Issues in Agriculture

The Newsletter about Integrated Pest Management for the El Paso Valley

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ANNOUNCEMENTS

- You can download this and other IPM newsletters, check updates, and view upcoming events at the El Paso Texas A&M AgriLife Extension IPM website: http://elp.tamu.edu/integrated-pest-management/
- **Gardening 101 Workshop Series**: All sessions are free of charge and will be held at the Multipurpose Center on 9301 Viscount. On July 24, from 4:00 PM to 5:30 PM, the topic of discussion on this date will be plant propagation. Information: Denise Rodriguez Texas A&M AgriLife Extension (915) 860-2515.
- **Texas Pecan Growers Association Annual Conference & Trade Show:** July 12-15, 2015. Embassy Suites, Frisco, TX. Contact TPGA, 979-846-3285 or pecans@tpga.org
- The NMSU Agricultural Science Center at **Los Lunas field day** is scheduled for August 12. Both NMSU and NRCS programs will be highlighted. The day consists of wagon tours, walking tours, informational seminars, demonstrations, and a free lunch. For more information contact the Agricultural Experiment Station at 575-646-3125 or visit their website at the following link: http://loslunassc.nmsu.edu/events--announcements.html

GENERAL SITUATION:

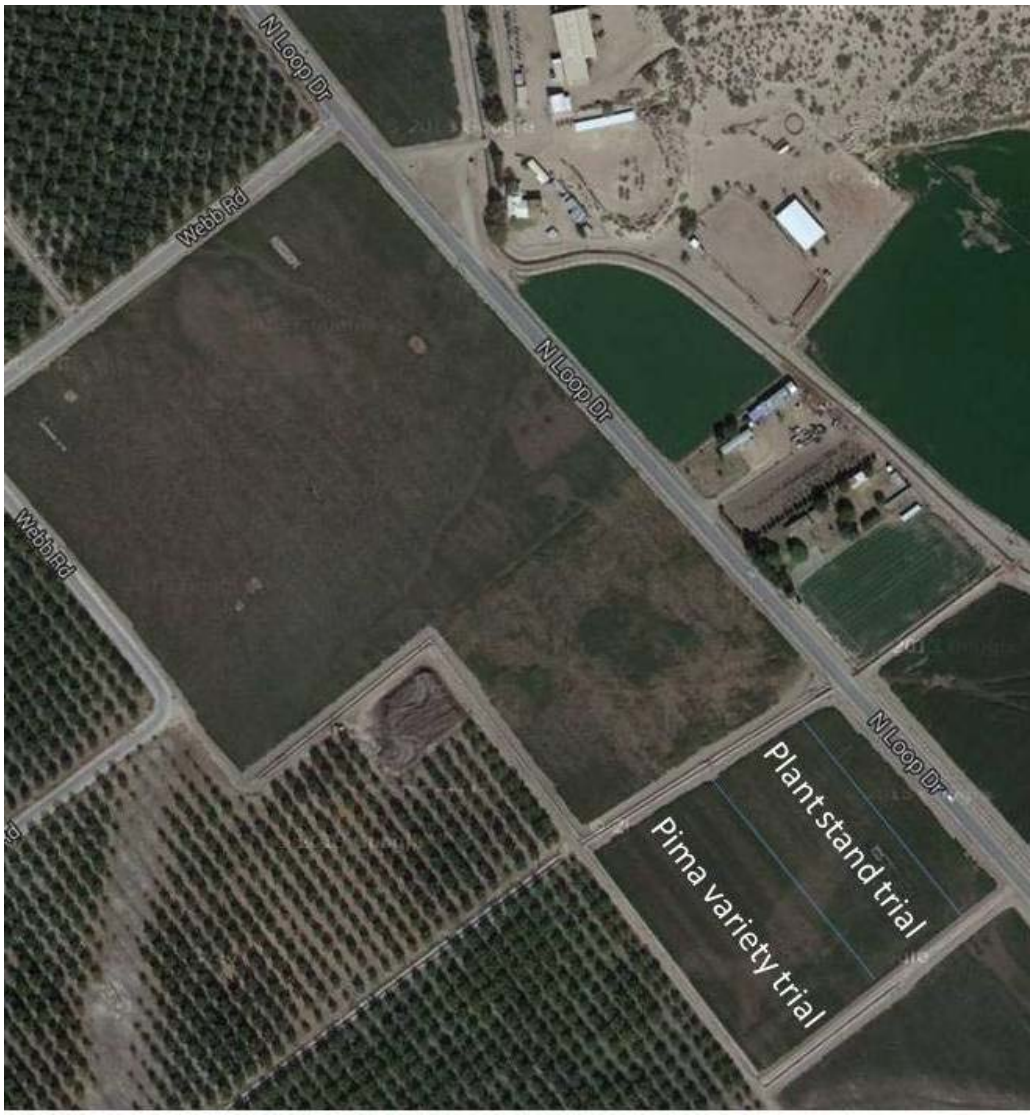
Most fields in El Paso Lower Valley are receiving flood irrigation. The most advanced cotton fields have started to bloom. Lygus bugs are increasing in numbers and need to be monitored frequently. Beneficial insects in cotton are at high population levels; especially damsel or nabid bugs. Pecan aphids are present at below action thresholds, but honeydew accumulation on the leaves is fairly common at the moment. Second-generation pecan nut casebearer moths captured in pheromone traps are tapering off.

