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

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SUMMARY:

Fifty-four volunteer pecan producers across 31 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, Bell, Brazoria, Brown, Burnet, Colorado, Comanche, Culberson, Dallas, DeWitt, El Paso, Ellis, Erath, Fayette, Fort Bend, Harris, Hood, Lamar, Lavaca, Menard, Pecos, Runnels, San Jacinto, San Saba, Schleicher, Uvalde, Victoria, Washington, Webb 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 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 and 2007, 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 100+ 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 2008 with the addition of producers in non-reporting areas of Texas.

Date of first trap catch in Victoria County ranged from April 23rd to April 29th with the first observed eggs being reported from May 3rd to May 4th. 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 38,000 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[1/] of adult pecan nut casebearer adult moths in pheromone traps, resulting egg lay, nut entry and spray dates. Victoria County, TX 2007.

Date: April - May	Stephen Moreno	Charles Nelson	Kernel Moritz	Ronnie Otto	Joe Janak	# Eggs or Larvae Feeding/100 clusters	Comments etc. Note spray date.
Tue 17			Set				Traps hung in trees on "Set" date
Wed 18		Set	0				
Thur 19		0	0		Set		
Fri 20	Set	0	0	Set	0		
Sat 21	0	0	0	-	0		
Sun 22	0	0	0	-	0		
Mon 23	0	2	0	1	0		Note: First moth caught on shaded dates. Should start looking for eggs 7 to10 days after finding the first moth.
Tue 24	0	2	0	1	0		
Wed 25	0	4	0	3	0		
Thur 26	0	9	0	3	0		
Fri 27	0	17	0	8	2		
Sat 28	0	29	5	10	2		
Sun 29	2	44	5	12	7		
Mon 30	2	47	15	13	7		
Tue 1	3	57	15	16	8		
Wed 2	4	62	25	19	9		
Thur 3	8	72	32	22	9	3 eggs	Nelson - 3% infestation
Fri 4	8	76	-	22	9	4 eggs, 2 bud	Moreno - 6% infestation
						1 egg	Otto - 1% infestation
Sat 5	8	83	-	26	9	2 pink eggs	Nelson - 2% infestation
Sun 6	9	87	-	31	9	1 entry	Moritz - 1% infestation
Mon 7	10	90	-	33	9	3 eggs, 5 bud	Moreno - 8% infestation
						3 pink eggs, 5 bud entries	Nelson - 8% infestation
						3 nut entries	Moritz - 3% infestation; sprayed today
						9 eggs; 2 bud & 1 nut entry	Otto - 12% infestation; recommended spraying
						3 eggs, 5 nut entries	Janak - 8% infestation; recommended spraying
Tue 8	10	97	-	-	9		Nelson - Sprayed today