

## Pecan Nut Casebearer (PNC) Time is Here

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Time is drawing near to begin monitoring for Pecan Nut Casebearer (PNC). If producers have not ordered PNC pheromone traps it is time to do so. As a general rule for southern and central Oklahoma, traps should be in the orchard by the first week of May. The key to using pheromone traps is to get them out early in order to detect the onset of flight. The initial date of collection, when moths are captured (on 2 consecutive nights) will act as a biofix for predicting egg laying (oviposition).

### Description:

Adult casebearer moths (Fig. 1) are gray to dark gray, have a dark ridge of scales on the forewings, and are about 1/3 inch in length.



Figure 1. Adult Casebearer



Figure 2. Casebearer Eggs

Eggs are small and oval shaped (0.36 X 0.65 mm). The first generation of eggs are laid singly at or near the calyx lobes of nuts after pollination (Fig. 2). PNC eggs are white when first laid, then gradually change to a red color three to five days before hatching. As the larvae grow and move to developing nuts, they will bore into the base of one or more nuts. Black excrement (frass) and silk at the base of nuts indicates larval entry (Fig. 3). They remain within the nut and feed for four to five weeks. Full-grown larvae will pupate inside the pecan and emerge as moths 9 to 14 days later.



Figure 3. PNC Damage. Photo Credit, Noble Research Institute.

### **Scouting:**

In Oklahoma, egg-laying by PNC begins around the end of May in southern counties and ranges to June 15 in northern parts of the state. Excessive rainfall or cold temperatures may delay development of the overwintering generation.

Scouting for PNC eggs should begin one to two weeks before nut entry by larvae. This requires looking for eggs on the nuts and using a hand lens to determine the maturity of eggs. To determine infestation levels, nut clusters should be examined. A cluster is infested if any eggs are found, or evidence of larval entry (damage) is observed. Examine 10 nut clusters per tree across several trees. If 2 or more clusters are infested before 310 clusters have been examined, an insecticide application should be made as soon as possible. If less than two clusters are found infested, sampling should be repeated in two to three days.

First generation PNC generally cause the most damage. Larvae tunnel into nutlets shortly after pollination and can potentially destroy all nutlets in a cluster. The most effective control method is a well-timed insecticide spray. Whenever possible, biological insecticides (B.t.) or insect growth regulators (IGR) should be used for controlling PNC instead of synthetic pyrethroids, carbamates, or organophosphates. The latter materials, while effective, can result in reduction of parasite and predator populations. Due to loss of beneficial organisms, this increases the possibility of rapid population growth of aphids and spider mites.

Insecticides should only be applied if the nut load and infestation level warrant a treatment.

### **Pheromone Traps:**

Pheromone-baited traps for PNC use pheromone (sex attractant) that mimics the chemical emitted by female casebearer moths and attracts males to a sticky trap (Fig. 4 and 5). Trap captures can be used to detect the arrival of PNC into an area, aid the grower in estimating population numbers, and provide a signal of when first significant nut entry by larvae may occur. As a general rule, oviposition will start 7 – 10 days after first capture and nut entry starts

12 – 16 days after initial catch. Monitoring should begin in early to mid-May to identify a biofix and prepare for the flight in late May/early June.



Figure 4. PNC trap and pheromone  
Photo Credit, Noble Research Institute.

Figure 5. Adult moths on sticky trap insert, Bill Ree.

#### **PNC Pheromone and Trap Suppliers:**

So far, one location in Oklahoma serves as a distributor for traps, trap kits, and pheromone of PNC:

Trece, Inc. P.O. Box 129 Adair, OK 74330 Ph: 918-785-3061 Order Center 866-785-1313 Fax: 918-785-3063 Email: [custserv@trece.com](mailto:custserv@trece.com) Web: <http://www.trece.com>

In addition, the pheromone and traps can be obtained from Great Lakes IPM, Inc., Gemplers, and other services that carry IPM supplies.

Great Lakes IPM Inc. 10220 Church Road Vestaburg, MI 48891-9746 Ph: 989-268-5693 or 989-268-5911 Toll Free: 1-800-235-0285 Fax: 989-268-5693 E-mail: [glipm@nethawk.com](mailto:glipm@nethawk.com)

Gempler's P.O. Box 270 100 Countryside Drive Belleville, WI 53508 Order by Phone: 1-800-382-8473 Order by Fax: 1-800-551-112

Additional information on the Pecan Nut Casebearer can be found at EPP- 7189, The Pecan Nut Casebearer, <https://extension.okstate.edu/fact-sheets/the-pecan-nut-casebearer.html>