COTTON:

Cotton plants are in the third or beginning the fourth week of squaring. Some fields are starting to set flowers. **Cotton fleahoppers** have not been a problem so far, and I do not expect them to be for the remainder of the season. Cotton fleahoppers feed on pinhead or smaller squares in the terminals and are most damaging to cotton during the first three weeks of squaring. After that, they are considered beneficial because they feed on eggs of several insect pests. **Lygus bugs** feed on squares and small bolls and can continue to cause damage even after blooming. They are increasingly abundant, but have not reached action threshold yet.

Cotton farmers are always interested in learning about how commercially available cotton varieties perform under local management practices, soils, irrigation, and weather conditions. Growers know that the seed they plant is fundamental to a successful cotton growing operation. They need to select a variety capable of producing high quality yields, good staple length, acceptable micronaire, and other desirable plant/fiber traits. The development and commercial availability of new cotton varieties forces farmers to weigh pros and cons in seed cost, legal restrictions imposed by seed companies, weed management considerations, plant architecture, and especially lint yield and quality before deciding which variety, or varieties, to plant. Knowing which varieties are best suited for the climatic and soil conditions of a particular region is a crucial component of a successful farming operation.

PIMA COTTON VARIETY TRIAL: A 3-replicated field test was established on April 27 in Mr. Ramon Tirres Jr. Farm, on North Loop Dr, near Clint, El Paso County. This trial included the following six varieties: PHY805RF, DP340, DP357, DP348RF, DP358RF, and ALL-TEX P203. Plots are 4-row wide containing cotton rows spaced at 40 inches with a row length of 600 feet.
The first four rows in this field were planted, but left out of the test to avoid the “edge effect.”



2015 pima variety trial		
Rep	**Trt.**	**Variety**
101	1	PHY805RF
102	2	DP340
103	3	DP357
104	4	DP348RF
105	5	DP358RF
106	6	ALL-TEX P203
201	4	DP348RF
202	5	DP358RF
203	1	PHY805RF
204	6	ALL-TEX P203
205	3	DP357
206	2	DP340
301	6	ALL-TEX P203
302	3	DP357
303	4	DP348RF
304	5	DP358RF
305	2	DP340
306	1	PHY805RF

The attached plot map should be read from left to right when standing in front of the southernmost corner of the field. The pima variety trial and the plant stand density (or seeding rate) trial are contiguous, with 4 cotton rows separating these tests. The geographic coordinates for this field: 31°32'38.83"N, 106°10'45.11"W, at an elevation of 3,625 feet.

COTTON PLANT STAND DENSITY TRIAL (or seeding rate test): Currently, most growers in El Paso use up to 30 lbs/acre, but some farmers have obtained higher yields from plots with lower seeding rates. Responding to grower's concerns about high prices of cotton seed and as a result of previous field research that indicated that substantial savings could be gained by planting at a lower plant stand density than what growers traditionally use, a 3-replicated field trial was established on April 27 at Mr. Ramon Tirres' Farm near Clint. Plots are 8-row wide with a 4-row margin preceding the test. This test included the following three seeding rates: 17.3 lbs, 15 lbs, and 13 lbs of seed /acre. Cotton growers are interested in finding out the effect of seeding rates or plant stand densities on lint yields. If relatively similar yields can be obtained using lower seeding rates, substantial savings could be gained by planting less cotton seed than what most growers are currently doing. Results obtained in the previous two years indicate that the evaluated seeding rates are inversely proportional to yield; meaning that the lowest seeding rate produced the highest yield; while the highest seeding rate produced the lowest yield. I plan to hold turn-row meetings at this location this season to discuss pest management issues, but you are welcome to visit these field trials to make your own observations.

