Plant Disease and Insect Advisory

Entomology and Plant Pathology
Oklahoma State University
127 Noble Research Center
Stillwater, OK 74078

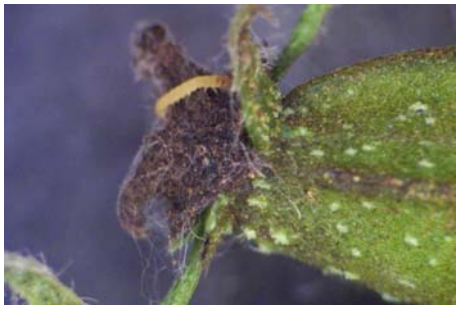
Vol. 6, No. 16 Website: http://entoplp.okstate.edu/Pddl/advisory.htm May 29, 2007

Pecan Nut Casebearer Treatment Time

Phil Mulder, Extension Entomologist

Early indications from captures of pecan nut casebearer (PNC) moths throughout the state suggest that the damaging first generation larvae could be present and damaging pecans as early as late May in southern Oklahoma. Early warm temperatures accelerated accumulation of degree days throughout the state and some locations in southern Oklahoma have surpassed the critical level to begin scouting for eggs. On May 18, egg populations were recorded in Burneyville, Oklahoma. On May 21, initial eggs of the season were discovered in Marlow, Oklahoma and on May 25 eggs were found by Central High, Oklahoma. While moth flights have been heavy around Stillwater, Oklahoma, as of May 25, no eggs were found. I suspect strongly, that early this week (28-30 May) that scenario will change quickly. We could be experiencing first entry of pecans by larvae as early as 12-16 days after first capture of adult males in pheromone traps. Based on moth captures occurring on May 6 in Burneyville, first nut entry could occur sometime this week in southern Oklahoma and the first full week of June in northern areas.

Typically, male PNC emerge about three days before females, females then require about three days for mating before they begin laying eggs and eggs may require from 3-5 days before hatch. After egg hatch, larvae will feed on buds for about two days before attempting to enter nuts and finally population buildup requires about two to four days. Once cluster infestations exceed 1-2%, treatment should take place immediately. Growers should be urged to check 310 clusters per orchard and if 2 eggs or damage is found, then treatment should be made. While checking clusters, if 1-2 eggs or damage are found before reaching 310 clusters checked, then scouting can be stopped and treatment made. Since eggs are difficult to see, we urge growers to at least be in their orchards regularly (every 2 days) during the next week or so to detect signs of damage. Damaged nuts are easier to discover than eggs and if you see the first damaged nuts then the decision to treat can be made immediately. Some areas of the state have a



tremendous crop and there may be a temptation to let the casebearer do some selective thinning so you don't have to later, especially with large seeded cultivars. Please, avoid this temptation, since it puts the casebearer in control and not the grower. Subsequent generations can build rapidly under these conditions and a 10% loss can quickly escalate into a 50% loss.

Treatment choices can include any of the chemicals from the following table, but consideration should be given to using something gentle to preserve beneficial organisms. Early use of synthetic pyrethroids, carbamates and organophosphates for this insect pest are not recommended. These latter materials are cleared for use in pecan and are presented here for information and consideration on other pests. In addition to the considerations mentioned here, if livestock are utilizing the orchard floor, growers should pay careful attention to grazing restrictions associated with some of these chemicals. Whenever using insect growth regulators, it is strongly suggested to use a spreader/sticker to increase residual capacity of these materials. Do not use these materials around any bodies of water as they may cause adverse effects on aquatic organisms. Likewise, do not use spinosad products around bees, as this material is highly toxic to honey bees.

Table 1. List of common insecticides that can be used for controlling pecan nut casebearer and other pests in pecan.

Common Name	**Chemical Name**	**Chemical Class**
Lorsban 4E [r]	Chlorpyrifos	Organophosphate
Malathion	Malathion	Organophosphate
Imidan	Phosmet	Organophosphate
Cypermethrin [r]	Ammo	Synthetic Pyrethroid
Esfenvalerate [r]	Asana	Synthetic Pyrethroid
Zeta-cypermethrin [r]	Mustang-Max	Synthetic Pyrethroid
Gamma-cyhalothrin [r]	Proaxis	Synthetic Pyrethroid
Lambda-cyhalothrin [r]	Warrior	Synthetic Pyrethroid
Spinosad	SpinTor or Entrust	Fermentation By-Product
Tebufenozide	Confirm	Insect growth regulator
Methoxyfenozide	Intrepid	Insect growth regulator
Difulbenzuron	Dimilin	Chitin-synthesis inhibitor
Bacillus thuringiensis	Javelin, Dipel, many other names	Bacterial insecticide

[r] Restricted use Chemical, for purchase and use by certified applicators only.

PDIDL News

Richard Grantham, Dir., PDIDL

Effective June 1, Brian Olson will be leaving his position as Extension Associate and Plant Disease Diagnostician with the Plant Disease and Insect Diagnostic Lab at OSU. Brian has been in the position for almost 8 years and has done an outstanding job of bringing the lab into the "molecular age". Brian will be leaving his position to join Dr. Mary Palm at the USDA-APHIS-PPQ lab in Beltsville, MD. I know you will join with me in wishing him great success in this new position.

We will make every effort to continue handling samples in a timely fashion as we identify a candidate for the Plant Disease Diagnostician position.

Dr. Richard Grantham
Director, Plant Disease and Insect Diagnostic Laboratory

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, VP, Dean, and Director for Agricultural Programs, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of Agricultural Sciences and Natural Resources.