
Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

Volume: 36
Issue: 8
Date: September 19, 2011

Salvador Vitanza, Ph.D.
Extension Agent- IPM
svitanza@ag.tamu.edu



El Paso County Ysleta Annex, 9521 Socorro Rd, Suite A2-Box 2, El Paso, TX 79927. Phone: (915) 860-2515. Fax: (915) 860-2536
Texas AgriLife Extension El Paso County: <http://elp.tamu.edu/> Pecan IPM Pipe: <http://pecan.ipmpipe.org/> TPMA www.tpma.org/

Announcements

- The Curry Chile and Seed Company will be hosting a **Chile Field Day** on September 21, at their farm in Pearce, Arizona. The event will be held from 9:00 AM to 3:00 PM. Researchers from New Mexico State Univ., the Univ. of Arizona, and Texas A&M Univ. will be presenting on a wide variety of topics critical to chile production. Field tours of research plots and chile breeding material will be conducted. The event is free of charge. Information: Dr. Stephanie J. Walker, NMSU, Phone: (575) 646-4398.
- The **2011 Texas Plant Protection Association Conference** will be held on December 5th and 6th at the Brazos Center in Bryan, Texas. The conference will include a half day session on precision agriculture; which will include classroom discussions and equipment displays. Information: <http://tppa.tamu.edu/> or call Bob Sasser, phone: (936) 537-7083, e-mail: tppa@consolidated.net.
- The **2012 Beltwide Cotton Conferences** will be held on January 3-6 at the Orlando World Center Marriott in Orlando, Florida. Information: <http://www.cotton.org/beltwide/>
- The **2012 El Paso Pesticide Applicator Training** will be held on Tuesday January 24 at the Ysleta Cultural Arts Center, 9600 Simms (Exit I-10 @ McRae), El Paso, Texas 79925 from 7:30 A.M. to 3:00 P.M. This event is sponsored by the Texas AgriLife Extension Service, the Texas Department of Agriculture, El Paso Pest Management Association, and the Ysleta Independent School District. The cost will be \$50. Five CEUs may be obtained for TDA, SPCS, NMDA, commercial, non-commercial, and private pesticide applicators. For general information, please call Texas AgriLife Extension Service at (915) 860-2515. For licensing information, contact Mario Saavedra (TDA) at (915) 859-3942.
- As you may know, the Texas Commission of Environmental Quality (TCEQ) no longer collects agricultural waste pesticides or pesticide containers. For information on how to dispose or recycle ag chemical containers in the state of Texas go to: <http://www.tceq.texas.gov/p2/AgWaste/about.html>

GENERAL SITUATION:

Weather conditions have improved. Maximum temperatures have come down closer to the average for this time of the year and recent rains have contributed to relieve plant stress suffered by crops and ornamental plants this season. Of course, this statement does not apply to areas that suffered hail damage on last Thursday. Farmers are concerned about the grim prospects for irrigation for the coming year. Many fear that the increase in the use of well water for irrigation may aggravate salt damage problems in sensitive crops such as pecan. The production cost is also a key factor to consider because investments in installing and running pumps can be an expensive proposition. According to the most recent U.S. Drought Monitor map (September 13), the majority of Texas is under exceptional drought or D4 (most intense category) with pockets under extreme drought (D3). El Paso County is one of the very few areas in the state experiencing moderate drought (D1).

COTTON:

On August 30, I was asked to help diagnose a cotton field in Acala that had scorched sections of leaves and bracts (see attached image). Plant samples were immediately submitted to the Texas Plant Disease Diagnostic Laboratory. Both Dr. Thomas Isakeit and Dr. Kevin Ong said that we were not dealing with a disease. This condition was more pronounced in marginal soils or in fields that received less than optimal nitrogen applications, and in pima cultivars. Interestingly, the upland varieties were not experiencing this problem. Soil moisture in affected fields was adequate, but I suspect soil salinity was high. Possibly, the symptoms may have been caused by environmental conditions; specifically stressed out plants not being able to move water fast enough to tender tissues during periods with above average

temperatures and high evapo-transpiration. These symptoms may be the result of similar environmental conditions that caused boll rot signs in water and heat-stressed cotton fields near Clint in early August (see previous newsletter).

