

Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

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Announcements

- There will be an **IPM cotton turn-row meeting** on Thursday August 25, 9:00 to 10:00 AM at Mr. Ramon Tirres Farm on North Loop Dr., ½ mile west of intersection with Webb Road. We will discuss current pest and disease conditions and upcoming pest management issues. This meeting is free of charge.
- **2011 El Paso County Fall Master Gardener Class:** 12 weeks of intensive horticulture training on such topics as herb and vegetable gardening, trees, pruning, xeriscaping, soils, fertilizers, plant pests, and more. After successful completion of the course, participants are required to share information learned with the community. Application deadline is August 23rd. Applications and more information can be found at: http://txmg.org/elpaso/files/2011/06/2011_MG_Application.pdf. Contact: Dr. Ray Bader at 915-860-2515.
- **Lessons learned after the 2011 Freeze** by Rafael D. Corral, Ph.D. August 13, from 10:00 to 11:30 AM at El Paso Museum of Archaeology (4301 Transmountain Road, El Paso TX 79924). Free Admission. This is a Master Gardener/Master Naturalist class, which is open to the Public. Dr. Corral will discuss the effects of extreme cold on a number of commonly used landscaping plants in our region and the consequences of selecting the wrong plants for our climate. Dr. Corral is the Botanist and Pest Management Coordinator at Fort Bliss. On the same day, there will be a **Volunteer Transmountain Road Clean Up**, just before the class, from 7:55 to 9:30 AM. Meeting for the clean up: at the pull-out just past the “Adopt a Highway” sign on the right-hand side of westbound lane on Transmountain Rd, west of the Gateway South intersection. Info: 915-755-4332; guidamr@elpasotexas.gov; www.elpasotexas.gov/arch_museum.
- **Arizona Pecan Growers Association Annual Meeting.** September 16. Palo Verde Holiday Inn, Tucson, AZ, Contact Mike Kilby (520) 403-4613 or mkilby@calsmail.arizona.edu.
- 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.

GENERAL SITUATION:

Maximum daily temperatures for this week will be at or above 100°F. This is warmer than average. In fact, today we reached the 40th day with maximum temperatures at or above the 100 degree mark in El Paso this year. According to John Nielsen-Gammon, the Texas State Climatologist and Professor of atmospheric sciences at Texas A&M University, our state is experiencing its most severe one-year drought. The lack of rain has been coupled with record-breaking temperatures. Texas suffered the warmest July ever; correspondingly, the 4th warmest in U.S. history. A report issued by the National Climate Center states: “*Oklahoma averaged 88.9°F, the warmest monthly statewide average temperature on record for any state during any month.*” Texas averaged 87.1°F. On a recent article by Keith Randall (Texas A&M News and Information Services), the Texas Agriculture Commissioner, Todd Staples is cited as saying: “*The extreme heat and unprecedented dry weather are crippling agricultural operations in Texas upon which all Americans rely for food, fuel, clothing and other daily necessities. This historic drought has depleted water resources, leaving our state’s farmers and ranchers in a state of dire need. The damage to our economy is already measured in billions of dollars and continues to mount.*” Wildlife has been impacted too. Locally, our chances of rain are estimated in 10-20% during most of this week. Alas, weather forecasters predict the drought in Texas may last into October.

COTTON:

What a difference two weeks make! I was out of the country for the past couple of weeks and upon my return, I was astounded with the growth rate experienced in most cotton fields. “Skips” are not as evident as just a little while back. Recent insecticide applications have been directed against **bollworms**, especially in pima fields. It is easier to find bollworms if you scout early in the morning. They tend to move towards the bottom plant canopy when the temperature rises. The recommended threshold for small bollworm larvae is 10,000 worms/acre with the caveat that if the scout’s eyesight is not sharp, this threshold could be cut in half (5,000 worms/acre). The threshold for bollworms that have reached 3/8” in length, or greater, is 5,000 worms/acre.

Plant diseases are rearing their ugly heads. Wilted plants have appeared in several fields. Both **Texas**

cotton root rot and Verticillium wilt in cotton result in sudden plant death (a decline lasting 4-6 days). To distinguish between these diseases you need to make a cut in the root. If the root is dark, it is most likely Texas cotton root rot. If the root tissue has a light color, you are probably dealing with Verticillium wilt. Texas cotton root rot symptoms include rotted, dark root tissue coupled with light color stem tissue, light hyphal strands on main root near the soil surface, and dried leaves attached to the plant. In most cases of Verticillium wilt in cotton, leaves show discolored and necrotic areas that later result in defoliation, the roots do not appear rotted, and there is discoloration of the vascular tissues of the stem. However, be aware that there is a strain of Verticillium wilt that causes no defoliation. To complicate matters, Verticillium wilt and **Fusarium wilt** exhibit similar symptoms. The classic sign of Fusarium wilt is leaf chlorosis. Fusarium wilt occurs mainly in sandy soils and it is correlated with the presence of root-knot nematode. There is not much you can do, at the moment, to control Texas cotton root rot or Verticillium wilt once they are detected in the field. The main strategy here is avoiding the movement of pathogens from one field to another through the use of machinery during soil preparation. Currently, Dr. Thomas Isakeit is conducting research trials throughout the state to evaluate a very promising fungicide, flutriafol (Topguard®) used at planting to prevent Texas cotton root rot. In regards to Fusarium wilt, you can use tolerant varieties and nematicides to lower the levels of root-knot nematode.

