

WEST
PLAINS
IPM
UPDATE

News about
Integrated Pest
Management in
Hockley and
Cochran
Counties from
Kerry Siders

Sept. 11, 2014

Vol. 19 – No. 19

Current Crop and Pest Situation

I normally would not be sitting down to write a newsletter so soon, since I just published an issue on Monday. However, due to the rain and what has transpired over the past couple of days in the insect world I thought I would take advantage of my time.

The first bit of news is that on my way home from the West Texas Ag Chemical Institute Annual Meeting in Lubbock on Tuesday afternoon, I noticed some very familiar symptomology in dryland cotton along FM 1585 just as I entered Hockley County driving west. It was not an hour later that I received a phone call from Cody Reep, CHS Ropes, noting his observation of the same symptomology. What we were seeing was damage caused by the Kurtomathrips, aka Desert Thrips.



Kurtomathrips morrilli is an unusual pest of cotton that appears to occur under hot, dry conditions affecting primarily water-deficit stressed cotton. This species is very small, about the size of a mite, and are very difficult to see with the naked eye. They tend to be found on both upper and lower leaf surfaces although initial infestations appear to begin on the underside of the leaf. They seem to prefer to rest and initially feed along the leaf veins, but will spread their damage throughout the leaf surface. The wingless adults are tan in color while the winged ones are more amber. The immatures are creamy white. The adults are mostly wingless although winged adults have been found. Additionally, they do not run around like normal thrips but mostly just sit still or walk slowly.



The damage will first show up as bad spots in the field. These may look like a nematode or lightning strike spots, or just a bad spot in the field where it's not getting enough water. These thrips may be on the plants and not really doing much damage. What seems to set them off is a stress event, usually water related brought on by boll filling and insufficient irrigation. At that time they can quickly spread and cause extensive damage in a matter of days. When you decide to back the water off of a field, watch it very closely; this is most likely when this thrips will take off. Damage can easily be mistaken for mite damage -causing desiccation to the leaves but tends to be more silvery in appearance and without webbing. This type of damage is primarily a concern in regard to boll filling. If the leaves supplying energy to the developing bolls are damaged, then boll size and yield may be compromised. There does not appear to be a preference for terminal growth or blooms as we see with most other thrips species infesting cotton. You have to assess whether or not the cotton is worth treating. The question you have to ask is whether there are enough bolls still filling, that can be filled, and that will bring in more income than the cost of the treatment. Some of this cotton just isn't worth protecting, but some other is.

Decision making: When making the decision to treat or not to treat consider the following:

1. Check boll maturity. If the bolls are mature (cutting the boll open and seeds have well defined cotyledons and seed coat versus those which are watery seeds) they may not be significantly damaged by the defoliation. If there are numerous bolls to mature, treatment may be justified. Make sure these immature bolls have the potential to yield enough to cover insecticide and the application expenses.
2. Choose the right insecticide. *K. morrilli* do not appear difficult to control with a number of insecticides including acephate, acetamaprid, imidacloprid and thiamethoxam. The most commonly used insecticides in the

2011 *K. morrilli* outbreak were imidacloprid and acephate. These were the insecticides of choice primarily because they were inexpensive, yet effective.

3. Consider cost saving methods. Consider multi target applications to save costs. If *K. morrilli* is present and an over the top herbicide application is scheduled, the addition of a relatively inexpensive, yet effective insecticide may save an application trip through the field solely targeting thrips. Spray field edges where *K. morrilli* is abundant and does not appear to be spreading into the field.

4. **What is the weather forecast? *K. morrilli* appears adversely sensitive to cool temperatures and precipitation. If these conditions are predicted in the immediate future and you have field edges infested, then an insecticide application may not be necessary**

Now the second “insect world” item of much importance. **The Sugarcane Aphid.**

The sugarcane aphid has progressed from the Rio Grande Valley into the Blacklands, Northern Blacklands, Concho Valley and as of this week we were notified that it is now being found in Glasscock County not too far south of us and Floyd County to the northeast. The species is *Melanaphis sacchari*. Don't confuse it with the yellow sugarcane aphid, a pest we already have on the High Plains and

The aphid that damages sorghum is taxonomically indistinct to the sugarcane aphid (*Melanaphis sacchari*), and it might be a new biotype that switched hosts or an invasive species recently introduced into the United States.



Corn leaf aphid



Yellow sugarcane aphid



Sugarcane aphid



Greenbug aphid



elsewhere in the state. We are monitoring sorghum and Johnsongrass for the sugarcane aphid and please report any unusual aphids. The sugarcane aphid first became a problem in Texas in 2013, starting in the Rio Grande Valley and moving up the coast and then into Louisiana and Arkansas, where it caused significant problems. Being a tropical insect it was pushed back to the Valley in the winter of 2013-14. In January of 2014, entomologists in South Texas documented sugarcane aphids reproducing on Johnsongrass and volunteer sorghum plants. Finding sugarcane aphid further west does not necessarily mean that the aphid will move into the large grain sorghum producing areas in the Rolling Plains and High Plains, but growers need to be aware that sugarcane aphids have been found west of where they were seen last year. Growers should keep a close watch on their grain sorghum fields as the plants begin to head.



Stephen Biles and Mike Brewer.

