

FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
1102 E. FM 1294, Lubbock, Texas 79403

Cotton Insects

Thrips
Spider mites
Leafminers

Cotton Diseases

General situation
Nematode control

Corn Insects

Fall armyworms
Spider mites

Cotton Insects

Thrips

With the increase in heat we are seeing a general decline in thrips over the past week. Thrips tend to prefer more moderate temperatures and reproduction is stifled once temperatures reach the mid-90's. However, treatable populations can be found in some areas. Monti Vandiver, IPM Agent in Bailey and Parmer counties has reported some increase in adult thrips over the past week in his area.

Keep an eye on your fields planted with insecticide seed treatments since these may very well be playing out. The best way to tell if your seed treatment or Temik are wearing off is to look for immature thrips. These are typically white to pale yellow in color, very small and without wings. Immature thrips like to hide and are difficult to see. They are usually found in groups hiding between the leaf veins near the petiole, or in the curled up or cupped terminal leaves. You really need to use something like a pencil lead to "dig" through the small leave and flush them out. If immature thrips are common, you can be certain the preventative treatment is no longer working and a foliar shot may be necessary.

Spider Mites

Spider mites had continued to be common throughout High Plains cotton until this week when most populations experienced marked declines. We are not certain what caused the decline but it may be related to thrips predation on the mite eggs. I did not personally see a single field with a treatable spider mite populations, but I did hear and see pictures of a few fields where treatment may have been advisable. We do not have a threshold for spider

mites on seedling cotton, but suggest treating when damage is easily noticeable. Unlike spider mites in late season cotton where the leaves redden, we are not seeing that type of damage on seedling cotton. What we are seeing is heavy stippling and yellowing of the leaf. If you have a field that warrants treatment, our data on late season cotton suggests that Oberon, Epi-Mek, Zeal and Athena all have good, consistent activity. Bifenthrin (Brigade, Capture) has performed inconsistently in late season cotton, but because it is much less expensive than other miticides, and coverage should be good on small cotton, it may work just fine.

If you have spider mites in your cotton that concerns you, please call David Kerns at (806) 438-6672.



Leaf stippling by spider mites

Leaf miners

I have been seeing leaf miners all season; primarily on the cotyledons but we are seeing some on the true leaves as well. Mining can cause some stunting, but we are not sure how much mining will cause economic damage. Thus, we have no action threshold for this pest in cotton. Monti Vandiver, IPM Agent in Bailey and Parmer counties has reported at least one field where mining is heavy enough to warrant concern. In most cases, parasitoids will prey on the miner maggots eliminating 90% or more of the pest. Therefore for now, I do not recommend treating for them. If you encounter a

situation where you think you may need to spray, call David Kerns at (806) 438-6672. DLK



True leaf with leaf miners



Leaf miner adult

Cotton Disease Update

Despite the harsh weather conditions and emergence issues discussed in the previous FOCUS issue, many of the fields I have seen over the past 2-3 weeks have finally 'turned the corner'. Stands are at the point where you can row cotton; however, there are obvious skips in many fields as you look across rows. Nevertheless, the cotton is off and running with much of the cotton planted I have seen squaring or beginning to square. It appears that seedling disease has subsided; however, it is important to continue to examine root systems over the next several weeks. One reason is to remain aware of the condition of the roots. Plants with shallow root systems are common due to low

or moderate soil moisture in the seed bed at the time of planting. A shallow rooted plant may not be able to acquire adequate water as the plants demand increases. Furthermore, I have seen several fields exhibiting symptoms of root-knot nematode infections. Symptoms of root-knot nematodes consist of a decline in cotton plants, reduced vigor, stunting ([Figure 1](#)) and later a reduced boll load. Foliar symptoms often resemble those observed with nutrient deficiencies, due the fact that the nematode is compromising the root system and disrupt the roots ability to absorb water and nutrients ([Figure 2](#)). Under extreme conditions plants may completely die. Nematode damage is often exacerbated by other stress conditions, such as drought.

