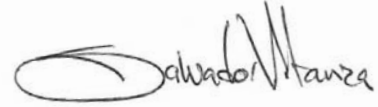


## Issues in Agriculture

*The Newsletter about Integrated Pest Management for the El Paso Valley*

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### Announcements

- **Pima cotton variety trial field day** on Wednesday September 17 (10:00-11:00 AM) at Mr. Ramon Tirres Farm on North Loop Dr., ½ mile west of intersection with Webb Road. This year, the field day will be celebrated much earlier than in previous occasions to avoid scheduling conflicts with cotton harvest activities. The field day will be a good opportunity to evaluate the performance of pima cotton varieties in local conditions. This meeting is free of charge. Participation certificates with one Continuing Education Unit will be provided.
- **Western Pecan Production Short Course.** Sept 25-28. Three days in the classroom on horticulture, pest control, economics, and pecan production; plus a half-day field trip to local pecan farms. Register: <http://aces.nmsu.edu/register/pecanshortcourse/> Cost: \$360. Contact: Mary Curtis. Phone: 575-646-1715.
- **Insect and agriculture images:** For those who find insects to be interesting or even beautiful critters, Dr. Patrick Porter, AgriLife Associate Professor and Extension Entomologist based in College Station, has a website (<http://patrickporter.smugmug.com/>) showcasing his skills as accomplished photographer of insects, wildlife, landscapes, and agricultural activities. He also includes some images from coworkers. His section on moths collected from pheromone traps should be a great aid, for scouts or farmers, in identifying some key Lepidoptera crop pests.
- **West Nile Virus (WNV):** 2012 has been dubbed the “worst year ever” since this mosquito-transmitted disease was detected in the US in 1999. As of August 28, the Center for Disease Control reports 1,590 cases and 65 deaths in the nation, setting a new record, with Texas as the most affected state. The year is not over and these numbers are most likely going to increase. As of August 27, the Texas Department of State Health Services (DSHS) reports a total of 783 human cases of West Nile illness in the state, including 31 deaths. The Dallas/Fort Worth area has been hit incredibly hard. The majority (99%) of people infected with WNV does not develop severe neuroinvasive symptoms and the surveillance system is not designed to detect asymptomatic infections. Therefore the real number of infections is vastly greater than the statistics reported. El Paso County has recorded 9 human cases this season. When spending time outdoors, especially during the evening, wear protective clothing and use insect repellent.

### BIOLOGICAL CONTROL OF SALT CEDAR PLANTS:

The following excerpt taken from “Brief Program Highlights” by Dr. Charles Allen, Texas IPM Coordinator and Associate Department Head for AgriLife Extension Entomology Programs, aptly describes the problematic with saltcedar and summarizes the efforts made by AgriLife in Texas for the biological control of saltcedar: “Saltcedar, *Tamarix sp.*, was introduced into the United States as an ornamental, wind break and shade tree in the early 19<sup>th</sup> century and millions were planted during the 1930s to fight soil erosion in Great Plains Shelterbelts.

They grow in dense thickets in saline waterways and lakes in the western U.S. Introduced without their natural enemies they have flourished and spread. Saltcedar consumes large quantities of water, increases soil salinity, outcompetes and displaces native plants and degrades wildlife habitat. Dr. Jack Deloach, USDA-ARS (retired), Allen Knutson, Mark Muegge, Salvador Vitanza and Ed Bynum Texas A&M AgriLife Extension Service and Jerry Michaels Texas A&M AgriLife Research (along with many others) have worked to introduce and distribute saltcedar

beetles in Texas. In spite of setbacks from weather and other factors, three species have become well established in Texas. They are actively reducing the damaging effects of saltcedar in the Pecos and Rio Grande, Colorado, Upper Brazos and Red River basins. Recent area-wide defoliation of saltcedar at many locations demonstrates the potential impact these biological control agents can have on reducing the economic and environmental impact of saltcedar.”



