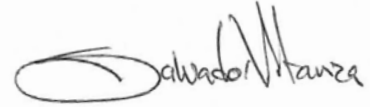


Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

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Announcements

- The TDA **cotton stalk destruction deadline** for our region is February 1st, 2011. At that time, cotton stalks should be plowed, chiseled, or disked to a depth of 6 inches.
- Greater El Paso Pest Control Association will hold a **training session on bed bug control**. Speaker: Jaime Lagos. Date: October 14. Time: 5:00 p.m. Location: Chihua's Taco's, 9135 Gateway West. For more information please contact: Jaime Lagos at 778-3834.
- The inaugural **South Texas Commodity Symposium** will be held Oct.15, 2010 and is hosted by Texas Wheat Producers Association, South Texas Cotton & Grain Association, Texas Grain Sorghum Producers, Texas Corn Producers, Texas Peanut Producers Board, Texas Rice Growers Legislative Group, Southwest Council of Agribusiness and Winter Garden Produce. For more information about the *2010 San Antonio International Farm and Ranch Show*, please visit www.farmandranchexpo.com
- **East Texas Nursery Conference**: October 27, 2010. Harvey Convention Center, Tyler, TX. Conference. Registration Fee: \$30 before Oct. 21, \$40 onsite. For more information: Contact Scott Ludwig at 903-834-6191 or swludwig@tamu.edu. Register online at <http://agrilifeevents.tamu.edu/>
- **Beltwide Cotton Conferences**, Atlanta Marriott Marquis Hotel, Atlanta, GA. January 4-7, 2011 (Tuesday-Friday). More information: <http://www.cotton.org/beltwide>
- The Center for Integrated Pest Management (CIPM) announced the launch of a **new Pesticide Environmental Stewardship website**. The site is designed for anyone who applies, sells, stores, or disposes of pesticides; provides advice or training on pesticide use; or is involved in pesticide stewardship or regulation. <http://pesticidestewardship.org>

COTTON:

Recent rains and strong winds have resulted in some fields with strung out cotton. Luckily, not many cotton fields had open bolls when they were subjected to harsh weather and damage is limited at this point. In general, plant diseases have not severely affected cotton fields in our region this season. However, damage by *Phymatotrichopsis* root rot (PRR) is becoming an increasing concern. The greatest incidence of PRR has been in Fort Hancock and Esperanza, but others areas such as Tornillo, Fabens, Clint, and the Upper Valley have some incidence too. Pima is more susceptible to root rot than upland cotton. During the 2009 field season, Dr. Jaime Iglesias and I detected



Dr. Jaime Iglesias and Carlos Perez inspecting fields for cotton root rot in Esperanza, TX

several cotton fields in El Paso and Hudspeth Counties apparently affected by root rot. Plant samples were later confirmed by Dr. Thomas Isakeit, AgriLife Extension Plant Pathologist, and Dr. Soum Sanogo, Associate Professor of Fungal Plant Pathology at NMSU. This year, there has been a substantial increase in areas showing root rot symptoms. *Phymatotrichopsis* root rot also known as Texas root rot is caused by a soil borne fungus named *Phymatotrichopsis omnivora* (= *Phymatotrichum omnivorum*) that affects more than 2,000 dicotyledonous tree and shrub species, including cotton and pecan. Monocotyledonous plants are immune to this disease. Many dicots are considered to be tolerant. PRR often causes a rapid wilt and plant death in late spring, summer and early fall when temperatures are warm. Dead and dying leaves remain attached to the plant. Infected plants may decline more slowly, especially at cooler temperatures and when plants are well cared for.

The roots of dying or declining plants are rotted. With careful examination under at least 10X magnification, light brown strands or hyphal webs of the fungus can be observed on the root surface. With sufficient moisture, the fungus may occasionally produce a white to light tan sterile spore mat on the surface of the soil near the host, but these mats are not common. PRR can infect soils up to a depth of 12 feet and survives for many years without the presence of a host. Luckily, this pathogen does not produce airborne spores and it spreads only through the growth of the fungus strands in the soil or by soil movement. Dr. Mary Olsen, Plant Pathology Specialist at University of Arizona, recommends replanting infested soils only with tolerant or immune plant species, but this advice may not be an option for some cotton growers.

Researchers have attempted to find practical solutions to control PRR for over 100 years. This disease has proved to be an extremely difficult puzzle to solve. Fortunately, during the last 3 years, Thomas Isakeit, AgriLife Extension Plant Pathologist, and Rick Minzenmayer, AgriLife IPM Extension Agent have been testing a very promising fungicide (Flutriafol) in John and Doug Wilde's Farm in San Angelo. In 2008, they showed that Flutriafol at 4 lb AI/acre, applied through drip irrigation, controlled PRR in cotton fields. However, this rate is too expensive to make sense moneywise. Trials conducted in 2009, suggested that Flutriafol at rates of 0.125 lb AI/acre, or greater (in drip irrigation), significantly reduces PRR. This year, Dr. Chris Sansone, AgriLife Extension



Entomologist, and Dr. David Drake, AgriLife Extension Agronomist have joined the research team to evaluate at-planting application of Flutriafol in dryland cotton. Field trials by AgriLife Extension personnel in conjunction with efforts by Texas A&M, Cotton Incorporated, the National Cotton Council, and many cotton grower organizations may persuade the Environmental Protection Agency to allow the use of Flutriafol in cotton (taken from the July 2010 issue of The Farmer-Stockman, "Cotton root rot may likely meet its end" by J.T. Smith).

Flutriafol is manufactured by Cheminova under the trade names of Impact® and Topguard®. None of these products is labeled for cotton at this time. Topguard® is registered for use on apples and soybeans.

PECAN:

Nut load is looking great for an "off year". As expected, there was some nut drop in August. This phenomenon is known to occur due to a combination of physiological, environmental, pests, and soil fertility reasons. Additionally, I have also noticed that in some cases the use of machinery, close to the trees, has resulted in mechanical damage to the nuts and some nut drop. Hickory shuckworm and pecan nut casebearer have damaged nuts, but, in my opinion, at tolerable levels. Aphid population levels have been below action thresholds.

Brad Lewis, Assistant Professor - Insect IPM Specialist at NMSU, kindly provided the following summary of very interesting research trials that he and his team are currently conducting:

Imidacloprid LD 50/90: Imidacloprid (Admire Pro, 42.8% [AI], Bayer CropScience Ltd.) dip studies were conducted in 2009 to determine a field LD 50/90 for blackmargined aphids collected in Las Cruces, New Mexico. Blackmargined aphids were counted and recorded on leaflets removed from infested orchards. Leaflets were dipped in one of several dilutions ranging from 0 to 50 ppm imidacloprid and placed in glass vials containing agar for 48 hours. The addition of the agar maintained leaf viability longer than without. Mortality was assessed at 48 hours after dipping. The 48 hour period was determined to provide a consistent evaluation. Mortality was determined by probing and viewing aphids under magnification for organized movement. Probit analysis (SAS Institute 2000) was used to establish the lethal dose required to kill 50% and 90% of the test population. Test results indicated a LD 50 of 6.5 ppm and an LD 90 of 38.7 ppm. Lab and field work continue in 2010 to determine LD 50/90's for blackmargined aphid populations outside of the Mesilla Valley to establish levels for a perceived susceptible level.

Pecan Pruning Study: Data continue to be collected from a multiple year, large plot pruning study that began in 2006. This study aims to establish or refine pruning strategies in the Mesilla Valley that may help achieve maximum yields and reduce input costs. In addition, it compares blackmargined aphid population densities in trees with dense canopies to those with sparse or non-existent canopies.