The tan to cream colored sugarcane aphids initially colonize on the undersides of leaves near the bottom of plants, then move up the plant as populations increase. When about 40 percent of the plants are infested, it's time to spray. Plants are considered infested if they have 100 or more aphids on one of the leaves. The aphid damage includes death of seedling sorghum plants, reduced seed set and at harvest their sticky prolific honeydew, or excrement, can cause harvesting machinery problems

Here is a summary of information from Raul Villanueva, Robert Bowling,

- 1) It takes ten days to two weeks for isolated aphids to establish significant colonies on sorghum. So scouting should be concentrated on finding the first few infesting aphids in the field on lower leaves.
- 2) Stephen Biles, Extension Agent IPM in Victoria, has done some very recent work on an action threshold in sorghum in the reproductive stage. Stephen's work suggests that a good action threshold for treating is an average of 100 aphids per leaf. He suggests sampling 10 plants per location within a field (several locations) and picking the leaf below the flag leaf and an additional leaf from the middle of the plant. If there are an average of 100 aphids per leaf (2,000 total on all 20 leaves), then come back in two days and re-sample to see if the population is increasing. If the numbers are going up then consider treating. If the numbers are not going up then don't treat but continue to monitor. Observations of this aphid from downstate have shown that some populations can crash very quickly. We don't know how to predict which populations will crash and which will increase.
- 3) Transform (available under a Section 18 exemption) is the most effective insecticide. It can be used at a rate of 0.75 to 1.5 ounces per acre. Our downstate colleagues have had good results at the 0.75 ounce rate, but good coverage is essential at this rate. They strongly recommend 10 gallons of carrier volume per acre by ground and, if this can't be achieved with aerial application, they recommend a bare minimum of 5 gallons per acre and a minimum rate of Transform of 1.0 ounces per acre. (Which is to say

the 0.75 oz rate of Transform may not work by air at 5 gallons per acre.) We do not know if a 1.0 oz rate can be put out at less than 5 gallons per acre. Our colleagues have also said that Dimethoate is not a good option because it is not a consistent performer.

This aphid is not going to be Atilla the Hun on the High Plains. Invasive species often do the most damage in their first year or two of invasion before natural enemies can respond to the new pest. For this year at least, the aphid is arriving late in the season and will not be infesting whorl stage plants which will be limiting the aphid in time to build into an economic problem. We also have products that have proven to control this aphid. This, combined with the implementation of good scouting techniques, give us confidence that this aphid can be effectively controlled if necessary. The Section 18 allows for two applications of Transform (1.5 oz maximum per application), with the total application for the season not exceeding 3.0 ounces. There is also a mandatory 14-day waiting period between the first and second application. So this gives us six weeks of good control, assuming 14 days of activity from each application. This should be sufficient to carry us through harvest.

It is not known whether the sugarcane aphid can overwinter on the southern High Plains; it is a subtropical species and overwintering survival is very much in doubt. We also do not know how fast the sugarcane aphid can reproduce given the predicted cooler temperatures in this week's weather forecast. We will have to watch for it next year when our sorghum is in the whorl stage, but for this year we can handle the problem if it arises.

The sugarcane aphid is fairly easy to recognize and distinguish from our other common aphids. Look for black-tipped antennae and legs. Dr. Ed Bynum recently posted an article on identifying the sugarcane aphid: <http://amarillo.tamu.edu/files/2010/11/PPU-V6i6-5-23-2014.pdf>. Our publication Sugarcane Aphid: A New Pest of Sorghum is available here: <http://www.agrilifebookstore.org/product-p/ento-035.htm>. We will of course keep you informed of new developments. *(This was taken in part from Dr. Pat Porter's article for Focus Newsletter).*

Upcoming Meetings:

September 24 9-10 AM Turnrow Meeting at CAP Dryland Cotton Variety Trial, Albus Farm, Oklahoma Flat (FM 597 & 1490)

September 25 9-10 AM Turnrow Meeting at CAP Irrigated Cotton Variety Trial, Brent & Daniel Patterson Farm, SE of Morton (FM 2195, 3 mi south of Hwy 114 & 2 mi north of FM 125)

October 9 - Ag Awareness Event (4th graders) Mallet Event Center, Levelland

See You On The Radio

IPM Radio Program Ag Talk on Fox Talk KJTV, radio 950 AM, on Wednesdays from 1:00 to 2:15 pm.

Texas A&M AgriLife Extension in Hockley County Report on KLVT Levelland, High Plains Radio Network, radio 1230 AM, Wednesdays from 7:30 am to 7:45 am.

West Plains IPM Update is a publication of the Texas A&M AgriLife Extension Service IPM Program in Hockley and Cochran Counties.

Editor: Kerry Siders, Extension Agent-IPM

Contact information: 1212 Houston St., Suite 2 Levelland, TX 79336

(806) 894-3150 (office),

638-5635 (mobile), or 897-3104 (Fax)

ksiders@tamu.edu (E-mail),

<http://hockley-tx.tamu.edu> (County website)

www.tpma.org (TPMA website)



Partners with Nature

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, religion, sex, national origin, age, disability, genetic information or veteran status. The information given herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas A&M AgriLife Extension is implied.

The Texas A&M System, U.S. Department of Agriculture, and the Commissioners Courts of Texas Cooperating