

Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

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Announcements

- **El Paso AgriLife Volunteer Recognition Day** will be held at the Texas AgriLife Research Center on Friday, June 3, from 3:00 PM to 5:00 PM.
- **Oklahoma Pecan Growers Annual Conference.** June 26-28. Bartlesville, OK. Contact Janice Landgraf (580) 795-7644 or okpecan@trinex.net.
- **90th Annual Texas Pecan Growers Conference & Trade Show.** July 10-13, 2011. Embassy Suites, 7600 John Q. Hammons Drive, Frisco, TX 75034. Conference Registration Fees: (2 adults of same family only per registration) TPGA member registering prior to June 20 = \$75; TPGA member after June 20 = \$85; TPGA nonmember = \$100. For more information go to: http://www.tpga.org/downloads/conference_packet_2011_frisco.pdf or call: (979) 846-328.
- **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.

GENERAL SITUATION:

Today, we reached the 117th consecutive day with no precipitation (since Feb. 4); which is now a new record. On May 23rd, we matched the all-time longest dry spell, established 9 years ago, in El Paso. Finally, it looks like we may see some rain in the coming days because this is, supposedly, the start of monsoon season and clouds are carrying moisture from the gulf.

COTTON:

Most cotton fields in our area have plants at 5-6 true leaf stage. I have not seen much thrips damage, but some plants have up to 20% damaged leaves as a result of strong winds. Several cotton fields have been replanted because of **poor plant emergence**. Unfortunately, the upland variety trial in Acala had to be replanted due to uneven seedling stand. Therefore, we will not be able to carry this trial to successful term. Dr. Jaime Iglesias and I inspected this field and found that some rows, within the same variety, appeared better than others. However, after calculating average stands for the whole trial, we did not find significant differences among varieties or rows. We could not identify varieties or a seed company with significantly better stand count than others. Problem cotton fields shared the following traits: There was sufficient soil moisture, but plant debris appeared not to have decayed properly. All cotton seed germinated and some seedlings died after reaching a radicle length of approximately half an inch or less. Lands were prepared using Pegasus plow and planted with commercially available seed. Sandblasting or thrips damage were definitely not causes for this failure. Fields in Hudspeth County fared much worse than in El Paso County. High soil salinity, heavy crop residue, and inadequate soil preparation could be among the possible causes of cotton seedling death.

The **Texas Bollweevil Eradication Foundation, Inc.** (TBEF) reports that in the West Texas and Southern Rolling Plains zones only 15 weevils were caught from 5,324,749 mapped cotton acres during 2010. Of those, 10 weevils were caught on the southern edge of the zone and five were caught on the eastern edge. There was no evidence of reproduction in any of the West Texas zones. The TBEF 2010 Program Year End Summary states: *"The 2010 cotton crop was the third largest on record in Texas in terms of total production to date. Record Texas cotton crops have been recorded in four of the last seven years. Prior to 2004 there had not been a record setting cotton crop in 58 years. The recent record-breaking production occurred after boll weevil had been removed as an economic pest. In the last seven years, yields have averaged 707.28 pounds per acre. Compared to the seven years prior to 2004 when yields averaged 487.85 pounds per acre, yields in the last seven years have increased by 219.43 pounds per acre."* Mr. Saul Cortes, Field Unit Manager at the El Paso/Trans Pecos Zone said that no boll weevils or native pink bollworms have been trapped this year and no acres have been treated so far. He reported that, in the year 2010, they released a total of 929,420,250 sterile pink bollworm moths, recaptured 1,058,139 moths, and found just 16 native moths. In El Paso, Hudspeth, and Culberson Counties, 4,366 boll weevil/pink bollworm traps have been placed this season in 1025 cotton fields, corresponding to 33,664 cotton acres. The breakdown of Bt and non-Bt acreage will be provided in the next issue of this newsletter.