Seeding rate/acre		
Rep	**Trt.**	**Variety**
101	1	Low (13.1 lbs)
102	2	Med. (15.3 lbs)
103	3	High (17.3 lbs)
201	2	Med. (15.3 lbs)
202	1	Low (13.1 lbs)
203	3	High (17.3 lbs)
301	1	Med. (15.3 lbs)
302	3	High (17.3 lbs)
303	2	Low (13.1 lbs)

UPLAND COTTON VARIETY TRIAL: A 4-replicated test was planted on May 1 in Dr. Harvey Hilley's Farm near Clint High School in El Paso County (see attached map). This test was planted with 8-row wide margins and using 38 inches between rows. It has 4 replications and includes the following 8 varieties: DP-1212-B2RF, DP-1518-B2RF, DP-1522-B2RF, FM-1830-GLT, FM-2334-GLT, ST-4747-GLB2, ST-4946-GLB2, and DP-1321-B2RF.

This location was chosen based on the fact that it has relatively uniform soils and on considerations of irrigation availability.

The plots in this field could not be allocated completely randomized due to the fact that we used an 8-row planter and the plots are 4-row wide. Therefore, for practical reasons, the 8 varieties tested were distributed in pairs throughout the test.

The coordinates for this field are the following: 31°34'48.11"N, -106°12'24.66"W. This site has an elevation of 3,655 feet.

This test should be read from left to right with the aid of the attached plot map. If you place yourself in front of the northeast corner of the field and skip the first eight cotton rows, the next four rows belong to plot # 101. Immediately on your right hand side, you will have plot # 102 and so on.

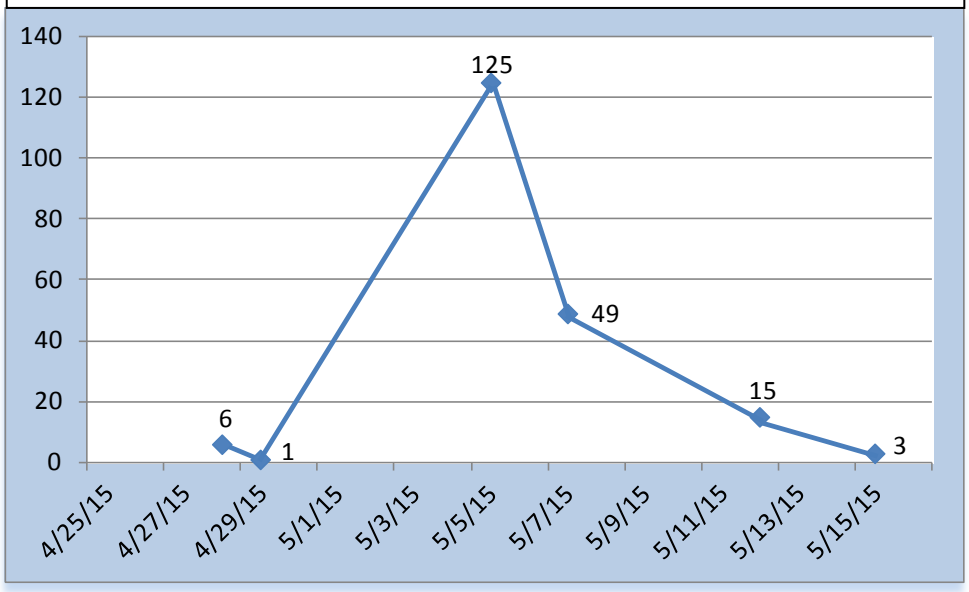
A field day will be conducted prior to harvest to tour these three demonstration plots. This will allow the cotton farmers to make their own observations and draw their own conclusions.

