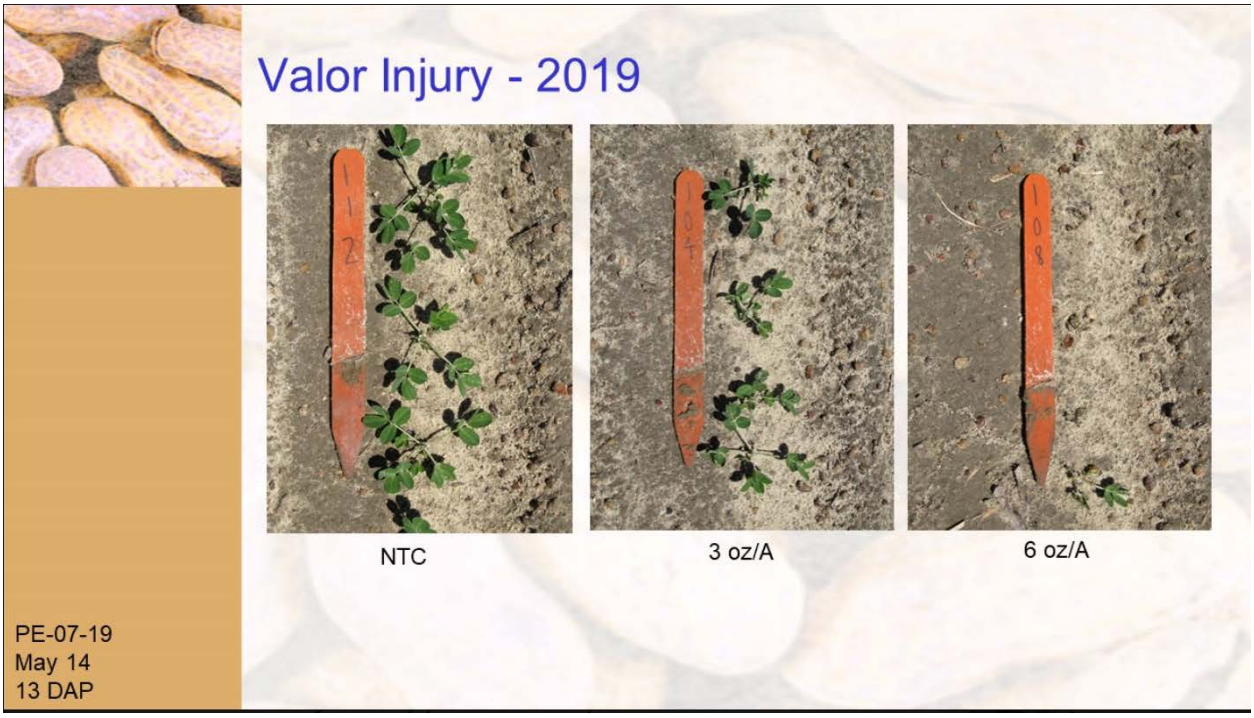
Colquitt County Extension Ag Update 5/29/19

Peanut Weed Control Update (Eric Prostko)

I have been getting numerous calls and comments about peanut weed control during this time. Topics include Valor injury, cracking sprays and also weed management in dryland situations. Dr. Eric Prostko, UGA Weed Specialist, has a few comments about these.

A few things to think about in regards to peanut weed control given the current weather conditions:
1) Rainfall events on Mother's Day Weekend (May 9-13) caused some Valor related peanut problems in many areas of south Georgia (Figure 1). Since I have addressed this issue numerous times in other blogs, I feel no need to bloviate any further. But, this problem should not be a surprise to anyone who has ever used Valor in the past. Valor injury will almost always happen when rainfall events occur from cracking up until about 2-3 weeks later. Historically, this injury has been cosmetic only and not resulted in reduced peanut yields.



2) Cracking/EPOST applications of paraquat mixtures or solo applied Storm or Ultra Blazer should be delayed as late as possible in peanut fields suffering from Valor injury. I would argue that if Valor injury has occurred, then good weed control has also occurred and a cracking treatment might not really be needed. Paraquat treatments can safely be applied in peanuts up to 28 days after cracking.
3) Common paraquat mixtures include paraquat + Storm or Basagran + Dual Magnum or Warrant or Zidua. I have **no preference** between Dual Magnum, Warrant or Zidua. There is no need for additional adjuvants with Dual Magnum mixes but a NIS (0.25% v/v) should be used in Warrant or Zidua + paraquat tank-mixes. FYI, I am not a huge fan of paraquat + Dual Magnum or Warrant or Zidua without any Basagran/Storm due to greater injury potential that might

reduce yields (*especially under these lava-like weather conditions*). Also, paraquat without Basagran/Storm is not very effective on smallflower mg (Figure 2).

