

GAINES COUNTY IPM NEWSLETTER

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General Situation

Overall the cotton and peanut fields are looking pretty good. Most fields have received some rainfall and are benefiting from the warm temperatures. Some fields in the Loop area are struggling after being hit with a severe hail storm on June 10 and heavy rainfall on June 20.

Peanut fields are blooming and we have some pegs starting to form. Cotton stages range from 5 leaves to 12 leaves. Square set is ranging from 79% to 100%, with a majority of the fields setting closer to 100%. During the last two weeks we have accumulated approximately 330 heat units. It takes 300 to 350 heat units for a square to become a white flower. Therefore, any day now, we should start seeing a few white blooms in our more advanced fields.

Overall, insect pressure has been low during the last week. The garden web worms that we found last week have cycled out and they are no longer being found. We are continuing to find grubs in a peanut field east of Seagraves. However, we have not noticed any wilting due to the grubs feeding on the roots and reducing water uptake in the plants.

Weed pressure is increasing in several fields. Nematode pressure is increasing in several fields too.

During the last week, I have been in a couple of fields that may benefit from a plant growth regulator application. In most cases these are fields that have received significant rainfall and are on the high end as far as fertility and irrigation levels. I would not recommend that plant growth regulators be applied in a field that is struggling due to nematode pressure, diseases, lack of fertility, and/or low irrigation levels.

IPM Radio Program

Be sure to tune in to Ag Talk on KJTV, radio 950 AM, on Wednesdays from 1:00 to 2:00. The Extension Agents-IPM from around the area discuss evolving pest situations and current cropping conditions.

Plant Growth Regulators (PGR)

In the June 18 edition of FOCUS on South Plain Agriculture, Randy Boman, Extension Agronomist, provided the following information on mepiquat-based (Pix, Pix Plus, Mepex, Mepichlor, Mepiquat Chloride, Mepex GinOut, Stance, and others) plant growth regulators (PGRs). Mepiquat chloride reduces production of gibberellic acid in plant cells that in turn reduces cell expansion, ultimately

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resulting in shorter internode length. Mepiquat chloride will not help the plants compensate for earlier weather or disease damage by increasing growth rate. It may under good growing conditions increase fruit retention, control growth, and promote earliness.

Determination of application rates is generally more "art" than "science" for these products. Applications should begin when 50% of the plants have one or more matchhead squares (see specific product label for more information). It is best to get a handle on excessive growth potential early if conditions favor excessive growth for an extended period of time. Herein lies the High Plains dilemma: It is unknown at this time as to how weather will affect the crop in July and on into early August. Will we get 100+ degree temperatures, southwest winds of 30 mph at 10% relative humidity? If so, those conditions will limit plant growth in many fields with low irrigation capacity. Watch high growth potential varieties and fruit retention. If a high growth potential variety has been planted and has encountered low fruit retention, then mepiquat chloride rate should be increase, especially under high water, fertility, and good growth conditions. One should target applications to fields with high growth potential. Some newer varieties may need aggressive management under high irrigation capacity and/or if heavy rainfall conditions are encountered. Visit with your seed company representative to determine which new varieties should be watched closely for mepiquat chloride needs under field-specific conditions.

Southern Root-Knot Nematodes

Figure 1 is a picture from a trial where we are evaluating a susceptible cotton variety and a tolerant cotton variety in a high nematode pressure field. We are seeing noticeable difference in plant height.



Figure 1. Susceptible cotton variety on the left and tolerant/partially resistant cotton variety on the right

We are also seeing added good growth in another field that was planted in mid-May and that had Temik 15G applied in-furrow (*Figure 2*). Essentially, the Temik 15G bought some time and the roots were able to grow a lot before nematodes began infesting the roots. In the picture, notice how the nematode galls are lower on the root.

Growers have several options to choose from for at-planting nematicides, including seed applied nematicides and nematicides applied in-furrow at planting. Use of nematicides should be based on nematode pressure within each field.