2015 UPLAND VARIETY TRIAL		
PAIR	**PLOT**	**VARIETY**
1	101	DP 1212 B2RF
	102	FM 1830 GLT
2	103	ST 4747 GLB2
	104	DP 1321 B2RF
3	105	FM 2334 GLT
	106	DP 1518 B2RF
4	107	ST 4946 GLB2
	108	DP 1522 B2RF
3	201	DP 1518 B2RF
	202	FM 2334 GLT
4	203	DP 1522 B2RF
	204	ST 4946 GLB2
2	205	DP 1321 B2RF
	206	ST 4747 GLB2
1	207	FM 1830 GLT
	208	DP 1212 B2RF
3	301	ST 4946 GLB2
	302	DP 1522 B2RF
1	303	ST 4747 GLB2
	304	DP 1321 B2RF
4	305	FM 2334 GLT
	306	DP 1518 B2RF
2	307	DP 1212 B2RF
	308	FM 1830 GLT
4	401	DP 1522 B2RF
	402	ST 4946 GLB2
2	403	DP 1321 B2RF
	404	ST 4747 GLB2
3	405	DP 1518 B2RF
	406	FM 2334 GLT
1	407	FM 1830 GLT
	408	DP 1212 B2RF

PECAN:

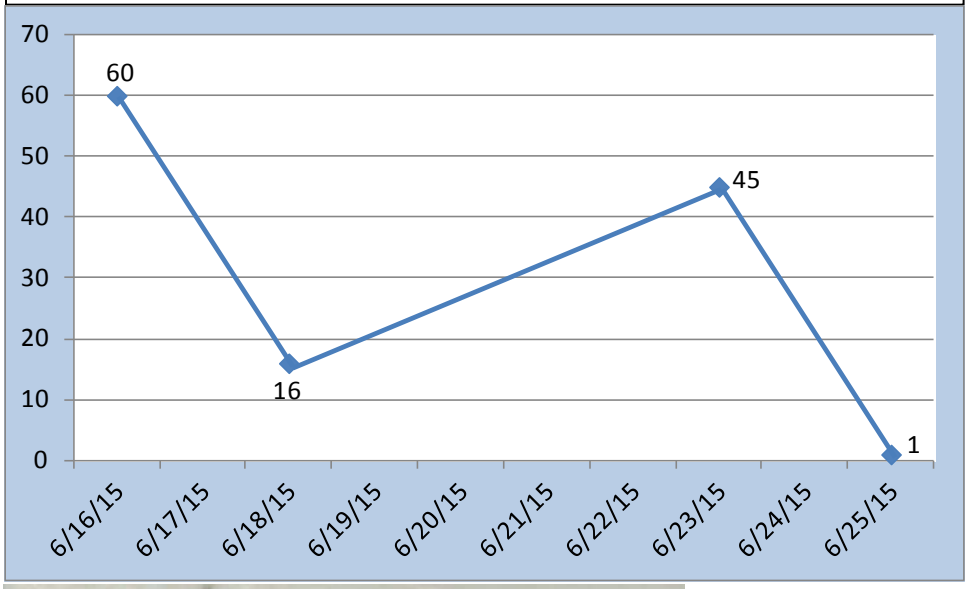
The **second-generation pecan nut casebearer** (PNC) moths were initially captured near Tornillo on June 11. My first captures of second-generation PNC moths occurred near Clint on June 16. This year, Dr. Jaime Iglesias contacted Mr. Lucio Lopez, Local Board of Plant Health of the Juarez Valley (Junta Local de Sanidad Vegetal del Valle de Juárez), to monitor this pest throughout the season in Chihuahua, MX. I shared with Mr. Lopez part of the donation (pheromone traps, sticky liners, and lures) that I received from Ms. Donna Lingren, Marketing Manager of Trece Incorporated. Mr. Lopez placed 10 traps (5 Mexican and 5 standard lures) in commercial pecan orchards in the Juarez Valley in close proximity to the international border. Using the data that Mr. Lopez shared with me, I developed the attached graphs showing the numbers of PNC moths captured in the traps for the first and second generations. The tables show total moth numbers without differentiating between traps containing Mexican or standard lures. During the first PNC generation, the efficiency of the standard lures was approximately 32% compared to the Mexican lures (48/151 = 0.3179). The difference in the lures capture efficiency was much more pronounced for the second PNC generation: 7% (9/122 = 0.0737) again in favor of the Mexican lures.