Mr. Lester Talley indicated that over 2,000 acres of saltcedar trees have been defoliated by the saltcedar leaf beetle in Indian Hot Springs. Also, some cotton growers in Esperanza recently noticed that saltcedar stands along irrigation canals had changed from their usual green color to a reddish-brown appearance. They were worried that whatever was affecting the saltcedar plants could damage their crops too. Upon inspection, I found saltcedar leaf beetles (likely *Diorhabda sublineata*) flying all over the site. The growers indicated that on still days, the beetles are so abundant that they may completely cover your clothes. You can rest assured that this insect will not damage any plant other than saltcedar and plants in the genus *Tamarix*. Without the availability of *Tamarix* spp., the beetle simply starves to death. The

Saltcedar stands in Esperanza defoliated by saltcedar leaf beetles



saltcedar leaf beetle will not hurt pets or feed on other insects either. According to Dr. Allen Knutson, “*beetles may occasionally feed on a related desert shrub, Frankenia, but cause little damage.*” There are several species, subspecies, and ecotypes in the genus *Diorhabda*. Attempting to make a precise species identification, I mailed samples of saltcedar leaf beetles collected from Indian Hot Springs and Esperanza to Dr. Knutson, who in turn sent them to Mr. James Tracy (formerly with USDA-ARS) for dissection of male genitalia. We suspect that these beetles are descendants of the

Tunisian leaf beetles released by USDA-ARS near Presidio. I will let you know about Mr. Tracy’s findings in the next issue of this newsletter. Saltcedar (*Tamarix ramosissima*) is the most abundant species of *Tamarix* in Texas and it grows as a shrub or small tree. The largest species in this genus is the Athel tree (*Tamarix aphylla*); which is sometimes used as an ornamental plant. Other species of *Tamarix* present in the state include the African tamarisk (*Tamarix africana*), the Chinese tamarisk (*Tamarix chinensis*), the French tamarisk (*Tamarix gallica*), and the smallflower tamarisk (*Tamarix parviflora*). All these species should be presumed to be susceptible to predation by the saltcedar beetle. In some cases, it is not easy to distinguish among these plant species. Saltcedar is considered a weedy invasive plant that has become well established in southwestern United States and Mexico and it has infested many other states.

In 2007 and 2008, the saltcedar leaf beetle from Crete was released by Texas AgriLife Extension Service personnel in Indian Hot Springs, as part of the Saltcedar Biological Control Implementation Program, but it failed to become established and could not be detected there after each winter. Predation of the beetle by ants, floods, and low winter temperatures were probable reasons for this failure. Drs. Allen Knutson and Mark Muegge reported “*Based on climate-matching studies conducted by USDA-ARS, Diorhabda sublineata, the Tunisian beetle was considered better adapted to the Pecos River watershed than the Crete beetle, Diorhabda elongata. The Tunisian beetles were initially released at two locations (Leon Springs and Imperial) in 2009 with additional releases in 2010 and 2011.*” A couple of weeks ago, I surveyed saltcedar stands in Esperanza and Fort Hancock and found that the beetles had not reached Fort Hancock yet. These beetles have been known to spread up to 80 miles in a season. If this trend continues, we should see the beetles defoliating saltcedar plants in El Paso County by next year.

#### **PECAN:**

The pecan aphid data obtained from the insecticide efficacy trials conducted by Mark Muegge and me near Tornillo (5-R Farms) are ambiguous. Neither of the two trials produced clear-cut results. Neonicotinoid insecticides had higher population densities than the untreated check, potassium nitrate (KNO<sub>3</sub>) and Requiem had no effect on aphid densities; Beleaf and Fulfill seemed to provide the best control. We should use caution while interpreting these results because most were not significant, just trends with a lot of variability. By the last sample date the aphid populations crashed. We intend to conduct another insecticide efficacy test for pecan aphid control but will have to wait for aphid populations to build back up. Of course, we do not want to wait until October to conduct this test because the aphid populations may be naturally decreasing by then.

#### **ALFALFA:**

Robert Neese found two *Bagrada* bugs in cotton fields. This is a new invasive species that I had warned growers about in this year’s first issue of my newsletter. I will discuss this information at length in next issue. He also found a blister beetle on weeds at the edge of an alfalfa field. *Lygus* bugs are extremely abundant right now, but should not be a concern unless you are raising alfalfa for seeds. The beet armyworm and the alfalfa caterpillar are defoliating alfalfa fields south of Fabens.

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**Ag Market Resources**  
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**West Texas Pecan Association**