UTILIZING VOLUNTEER PECAN PRODUCERS TO MONITOR PECAN NUT CASEBEARER PHEROMONE TRAPS FOR A STATE WIDE PREDICTION PROJECT

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SUMMARY:

Forty-six volunteer pecan producers across 29 Texas counties, including five from Victoria County contributed pecan nut casebearer pheromone trap data to Texas A&M for the publication of a state wide prediction map. Counties that contributed data to this project included: Atascosa, Austin, Bastrop, Bell, Brazoria, Brown, Burleson, Clay, Collin, Comanche, DeWitt, El Paso, Ellis, Erath, Fort Bend, Hale, Lamar, Lavaca, Lubbock, Menard, Runnels, San Jacinto, San Saba, Schleicher, Terry, Victoria, Waller, Washington, and Williamson. As trap data on the start of PNC activity was received from volunteers, a prediction map for activity was posted on the pecan IPM website http://pecankernel.tamu.edu beginning in late April. The state-wide map was updated weekly through mid-May. As a result, pecan producers statewide were able to utilize this data to make critical management decisions on the pecan nut casebearer pest.

OBJECTIVE:

The objective of this project was to recruit, train and utilize volunteer pecan producers across Texas to monitor and report PNC pheromone trap data to Texas A&M for the purpose of generating a state wide prediction map of PNC activity.

METHODS AND MATERIALS:

Volunteer pecan producers were recruited through county Extension agents, the pecan IPM lab (Dr. Marvin Harris) and through the state pecan Extension IPM agent. Volunteers were provided with 5 orange delta traps and 5 pecan nut casebearer lures and instructions. Volunteers were to monitor traps and report trap data via email at least three times a week to the pecan IPM lab. Trap data was assimilated and predictions were generated.

RESULTS AND DISCUSSION:

This project originally started in the tri-county area of Victoria, Lavaca and DeWitt with 10 volunteers. The project grew to 9 counties and 30 volunteers basically as county based programs. In 2006 the project was expanded state wide in an effort to generate a state wide prediction map.

During 2006, 2007, 2008 and 2009, trap data received from producers allowed for the generation of prediction maps from mid-April to late May. Map information was also emailed weekly to 400+ producers on the pecan IPM newsletter list and to 200+ Texas county Extension agents, IPM agents and Horticulture agents.

In a post monitoring program survey, 15 of 51 volunteers (29%) responded to the survey. Nine of 14 responses indicated that the map was helpful, 8 of 11 responses indicated that the map was helpful in deciding when to apply a pesticide and 15 of 15 responses said they wanted the program to continue. This program will continue in 2010 with the addition of producers in non-reporting areas of Texas.

Date of first trap catch in Victoria County ranged from April 20th to April 27th with the first observed eggs being reported from May 4th to May 8th. From past research in has been determined that oviposition or egg lay will begin 7 - 10 days after initial trap catch and data from this demonstration supports these findings. Cumulative trap catch totals from the participating Victoria County producers can be found in Table 1.

Alerting the public to the pecan nut casebearer activity took place through two news articles in the Victoria Advocate reaching 36,000 potential contact twice plus 50 phone calls and 60 emails to producers.

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DISCLAIMER CLAUSE:

Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.

Table 1. Cumulative trap catches of adult pecan nut casebearer adult moths in pheromone traps, resulting egg lay, nut entry and spray dates. Victoria County, TX 2009.

Date: April - May	Stephen Moreno	Charles Nelson	Kernel Moritz	Ronnie Otto	Joe Janak	# Eggs or Larvae Feeding/100 clusters	Comments etc.
Mon 14		0	0		0		Note: Traps put out on first day with a "0"
Tue 15		0	0	0	0		
Wed 16		0	0	0	0		
Thur 17		0	0	0	0		
Fri 18	0	0	0	0	0		
Sat 19	0	0	0	0	0		
Sun 20	0	0	0	0	1		
Mon 21	0	0	0	0	1		Note: First moth caught on shaded dates. Should start looking for eggs 7 to10 days after finding the first moth.
Tue 22	0	0	0	0	2		
Wed 23	0	0	0	0	4		
Thur 24	0	0	0	0	4		
Fri 25	1	7	0	2	4		
Sat 26	1	13	0	2	4		
Sun 27	2	23	1	2	4		
Mon 28		29	3	8	9		
Tue 29		33	8	8	11		
Wed 30		41	8	17	11		
Thur 1		41	14	29	12		
Fri 2		44	14	32	12		
Sat 3		46	14	37	12		
Sun 4		52	14	40	14	Nelson – 2 white eggs	
Mon 5		53	20	42	16	Janak – 3 white eggs; 2 pink eggs	Janak – 2.5 % infestation on 200 clusters Moritz – no eggs found yet
Tue 6		53		45	17	Nelson – 2 pink eggs; 2 bud entries	
Wed 7		54			18		
Thur 8					18	Nelson – 1 hatch; 2 bud entries; 1 nut entry Moreno – 1 pink egg; 1 bud entry; 1 nut entry	Moreno had 4 % infestation of 50 clusters checked
Fri 9					18		Nelson sprayed
Sat 10					18		
Sun 11					18		
Mon 12					18		
Tue 13					19		
Wed 14					19		