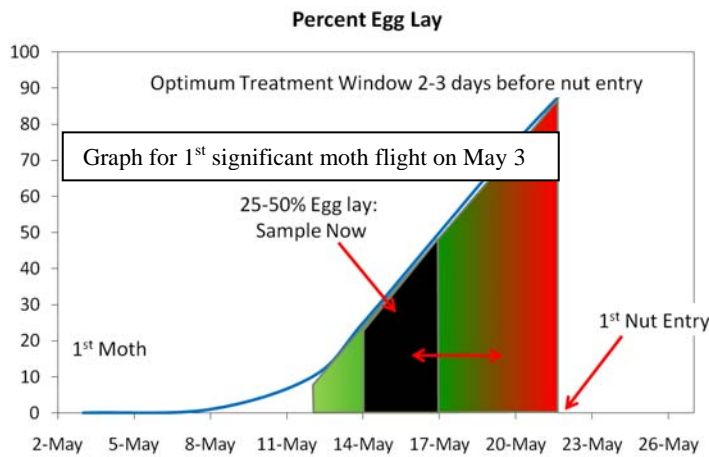
PECAN:

The pecan nut casebearer (PNC) moths appeared up to two weeks earlier than usual in most Texas orchards. In our region, only one pecan grower, in San Elizario, reported early captures (April 25th). Most pecan farmers collected the first moths in early May. First generation PNC moths have been trapped in much lower numbers compared to last year's captures. Additionally, very few to none PNC eggs have been found on the nutlets. This fact would suggest that some pecan farms may go without insecticide applications if the action threshold is not reached. This is not a time to completely forget about PNC monitoring for the rest of the season. The second PNC generation should be watched closely because in 2009 the second generation produced much more damage than the first one. You can follow the moth capture data in "real time" and see a prediction map of PNC egg lay at <http://pecan.ipmpipe.org>.

The **2011 Pecan Pest Management Workshop** held at the AgriLife Research Center on Thursday May 12 was a

success. A total of 34 people attended this training. The evaluation survey administered at the end of the event rated the speakers and the quality of information delivered with extremely high marks. The following is a summary of the 4 topics discussed at the workshop:

Pecan Nut Casebearer Forecast and Control (Dr. Mark Muegge): PNC is one of the most damaging pecan pests. The



spring generation is the most important to control. A single well timed treatment should provide good control. Action threshold: 2 or more egg-infested clusters before 310 clusters are examined. You can use the <http://pncforecast.tamu.edu/> website or make your calculations by hand. Your start date is the first date of sustained moth flight. The heat units are obtained by: (maximum daily temp + minimum daily temp)/2 – 38. The correlation between the percentage of oviposition and heat units (HU) is as follows: 10% oviposition = 338 cumulative HU, 25 = 411, 50 = 509, 75 = 625, 90 = 737, 1st nut entry = 711. Among the most commonly used insecticides: Lorsban 4E at 1½ to 4 pints/acre. Intrepid at 4 to 8 oz/acre: must be ingested to work, thus good coverage is essential. On large trees with dense canopy

aerial application may not give satisfactory control. Spintor 2SC at 4-10 oz/acre (Entrust for organic orchards). Warrior II at 1.28-2.56 oz/acre. Apply in minimum 100 gal/acre using ground equipment.

Pecan Aphids Biology and Control (Dr. Salvador Vitanzo): Three aphid species may need control: black-margined aphid, *Monellia caryella*, yellow pecan aphid, *Monelliopsis pecanis*, black pecan aphid, *Melanocallis caryaefoliae*. Population levels of black pecan aphid above threshold (2-3/compound leaf) may result in heavy defoliation, poor nut quality, and substantial reduction of flowers in the following year. This is the most solitary species of the three. It injects toxic saliva that causes portions of the leaves between major leaf veins to turn yellow and later brown. Heavily injured leaves drop prematurely. It is much more destructive than yellow aphid species. It usually starts in shaded areas of orchard and peaks in fall. Adults and immatures can be found on both the upper and lower surfaces of a leaflet. Do NOT make a decision based only on damage because populations fluctuate. Probably there is little to gain with insecticide applications prior to mid July. Varieties considered susceptible include Caddo, Gloria Grande, Moreland, Oconee, and Sumner. Morrill and Pawnee are resistant. The blackmargined aphid has a black front margin on its forewings and holds wings flat over the back of its body. The Yellow pecan aphid has clear wings that are held roof-like. Control usually not needed early in the season. Often peaks by mid-summer and may suddenly decline after heavy rain showers. High levels of yellow aphids (above 25/compound leaf) may reduce nut yield and quality. The varieties Elliot and Cheyenne are susceptible. Pawnee is considered tolerant. Pyrethroids for PNC control may increase level of yellow aphids. Take into account the weather forecast and beneficial insect abundance before any attempt to control aphids.