Dr. Iglesias and I inspected cotton fields near Fort Hancock and Acala, a little more than a week ago, to show the differences in symptoms between **Texas cotton root rot** (more appropriately called *Phymatotrichum* root rot) and **Verticillium wilt** to a group of growers; mainly that plants affected by root rot have roots with either dark tissues or strands of fiber on their surface and appear rotted. Plants recently affected by *Verticillium*



Scorched sections of cotton leaves

wilt appear to have relatively intact roots and darkening, staining, or discoloration of the vascular tissues in the stems. We estimated a large field in Acala had up to 45% of *Verticillium* wilt damage. **Fusarium wilt** and *Verticillium* wilt have a close resemblance, but can be distinguished because *Fusarium* wilt produces a continuous staining of the vascular tissues, especially in the lower portion of the stem, whereas *Verticillium* wilt causes a speckled staining of the same tissues. The surest way to differentiate between these two cotton diseases is by laboratory tests. Considering this and the alarming reports of *Fusarium* Race 4 (FOV) coming from California, Dr. Iglesias submitted samples (4 inch-long sections of cotton stems collected one foot above the ground surface) to Dr. Michael Davis, Cooperative Extension Specialist at the University of California-Davis Department of Plant Pathology. These samples were received on September 12. The tests usually take less than a week for analysis. Results will be announced shortly.

Variety selection is a key management tool when dealing with cotton diseases and nematodes. AgriLife Plant Pathologists, Drs. Terry Wheeler and Jason Woodward, evaluated commercially available **upland cotton varieties** in 2010 in Texas Southern High Plains, for *Verticillium* wilt, bacterial blight, root-knot nematodes, and *Fusarium* wilt. The results are too extensive to include in this newsletter, but you can download this publication at: <http://lubbock.tamu.edu/cotton/pdf/DiseaseRecommendations.pdf>

Consider crop rotation to reduce the chances of recurring *Verticillium* wilt damage. This is one of the oldest management practices used against the buildup, year after year, of soil diseases and nematodes. Rotate with grass crops or other immune crops, and plant tolerant cotton varieties. Do not rotate with chili pepper because it is among the susceptible crops. You should also try to achieve 4 plants per foot of row because lower stand densities have been associated with higher incidence of *Verticillium* wilt. AgriLife publications recommend avoiding excessive irrigation, high nitrogen fertilizer rates, deep cultivation and crop residues to manage this disease.

Reports published on August 25, 2011 in the AgriLife IPM Newsletter “*Focus on South Plains Agriculture*” indicate that a new thrips species, ***Kurtomathrips***, was found in early August in the Texas high plains and damaging populations have spread rapidly since then. Significant damage to cotton fields has been reported in Gaines, Terry, Hockley, Garza, Lubbock and Hale counties. Kerry Siders, IPM Extension Agent, found the first *Kurtomathrips* in Hockley County on August 17. The following excerpt is from Dr. David Kerns, Extension Cotton Entomologist in Lubbock:



Kurtomathrips immature and adult

“A new thrips has been observed feeding on and causing extensive damage to cotton in Gaines County. This thrips has been tentatively identified as *Kurtomathrips morrilli*. This species was originally described in Arizona and has been collected in California, Arizona, New Mexico, Nevada, Texas, Florida, Hawaii, Jamaica and India. It can feed and damage a number of crops including cotton, eggplants, beans and chrysanthemums. Reports of it damaging cotton are quite old, dating back to the 1920-50’s, and little information pertaining to these infestations exists. 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 were originally reported in Hawaii in 1965. We found several with wings in Gaines Co. Most adults do not have wings and appear to be “sculpted” with brown spots or stripes. Additionally, they do not run around like normal thrips but mostly just sit still or walk slowly.” According to Greg Cronholm, Hale County IPM Extension Agent,