I am collaborating with Dr. Mark Muegge on a **Stink Bug Damage and Sampling Methodologies Research Project**, which he is conducting in several Far West Texas counties. I have been obtaining sweep net samples from selected fields, beginning from the first week of blooming, but I am yet to find a single stink bug. Sampling in other counties in the region has resulted in one measly stink bug. All this work will be pointless if we fail to find a field with at least low to moderate stink bug population levels. Please contact me if you happen to find such field.

Many growers have found **Lygus bugs** population densities at or above threshold and aerial insecticide applications are under way to cover approximately 10% of the total cotton acreage, mainly using Orthene and Asana. The threshold for Lygus bugs is 15:4 (adults to nymphs) /100 sweeps. Almost all the Lygus samples in El Paso and Hudspeth Counties are obtained using sweep nets probably due to their ease of use. I have not met anybody here who uses the drop cloth or the beat bucket to monitor Lygus. The following considerations are suggested when choosing the sampling method: Drop clothes are best suited for sampling nymphs. Sweep nets are generally better suited for sampling adults. Sweep nets lose accuracy in late season, while drop clothes have been shown to be less reliable pre-bloom. S. R. Race in New Mexico concluded that, late in the season, sampling by net should be used only in conjunction with visual inspection of the plants in the field (J.E.E. Vol. 53, No. 4). In 2002, Megha Parajulee in Lubbock, TX evaluated the beat bucket, sweep net, drop cloth, vacuum, and visual sampling methods for Lygus and the cotton fleahopper (CFH). He concluded that the beat bucket method captured the greatest numbers of Lygus and the visual method accounted for the most CFH. If you are scouting for Lygus, pay closer attention to cotton fields planted next to alfalfa or weedy areas. When alfalfa is cut or weeds dry out, Lygus bugs move to cotton plants. If you own the alfalfa crop neighboring your cotton field, it is preferable to strip-cut it rather than harvest it completely. Strip-cutting will allow the bulk of Lygus bugs to remain in the alfalfa field because Lygus bugs prefer alfalfa to cotton. Long-season varieties are more sensitive to Lygus damage than short-season ones. Immature Lygus bugs cause the greatest damage and are better yield predictors than adults.

In a large series of insecticide trials conducted by Scott D. Stewart et al., in Arkansas, Louisiana, Mississippi, and Tennessee, which evaluated Bidrin (8 oz/a), Centric (2 oz/acre), Diamond (6 oz/a), acephate (Orthene 0.5-1 lb/a), and Trimax Pro (1 and 1.8 oz/a) for Lygus control, it was found that Diamond or Acephate performed similarly immediately post treatment, but Diamond had longer residual activity, which translated to fewer applications in the season. Diamond is labeled for most cotton pests, but works only on immature stages.

A 2007 study by A. Balachandran et al., tested low and high rates of Ammo 2.5EC (at 3.0 fl-oz/a and 5.0 fl-oz/a), Brigade 2EC (3.84 fl-oz/a and 6.4 fl-oz/a), Orthene 90SP (0.5 lb/a and 1.0 lb/a), Vydate C-LV 3.77 (17.0 fl-oz and 34.0 fl-oz), Endosulfan 3EC (1.3 qt/a and 2.0 qt/a), Carbine 50WG (1.7 oz and 2.8 oz). All insecticides were applied broadcast, in a spray volume of 10 gal/a on August 10, 2007. The researchers concluded that Ammo and the high rate of Vydate offered the longest residual mortality of 80% at 7 days after treatment (DAT). Brigade was inconsistent, but resulted in 80 – 95% mortality at 3 DAT. Carbine at the high rate resulted in 80% mortality at 7 DAT. The high rate of Orthene offered at least 3 days of good mortality levels. Endosulfan produced good initial mortality too, but its effect was very short lived.

PECAN:

Aphids: black aphids and black margined aphids are key insect pests that often exceed threshold levels in our region. Their abundance is moderate to high at the moment. Some orchards have tree clusters that show a substantial amount of damaged leaves by the black aphid. These leaves show the typical yellow and necrotic spots resulting from black aphid feeding. Several insecticide applications, mainly using Lorsban, have been made for aphid control. The currently accepted action threshold is 25 or more yellow aphids or 2 or more black aphids per compound leaf. When this threshold is reached, you should consider the abundance of beneficial insects before making an application. Be careful with continued use of any insecticide against aphids because this insect group tends to develop resistance. Bill Ree is conducting an imidacloprid resistance study. Please contact him or me if you suspect having resistant aphids. Currently, the pecan nut casebearer is not an issue.