

Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

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Announcements

- **2011 Pecan Pest Management Workshop** at the Texas AgriLife Research Center, 1380 A&M Circle, El Paso, TX 79927 on Thursday, May 12, from 8:30 AM to 12:00 PM. Topics: pecan nut casebearer forecast and control (Dr. Mark Muegge), pecan aphids biology and control (Dr. Salvador Vitanza), leaf footed and stink bugs management (Bill Ree), squirrel damage to pecans and its management (Dr. Jaime Iglesias). For more information call (915) 860-2515. Three continuing education units will be provided to licensed pesticide applicators. Cost: \$25.
- **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.
- I just received a package of **AgriLife field templates** (lanyard and card) to aid at scouting and decision-making for **stinkbug thresholds in cotton**. Anyone interested in obtaining a free, pocket-size field aid should let me know as soon as possible because I have a small number of them. You can access this publication, and print your own card at: <http://ipm.ncsu.edu/cotton/insectcorner/PDF/Tx.AgriLife.Handout.pdf>

GENERAL SITUATION:

We reached the 95th consecutive day with no rain (since Feb. 4) and have now surpassed the 2nd longest period without precipitation in El Paso. It is likely that we may break the old-time record (in 2 more weeks) of 109 days without rain, established 9 years ago. The main difference between that time and now is that we entered that period with more than an inch of rain, compared to just a ¼" of precipitation previous to the current dry spell. Dust and strong winds have become an almost constant feature of our landscape for the past two and a half months.

ALFALFA:

A 14-acre alfalfa field south of Fabens has been affected by an undetermined leafminer, possibly the **American Serpentine Leafminer** (ASL), *Liriomyza trifolii*. This field had areas with severely damaged plants next to areas with plants that had little damage. Approximately 30% of the field was affected. I recommended an early harvest and immediate removal of the alfalfa to reduce both the pest and susceptible host. Additionally, that field could also benefit from prompt irrigation. A sample of adult leafminers was submitted for species identification. Dr.

Scott Armstrong, a research entomologist with ARS-USDA in Weslaco, TX, reports that this species has been a problem in cotton and vegetables in southeast Texas this year. ASL is one of the most widespread and economically-important leafminers in the US. It is a very polyphagous leafminer species that feeds on a wide variety of row crops, ornamentals, weeds, and native plants. Therefore it can maintain continuous populations even when crops are not in cultivation (C. E. Stegmaier Jr., *The Florida Entomologist*, Vol. 49, No. 2). In general, leafminers can become key pests in crops where insecticides are used excessively. Usually, leafminers are kept in check by natural enemies, especially small wasps that parasitize eggs, larvae, and pupae stages.

They are called "parasitoids". Parasitoid is defined as an organism that, during its development, lives in or on the body of a single host individual, eventually killing that individual. Sometimes there are also "hyperparasitoids", which are parasitoids that develop in other parasitoids. The leafminers are very tiny insects



Carlos Perez inspecting leafminer damage in alfalfa



Leafminer damage

so you can imagine the size of its associated hyperparasitoids. When insecticides are applied too frequently, the populations of natural enemies may crash and this results in leafminer outbreaks. Interestingly, alfalfa fields in our region receive very little insecticide applications, if any. The good news is that we are definitely not dealing with the Alfalfa Blotch Leafminer, a major alfalfa pest in other parts of the country; especially the Midwest.

COTTON:

All cotton fields in our area have been planted and “capped off”. A majority of them have plants at the cotyledon stage. I have not seen much **thrips damage** yet. In the Texas high plains, thrips are considered a key pest in pre-squaring stage cotton (David Kerns et. al., *Developing an action threshold for thrips in the Texas high plains, 2010*). The currently accepted action threshold for thrips is 1 thrips per true leaf, but based on recent findings, these AgriLife Researchers suggest that it may be necessary to update thrips thresholds in cotton to the following levels: cotyledon stage = 0.5 thrips per plant, 1 true leaf = 1 thrips per plant, 2 true leaves = 1-1.5 thrips per plant, and 3-4 true leaves = 2 thrips per plant. Cotton plants are most susceptible to thrips damage at the cotyledon stage and this susceptibility decreases as the cotton plant grows. Another caveat is that whole-plant samples placed into jars containing alcohol have been shown to be a more accurate sampling technique than simple visual inspections. Usually, warm weather allows cotton seedlings growth to compensate for thrips damage. The weather forecast calls for the next couple of days below average temperature and then return to warm conditions. I do not expect thrips to be a problem in El Paso and Hudspeth Counties this year, but it is wise to monitor the crop for thrips levels. There are some plants showing sandblast damage; especially in sections of fields with soils high in sand content.

In recent years, I have observed that cotton fields in our region have an **average plant stand density** around 55,000 plants/acre, with fields planted as low as 30,000 plants/acre and as high as 63,000 plants/acre. Yesterday, I obtained four samples per farm from 4 cotton farms. For each sample I counted the number of plants in 11 feet of row. The first 3 farms had plant stand densities falling within expectations: 41,818; 59,459; and 63,828 plants/acre. However, the last farm sampled now holds the highest plant stand density that I have observed so far: 105,981 plants/acre. It is generally accepted that 2-4 plants/foot of row maximizes yields. This is equivalent to 26,136 - 52,272 plants/acre in fields with 40 inches between rows. Most cotton fields that I have visited this season have been planted at 40 inches between rows and a few at 38 inches. It seems to me that some growers could gain substantial savings in seed costs by planting at recommended densities.

PECAN:

On January 25, I received a pecan nut, with a hole in it, which a grower had found in his orchard and suspected to be infested with pecan weevil. I opened it, found a moth pupa, put the nut and its contents in a rearing cage, and completely forgot about it. Recently, I found 4 unfamiliar moths in that rearing cage. From the close-up photographs that I sent out, Bill Ree and Mark Muegge determine it to be the **navel orangeworm**. I mailed all the specimens to Kira Metz, Entomologist Identifier, USDA-APHIS in College Station, for confirmation. The navel orangeworm is a pest of citrus, walnut, almond, pistachio, macadamia, and figs in California, but I have not found a publication that deals with this pest in pecan. Bill Ree suspects that El Paso pecan growers should not be worried about this insect at the moment because the navel orangeworm cannot enter a pecan nut unless there is a crack in the shell. Potentially, this insect could become a stored product pest of pecan. The University of California IPM website mentions that the navel orangeworm does not damage sound walnuts, almonds, or pistachio, but nuts become susceptible when hulls begin to split.



Navel orangeworm moths reared from a pecan nut collected near Tornillo, TX in late January 2011 (scale in centimeters).

I have not caught a single **pecan nut casebearer** (PNC) moth in my traps yet. It is important to mention that all my PNC lures are of the standard type. However, several pecan growers have trapped PNC moths near Tornillo, Fabens, and Clint. Pheromone traps placed at Rio Bravo Farms (near Tornillo) caught the first significant PNC flight on April 30th. Entering this date into the <http://pncforecast.tamu.edu/> website gives us May 15th as the date for 50% oviposition (time to check for eggs) and May 20th as first detectable nut entry. San Lorenzo Farm near Clint reported their first significant flight on May 1st. 5-R Farms near Fabens started capturing moths on April 29th. Most of these moths were found in pheromone traps using the "Mexican strain" lures and a few were caught using the “Standard” strain lures. You can follow the real time moth capture data and a prediction map of PNC egg lay at <http://pecan.ipmpipe.org>.

I hope to see you at the **2011 Pecan Pest Management Workshop** at the AgriLife Research Center on Thursday May 12, from 8:30 AM to 12:00 PM.