“*Kurtomathrips* damage is reported to be heavier in drought stressed cotton.” The symptoms first show as bad spots in the field. These may look like a nematode or lightning strike spots. These thrips may be on the cotton plants not doing much damage, but then water stress can quickly spread and cause extensive plant injury in days. Texas AgriLife personnel, especially Dr. David Kerns and Manda Cataneo, Gaines



County IPM Extension Agent, evaluated insecticides against this pest and identified several effective products: Trimax Pro or generic imidacloprids at 1.8 fl oz/a, Orthene or generic acephate at 4 or 8 oz/a, Intruder at 1 oz/a, and Centric at 2.5 oz/a. Acephate and the imidacloprid products may be the least expensive options. Here in El Paso and Hudspeth Counties, we need to be vigilant for this pest. Photographs of *Kurtomathrips* and its damage in this

newsletter were borrowed from the AgriLife IPM Newsletter “*Focus on South Plains Agriculture*”.

This coming week, Dr. Mark Muegge and I will be conducting insecticide efficacy tests against Lygus bugs in cotton. If you have a cotton field with moderate to high Lygus levels, please contact me immediately.

PECAN:

The **termites** found in a few pecan trees in a commercial pecan orchard near Fabens have been officially determined by Dr. Robert Puckett as *Zootermopsis laticeps*, a native termite that belongs to the family Termopsidae called “dampwood termites”. These termites consume dead branches resulting in trunk cavities, but not affecting the live wood of healthy trees. I submitted a close-up picture of a couple of soldiers to “Bug Guide” that now appears at: <http://bugguide.net/node/view/565382> The long-term damage or threat of this termite to pecan orchards in far west Texas and southern New Mexico is yet to be determined, but it might not be so alarming because their colonies are usually small.

Pecan bacterial leaf scorch (PBLs) in El Paso County? Recapitulating the sequence of events dealing with this condition: some El Paso pecan growers were surprised to find many pecan trees with scorched leaves since June, but symptoms were more dramatic in early August. They suspected that this was a new disease. Dr. Thomas Isakeit thought that the photos closely resembled PBLs and suggested me to submit leaf samples to the Texas A&M Plant Disease Diagnostic Laboratory to be evaluated for the presence of *Xylella fastidiosa*, causing agent of PBLs. This is a chronic disease in pecan trees that weakens the plant and results in a yield reduction of up to 20%. I also contacted Drs. Soum Sanogo and Natalie Goldberg at NMSU because Dr. Goldberg has conducted annual surveys of this bacterium in southern New Mexico and found it to be occurring locally in grapes, chitalpa, catalpa, and peach. Plant disease diagnostic clinic laboratory personnel conducted visual examinations, microscope inspection, tissue exam, and an ELISA serology test on our samples. Fortunately, the laboratory tests could not detect *Xylella fastidiosa*. Obviously, this result does not discard the possibility of having some pecan trees affected by this disease in our area (it is difficult to prove a negative), but at least this finding is encouraging. Furthermore, Dr. Goldberg has not found it in southern New Mexico pecans. She has mentioned that “*Extraction of the bacteria from the xylem vessels is challenging and bacteria population fluctuates with the time of the year and from leaf to leaf*”. The results from the Texas Plant Disease Diagnostic Clinic stated the following: “*ELISA based serological tests for the bacterial leaf scorch pathogen, Xylella fastidiosa were NEGATIVE. Positive and negative controls worked properly. Based on the ELISA tests, we have found NO evidence of bacterial leaf scorch. The symptoms of generalized foliage decline/necrosis are indicative of a site-specific problem likely occurring within the root zone of the tree.*”

This coming week, Dr. Mark Muegge and I will be conducting insecticide efficacy tests against pecan aphids. If you have an orchard with moderate to high aphid levels, please let me know as soon as possible.

The Texas AgriLife El Paso IPM Program is partially supported by the following organizations:

El Paso Pest Management Association
Texas Pest Management Association
Valley Gin Company, Tornillo
West Texas Pecan Association