Figure 2. Smallflower morninglory

3) With paraquat mixes, I prefer Storm (bentazon + acifluorfen) over Basagran (bentazon) due to the variety of weeds that can occur in any given peanut field in Georgia. My typical recommended use rate of Storm in EPOST paraquat tank-mixes is 16 oz/A. If need be, growers can make their own "Georgia" Storm by mixing 16 oz/A of Ultra Blazer 2SL + 8 oz/A of Basagran 4SL (*yes*, *this is a slightly hotter mix than 16 oz/A of Storm*).

4) It is very hot and very dry right now. **Non-irrigated** growers who were planning on using paraquat tank-mixes after peanut emergence might want to re-considering their options. Why? Rainfall/irrigation is critical in helping peanut plants recover from paraquat injury. I do not think that **irrigated** growers need to worry about this issue since they can help the peanut plants recover from paraquat injury with well-timed irrigation events.

5) When paraquat + Storm/Basagran + Dual/Warrant/Zidua mixtures are applied in peanut, there is no need to be a great ID'er of weeds since these mixes control just about everything (small grasses and small broadleaf weeds). But, if a **non-irrigated** grower decides to go with something other than paraquat mixtures (*which is fine*), such as Ultra Blazer or Strongarm or Cadre or 2,4-DB, they better know what is in the field since these herbicides are not as broad spectrum. I am not comfortable with very early applications of Cobra unless the peanut plants have reached the 6 true leaf stage.

Thrips Injury and Acephate Rate (Mark Abney) Over the years several folks have asked why there is a difference in the recommended rate of acephate for cotton (3 oz/acre) and peanut (6-12 oz/acre). I applied acephate (97) at 3, 6, or 12 oz/acre to peanut on 10 May (16 days after planting). The pictures below were taken on 21 May. **A** = untreated check, **B** = 3 oz acephate/acre, **C** = 6 oz acephate/acre, and **D** = 12 oz acephate/acre. The pictures may not be great, but it should be apparent that 3 oz/acre is not adequate for thrips management in peanut.

The number of dispersing adult thrips collected on yellow sticky traps declined last week. This should result in reduced risk of injury for peanut seedlings emerging in the coming weeks. We have been planting peanuts with no in-furrow insecticide each week since 24 April to examine the relationship between observed thrips injury and trap capture. The pictures below show untreated peanut seedlings planted on: **A** = 24 April, **B** = 1 May, **C** = 8 May. The difference in accumulated thrips in the early planted peanuts is dramatic. Adult thrips are present in the 8 May planted peanut, and we will track the progression of injury over the coming weeks. We will also continue to plant each week until June.

Bob's Comments on the Disease Situation (5-28-19)….

Below are a few words from Bob Kemerait on the current disease situation….

To date no southern corn rust found. Soybean rust is in kudzu across lower Coastal Plain, but punishing temperatures and dry weather will keep it in check.

Punishing hot and dry weather will increase Aspergillus crown rot in pesnuts and charcoal rot in corn and soybeans. Those could be real problems this year and there is little we can do to stop it.

Threat from foliar diseases of corn soybean peanut and cotton is reduced, for now. Growers should take this into consideration when deciding when and what to spray..

White mold on peanuts could be ignited EARLY because of the hot. I recommend all growers start their white mold program aggressively, even if it is only adding tebucoazole to early leaf spot sprays. There are other good options as well. Important to not get behind.

Cotton Irrigation Recommendations According to Dr. Jared Whitaker, cotton that is emerging to squaring, needs about ½ inch per week. In stressful conditions, 25 to 50 percent more water may be in order to meet irrigation requirements. Below is the UGA Checkbook Cotton Irrigation schedule from the 2019 Production Guide.

Table1. UGA Checkbook Cotton Irrigation for Full Season

Cotton Irrigation Schedule				
Growth Stage	**Days after Planting**	**Weeks after Planting**	**Inches per Week**	**Inches per 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	0.20
	85 - 91	13	1.42	0.20
	92 - 98	14	1.30	0.19
	99 - 105	15	1.16	0.17
	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	0.22	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

Corn Irrigation Requirements

Most of the corn in the area is at or reaching tassel stage of development. At this time water requirements are reaching their highest levels. Below is a corn irrigation schedule.

Crop Growth Stage

Growth Stage	Days After Planting	Inches Per Day
Emergence and primary root developing.	0-7 8-12	.03 .05
Two leaves expanded and nodal roots forming.	13-17 18-22	.07 .09
Four to six leaves expanding. Growing point near surface. Other leaves and roots developing.	23-27 28-32 33-36	.12 .14 .17
Six to eight leaves. Tassel developing. Growing point above ground.	37-41 42-45	.19 .21
Ten to twelve leaves expanded. Bottom 2-3 leaves lost. Stalks growing rapidly. Ear shoots developing. Potential kernel row number determined.	46-50 51-54	.23 .25
Twelve to sixteen leaves. Kernels per row and size of ear determined. Tassel not visible but about full size. Top two ear shoots developing rapidly.	55-59 60-64	.27 .29
Tassel emerging, ear shoots elongating.	65-69	.31
Pollination and silks emerging.	70-74 75-79	.32 .33
Blister stage.	80-84	.33
Milk stage, rapid starch accumulation.	85-89	.34
Early dough stage, kernels rapidly increasing in weight.	90-94	.34
Dough stage.	95-99	.33
Early dent.	100-104	.30
Dent.	105-109	.27
Beginning black layer.	110-114	.24
Black layer (physiological maturity).	115-119	.21

Stink Bug Thresholds for Corn

EAR STAGE: Corn is most sensitive to stink bug injury during ear formation before silking. Treat if 25% (1/4) of plants in the ear zone are infested with stink bugs.

