

Pecan Weevil Season is Here. Are you ready?

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Recent rains (the 2–3-inch kind) have pecan weevils on the move. Typically, weevil emergence increases three to four days after a 1- to 2-inch rainfall event. For some growers, decisions about pecan weevil treatment could be coming within the next week or so. Trap monitoring has shown pecan weevil emergence at the Cimarron Valley Research Station in Perkins, OK (Payne County). Most trees are still in the water/gel stage, however, early maturing cultivars such as “Peruque” have transitioned to dough stage, with later maturing cultivars soon to follow. Dough stage (**Fig. 1**) is the period in pecan development where pecan nut maturity begins and are most susceptible to pecan weevil female oviposition (egg lay), generally late-August to mid-September.

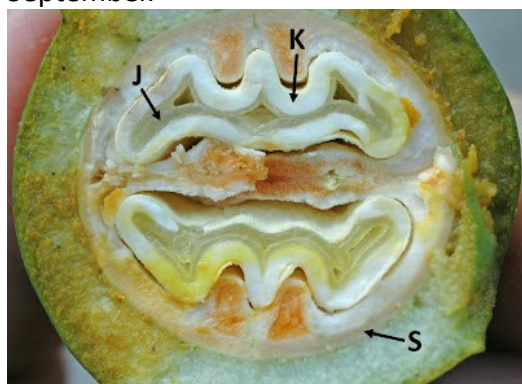


Figure 1. Photo. Northern Pecans.

The arrow marked “K” denotes a newly formed kernel (starting dough stage). The white color indicates what the kernel will look like as the liquid absorbs back into the tree and continues to develop.

Inside the white kernel layer is a translucent later marked “J”. This is kernel tissue not fully developed into the solid state. This is the origin of the gel stage.

The area marked “S” is the formation of the shell.

Oviposition by female weevils can occur as early as 2 days after emergence; however, average egg production occurs 6.5 days after emergence, giving growers a window of opportunity for decision making regarding spray applications (**Fig. 2**). Once eggs are deposited inside the nut and larval feeding begins, insecticide applications are ineffective (**Fig. 3**). Damage from pecan weevil can vary from year to year and orchard to orchard. Drought conditions can also delay emergence. If dry conditions prevail in certain areas, potential weevil problems could persist into October.

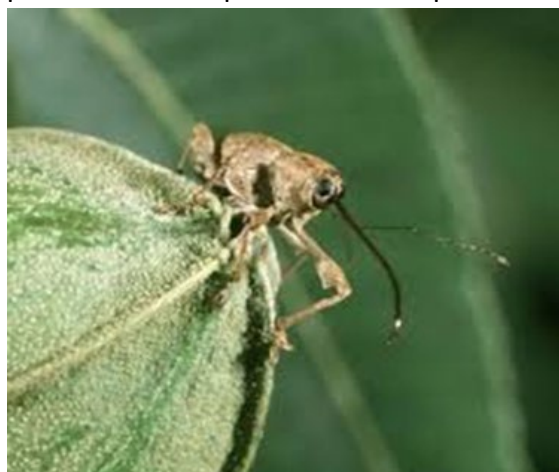


Figure 2. Female Pecan Weevil oviposition. (OSU).



Figure 3. Pecan Weevil larvae in nut. Credit. (University of Georgia)

After feeding for approximately 42 days, larvae will drop from the nut and burrow into the soil at various depths depending on soil type, moisture, and condition of the orchard floor. Most larvae are 6-9 inches deep in the soil profile. At this point they will create an earthen cell for overwintering (**Fig. 4**). Ninety percent (90%) of the larvae that entered the soil in the first year



will pupate and emerge in the second year. The remainder of the population (10%) will not emerge until the third year. This makes the typical life cycle of the pecan weevil 3 years.

Figure 4. Pupa inside earthen cell, photo credit, Jerry Payne, USDA-NRS.

Much of the damage experienced by pecan weevil can be avoided with timely use of insecticides. Making the decision on when to treat, however, can be challenging. Emergence can be highly variable, especially in years delayed by drought. The use of the (Circle Trap) is a useful tool for determining emergence timing. Developed by Kansas pecan grower, Edmond Circle, these traps eliminate management challenges (e.g., grazing and mowing) of previous traps.

Below are a few general suggestions to keep in mind for pecan weevil management:

- Where possible, target indicator trees – Those with a history of weevil problems, early maturing, or found in sandy soils.
- Begin trapping by July 15, if possible, but don't be overly concerned if the nuts are still in the water stage.
- Monitor pecan nut development (dough stage). Generally, mid to late August.
- Don't stop trapping too early (mid-October).
- Inspect traps at least every 2 to 3 days.
- Keep good records.
- Monitor trap captures to optimize control measures throughout the season; and
- Finally, if aphids are problematic before application, incorporate an aphicide (e.g. – Closer®, Carbine®, Movento®, etc.). This can save you from a sticky mess that can result in moldy pecans and early defoliation, the latter of which can affect fruit set for the following year.

More information on pecan weevil and its control can be found in [EPP- 7079](#), *Biology and Control of the Pecan Weevil in Oklahoma* and [CR- 6209](#), *Commercial Pecan Insect and Disease Control*.