Pecan Stink Bugs (Bill Ree): The true stink bug complex in Texas includes the southern green stinkbug, *Nezara viridula*; the green stink bug, *Acrosternum hilare*; the brown stink bug, *Euschistus servus*; the dusky stink bug, *E. tristigma*; and the Conchuela stink bug, *Chlorochroa ligata*. The leaffooted bug complex includes the following species: *Leptoglossus phyllopus*, *L. oppositus*, *L. zonatus*, *L. clypealis*, *Acanthocephala declivis*, *A. femurata*, and *A. terminalis*. The kernel-feeding hemipterans or “true bugs” present difficult management challenges such as: no established treatment thresholds, difficulty in scouting large trees, and late season restrictions on insecticide applications. Stink bug and leaffooted bug damage may cause nut drop during the pre-shell hardening stage, kernel spot during the post shell hardening stage to harvest, and energy expense on damaged kernels. These pests may originate from soybeans, grain sorghum, vegetables, alfalfa, and other crops, but also from native weeds or vegetation. Management options: weed management or “sanitation”, biological control, trap crops, cone/pheromone traps (only for the brown stink bug species), monitor orchard ground covers, monitor nut clusters (especially in border rows), and insecticide application (consider pre-harvest intervals). Trap crops may result in reductions of pesticide usage. However trap crops have limited effectiveness when the pecan orchard is surrounded by large acreage of row crops. When planting trap crops in late summer consider water, weed control, and wildlife. Trap crops must be treated with insecticide. Research projects for 2011: Evaluate possible pathogen transfer by adult stink bugs to pecans. Determine a cut-off time for management.

Pecan Squirrels (Dr. Jaime Iglesias): A survey conducted in 2010 in El Paso County found an average of 12 squirrels per 100 feet of open drain ditch. There was an instance of 30 lbs of pecan nuts found in a nest located in ag machinery by one adult squirrel. Nests can also be established in the pecan tree canopy or hedged trees. Rock squirrels can damage pecan tree bark and kill branches. Additionally, they can gnaw on electrical wires and produce short circuits. Burrow entrances constitute serious hazards and should not be allowed in equestrian fields, parks, schools, and other public areas. Rock squirrels are also associated with the transmission of bubonic plague to humans. Rock or ground squirrels can be controlled by habitat manipulation. They prefer areas with short grass. Therefore, control can be achieved by allowing the grass to grow into dense stands or by cultivating infested areas. Rodenticides provide the most economical method for controlling large populations of ground squirrels. When using any fumigant, it is important that the soil contains adequate moisture. Moist soil types hold the fumigant in the burrow. Do not fumigate under buildings because the fumes may seep into the dwelling and create a hazard to the occupants. Ground squirrels can be excluded by fences made of either sheet metal or ½” hardware cloth. The fence should be at least 18” high, with about 6” buried in the soil. The fence should completely surround the area to be protected. This costly method is practical only in small areas. Traps are often effective with small populations of ground squirrels or in urban areas where a toxicant cannot be used safely. Although it is legal to trap ground squirrels at any time, persons wishing to capture live animals to relocate them should get in touch with local representatives of the Texas Parks and Wildlife Department. Periodically flooding the burrows may encourage ground squirrels to relocate. In rural areas, ground squirrels also can be shot if local laws, ordinances and safety considerations permit.