KERNEL FILL: During early kernel filling bugs feed through the husk damaging individual kernels. Treat if 50% (1/2) of ears are infested.

NOTE: Use pyrethroids (Baythroid, Capture, Delta Gold, Fastac CS, Mustang, Karate, Warrior, Declare, Proaxis, Tombstone) if southern green stink bug is present. These products are less effective against brown stink bug.

NOTE: Bidrin as used on cotton is not registered for use on corn.

Heat Affect on Corn (Rome Ethridge)

Boy, I hate to see the high heat this early in the year. We are entering one of the most important weeks for our corn crop in many fields, pollination time. It's a critical time in which each kernel must be pollinated. An amazing process occurs in which pollen from the tassels 12 feet high (often half a million pollen grains produced per plant) fall to the silks on the corn ear and travel down the silk to the kernel. This photo taken this week we see silks attached to each kernel. They will released once pollinated.

The number or rows around the ear has already been established by this time. This is always even numbers, about 16 to 20 rows. So now we need the most kernels we can get down the length of the ear and to plump up all the kernels. We always see a few misses in pollination on a few kernels but we want to keep this number low.

Several things can happen to disrupt this process, the worst of which are excess heat and the plant not getting enough water. We can't do anything about the heat but we can water the corn if we have irrigation. At this stage the corn plant needs lots of water and the massive root system has been growing and expanding for 65 days so it can really take up the water. We have noticed in working with soil moisture sensors that we have a hard time getting enough water to the roots during this phase and time of year under normal circumstances. Another thing with corn irrigation is that we can easily get behind and its hard to catch up once soil moisture drops. This is all a worse situation the sandier your soil is as it can't hold as much water per square foot.

Corn needs just over 2 inches a week at pollination time and with the forecast temperatures and dry air we will be loosing more than usual from the sprinkler to the soil level.

Temperatures over 95 can affect the plant's pollen production and life, and worse is that we can get drying of the silks affecting their performance especially if the plant isn't getting enough water.

How will heat affect younger corn? Corn grows best at lower temperatures and there's no advantage from temperatures over 86. Remember that maximum kernel number around the ear is set before tassel time, so the plant needs to be healthy for the maximum number. We could also see shorter corn, with this fast heat unit accumulation.

Help with Horn Flies…

Jason Duggin, Southeast Update, May 2019 (Progressive Cattlemen)

The approach to ward off flies is multi-prong and challenging. However, doing nothing can severely hinder productivity, profits, and herd welfare. I've asked Dr. Nancy Hinkle, Extension Veterinary Entomologist at UGA, to give her tips on horn fly control for the Southeast.

"Since much of the Southeast has such a long horn fly season, we recommend that producers use a pour-on, spray, or dust on their cattle in the spring. If you're getting up your animals to vaccinate and treat otherwise, this works okay. Once fly numbers start to take off, likely in early June, it is probably time to install ear tags. If organophosphate tags have been used more than the past three years in a row, it's likely time to switch to another mode of action such as a pyrethroid tag. Similarly, if you've used a pyrethroid continuously for the past three years, it's probably time to switch to something else. If neither pyrethroids nor organophosphates are providing the level of control you're seeking, consider using the abamectin tag (XP-820)."

"Some producers are still getting good control using feed-through products containing insect growth regulators (IGRs) such as methoprene and diflubenzuron. Remember, these products prevent fly maggots from developing in the manure, but they do not kill adult flies. So, reductions in fly numbers on cattle will be apparent only a week or two later. And if your herd shares a fence line with a herd that is covered in horn flies, nothing will stop those flies from flying across the fence to infest your animals. If ear tags begin to fail late in the season, consider treating with a spray, dust, or pour-on." Fly tag removal is also essential to help reduce insecticide resistance.

"Of course, fly control can always be supplemented using self-treatment devices such as back-rubbers or dust bags." Dr. Hinkle suggests using pest control handbooks to understand which mode of action each product uses to determine rotation strategies. Your local University Extension is a good resource to find information on pest management information in your area.

Lastly, although pour-on avermectin dewormers do provide some fly control, excessive use may cause internal parasites to build resistance to those products. You definitely want to avoid both internal and external parasite resistance. Work with your local veterinarian and Extension resources to develop a multi-year game plan targeted for your area and herd.

Thanks for your time,

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