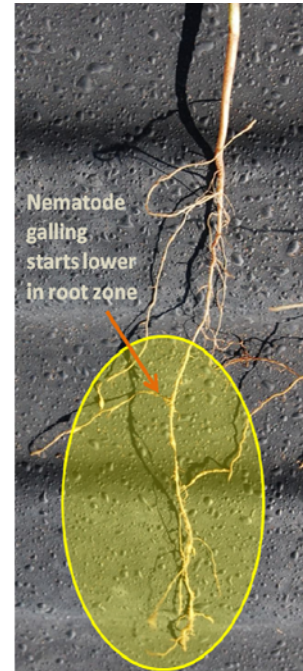


Figure 2. Nematode galls occurring lower on the root

Fusarium wilt in Cotton



Figure 3. Leaf with Fusarium wilt symptoms



Figure 4. Plant with Fusarium wilt symptoms

Fusarium wilt has started to hit in some cotton fields. *Figure 3 and 4* are pictures of a plants with symptoms of Fusarium wilt. If you had stand loss in your field last year but you where not sure what caused it, then now is the time to confirm whether or not it was likely caused by Fusarium wilt. As the saying goes "The best thing a farmer can put on his field is his shadow." This is the only way you are going to locate plants that may be dieing from Fusarium wilt. Be sure to dig up the dieing plants and examine the roots for nematode galls. Nematode infestations make the plants more susceptible to Fusarium wilt. Please feel free to give me a call if you would like me to look at a field. We can work with you to try and determine if it is Fusarium wilt. If Fusarium wilt is confirmed in your field, then you need to select a variety that performs best under Fusarium wilt pressure for your 2011 crop.

In FOCUS on South Plains Agriculture, Dr. Jason Woodward provided the following information on Fusarium wilt. Alone Fusarium wilt, is a weak pathogen, and damage caused by the Root-knot nematode is needed to induce this disease. Therefore, management options that are employed to minimize nematode damage are often integrated into Fusarium wilt management strategies. For example, the use of nematicides results in higher stands, lower disease incidence, and greater yields. While nematicides have no direct effect on Fusarium wilt, the benefit comes from reducing damage caused by nematode. Furthermore, results from trials conducted in fields infested with Fusarium wilt have found that varieties which posses partial resistance or improved tolerance to Root-knot nematode consistently perform well. In addition, varieties with no known nematode resistance also perform well.

Cotton Fleahoppers

Several people have been asking about fleahopper (*Figure 5*) populations. We have not found any damaging fleahopper populations in the fields that we are scouting. We have seen a few scentless plant bugs (*Figure 6*) in the cotton fields. However, scentless plant bugs are not known to cause damage in cotton. Be sure not to confuse these for lygus bugs.



Figure 5. Fleahopper adult (top) and nymph (bottom)



Figure 6. Scentless plant bug (top) and Lygus bug (bottom)

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Beet Armyworms

On Monday we found a few beet armyworm egg masses in a non-Bt cotton field south of Seminole. I revisited the field this morning and the larvae are now approximately three days old (*Figure 7*). Several things need to be considered before applying an insecticide, such as, what percentage of the plants are infested, what is the larval survival rate, what are the beet armyworms feeding on, and are there beneficial insects present? In this particular field I found a few "hits" where larval survival was high. But larval survival was low for a majority of the "hits." We decided to hold off treating this field since less than 1% of the plants are infested and we are finding several beneficial insects (including ladybird beetles, assassin bugs, and spiders) feeding at the "hit" sites. Additionally, the beet armyworm larvae are feeding on the leaves and we have not observed any damage to the plant's terminals. This particular field has just started to put on squares and we would like to allow the beneficial insects time to increase. The beneficial insects will help to lower larval survival as we progress through the season. The beet armyworms are likely coming from a weed patch near this field.



Figure 7. Beet armyworm "hit"

We have not seen any beet armyworm activity in Bt cotton.

Southern Blight

A crop consultant found a few plants infected with Southern Blight. However, we do not believe that a fungicide application is justified at this time since the disease seems to be confined to these few plants and is not spreading down the rows.

This disease is characterized by feathery sheaths of fungal mycelia and spherical-shaped, brown sclerotia (*Figure 8*).



Figure 8. Southern blight in peanuts

Information for this newsletter was obtained from the following publications:

- **March 15, 2010 Focus on South Plains Agriculture Newsletter**
- **June 18, 2010 Focus on South Plains Agriculture Newsletter**
<http://lubbock.tamu.edu/focus>

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