1st generation PNC moths captured in pheromone traps on the Mexican side of the international border by Mr. Lucio Lopez in April-May 2015

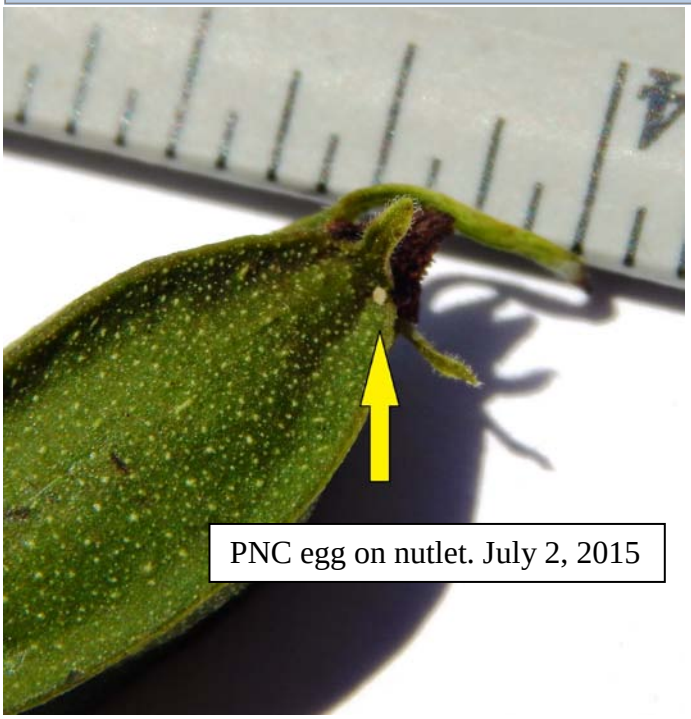


For comparison, in the next issue of this newsletter, I will post graphs showing first and second PNC generation moths captured in pheromone traps in El Paso County this season.

2nd generation PNC moths captured in pheromone traps on the Mexican side of the international border by Mr. Lucio Lopez in June 2015



Currently, PNC eggs can be seen on the nutlets. When you inspect PNC eggs, be careful to observe whether they are viable or alive versus dead or already ecloded (just empty egg shells). Also, some of the ecloded eggs may be left from the first generation and not necessarily recent ones. No insecticide applications have been made against second PNC generation yet, but this situation may change in the next few days, as some growers are evaluating the most appropriate course of action based on PNC egg counts.