With the loss of Temik 15G, nematode management options are limited. The performance of the seed applied nematicides, such as Avicta Complete Cotton (Syngenta Crop Protection), and Aeris Seed Applied System (Bayer CropScience) are most effective under low to moderate nematode pressure. Foliar applications of Vydate C-LV (DuPont™) have been used to reduce nematode damage and increase yields in Hockley and Cochran counties; however, has only been used to supplement early season nematode treatments in high risk fields. [Here are the data](#). Typically, initial applications of Vydate are made when cotton is at the second to fifth true leaf stage with a sequential application being made 7 to 14 days later; however, studies are currently underway examining alternative application timing of Vydate C-LV in the absence of Temik. Spray equipment should be configured to produce large droplet when applying Vydate C-LV in hot and dry conditions. This will help minimize the effects of evaporation. For additional information about Vydate C-LV, [refer to the label](#). Results from field trials have indicated that pre-plant applications of the fumigant Telone II (Dow AgroSciences) reduce nematode damage and increase yields. Additional studies are being conducted to determine the benefits of using Telone II.

The use of partially resistant varieties, such as DeltaPine 174 RF, Phytogen 367WRF, Stoneville 4288 B2F and Stoneville 5458B2F,

have lead to increased yields ([Figure 3](#)) and reductions in nematode reproduction compared to susceptible varieties. Continued evaluation of these and other varieties is taking place in fields with a history of root-knot nematode. If you have any questions regarding root-knot nematodes or any other cotton diseases please contact Jason Woodward @ 806-632-0762, or via e-mail jewoodward@ag.tamu.edu. JW

Corn and Sorghum Insects

Fall armyworm

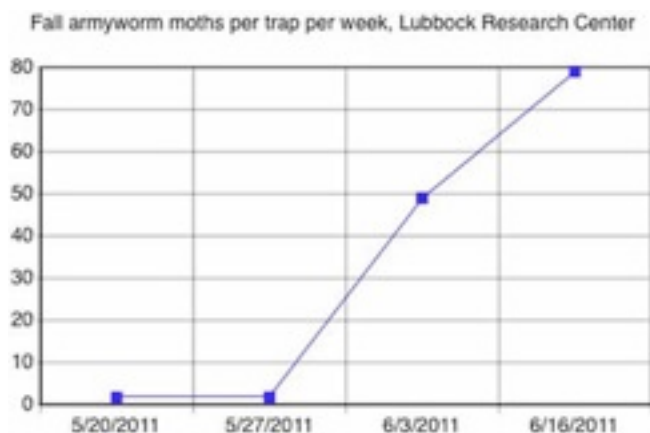
I am beginning to get a very bad feeling about the insect and spider mite potential in corn and sorghum. Here at the Lubbock Station in my corn plots, the non-Bt has 60 - 70 percent of the plants infested with fall armyworm larvae. About 25 percent of the sorghum plants here are infested. The trap counts reported in the graph below are probably a bit conservative because the traps are only 300 yards apart. The fall armyworm trap in cotton on the south end of the farm caught 118 moths in one night, which when extrapolated means 826 per week. As far as the moths in the traps, many have unusually small bodies which suggests the larval stage was not well fed, like it had to work to survive on a droughty host. These might be local moths. About 15 percent of the moths are larger and either had a better local host or flew in from somewhere else. The bottom line is that I am seeing pretty high numbers of moths and plenty of larvae in corn and sorghum.

Part of what is happening is that our crops are the only healthy food sources for fall armyworm and corn earworm; the non-crop vegetation in the host range of these insects is either struggling or dead. This means that the moths will almost exclusively choose our crops as egg laying sites and we won't get the benefit of egg laying on some of our non-crop plants that we get in a normal year. Depending on Bt hybrid the refuge requirement is either 20 percent or 50 percent and things could get very interesting in the next six weeks.

Brant Baugh in Lubbock County is reporting only light caterpillar infestation in the sorghum he is checking. Greg Cronholm in Hale County is reporting finding corn earworm eggs on corn.

Spider mites

Greg Cronholm and Monti Vandiver (Bailey and Parmer counties) are both reporting spider mites in corn, and Monti has listed the threat level as moderate. I am finding small spider mite colonies in the corn I am checking. No one knows how the mite situation will play out, but research we have done in the last two years at the Lubbock Center has shown quite clearly that spider mite populations increase most rapidly on moderately drought stressed corn; well watered corn and very droughty corn do not support the mite population explosion as readily. To be sure, mite populations on well watered and heavily drought stressed corn can still build up to damaging levels, but it is the moderately drought stressed corn that is at the greatest risk. A pre-emptive miticide application is still possible for most fields and should be considered, especially for fields with a history of mite problems and/or fields that might run short of full irrigation capacity at peak water demand around tassel. The miticide will only protect the leaves that get coverage and it will not protect leaves that are yet to emerge. But then again, most of our mite problems start on the lower leaves. RPP



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