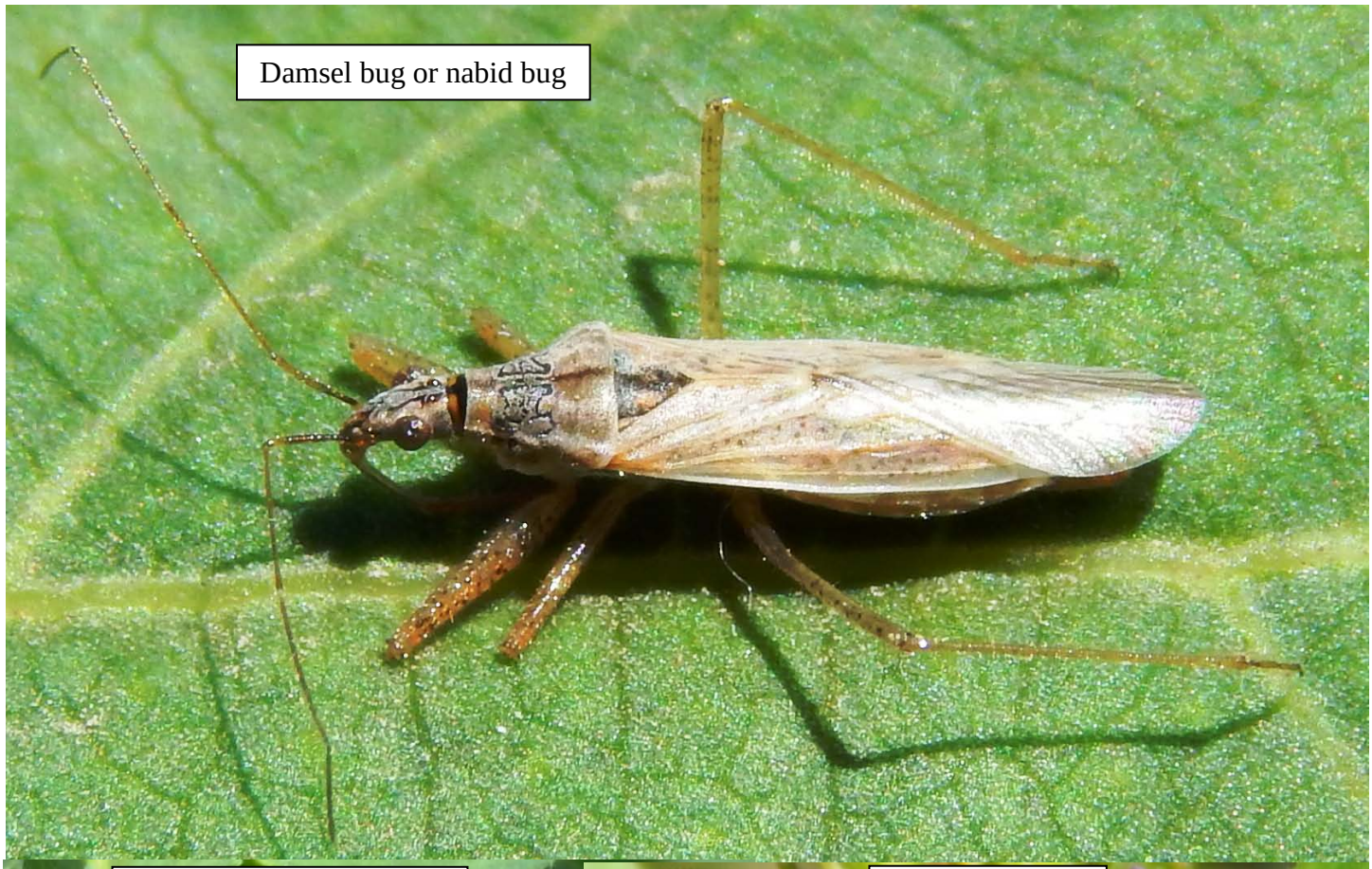


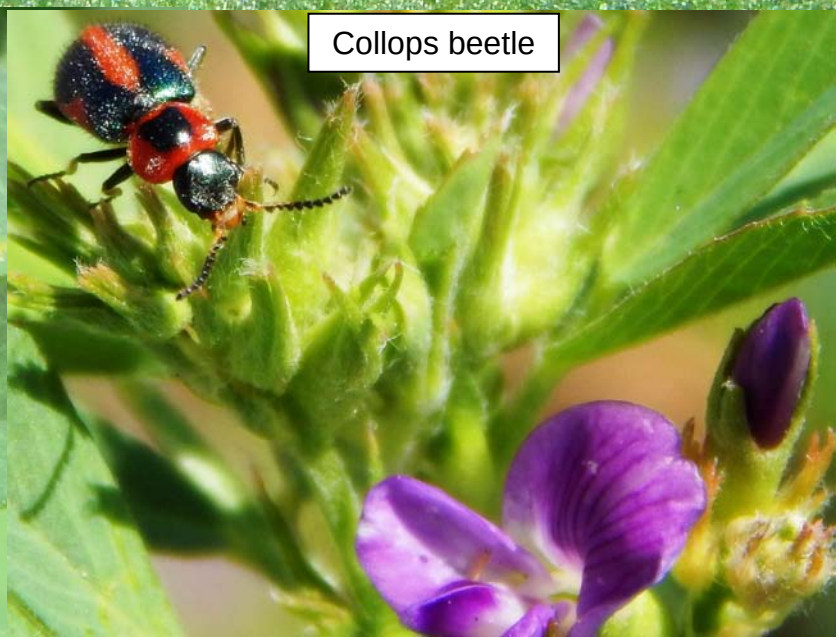
PNC egg on nutlet. July 2, 2015

Pecan orchards were treated recently to control the **blackmargined pecan aphid**. The insecticides most commonly used in our region included Beleaf, Carbine, Closer, and Lorsban. Apparently, all have provided good aphid control. I inspected several orchards with significant honeydew accumulation on the leaves, but relatively low pecan aphid population levels, well below recommended action thresholds (an average of 25 blackmargined pecan aphids per compound leaf).

Green lacewing

Beneficial insects are extremely abundant throughout the region in alfalfa, cotton, and pecan. I have found high population levels of nabid bugs, lady beetles, green lacewings, assassin bugs, parasitoid wasps in the families Ichneumonidae and Braconidae, Collops beetles, etc. It is important to take the population levels of beneficial insects into account while making pest control decisions. These bugs are your friends and are worth protecting because they assist you in keeping the pests under control. The most abundant insect predator, right now, is the damsel bug also known as the nabid bug.





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