



Pest e-alerts



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Walnut caterpillar and other insect issues

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I have received many reports lately, on Walnut caterpillar or Walnut datana, which is active on pecan at this time. In addition, there are other pests active and causing similar symptoms. Recognition of the early stages of an infestation is critical to preventing a major loss of leaves too early in the season. For Walnut caterpillar in Oklahoma there can be two generations per year, so keep an eye out for them now and into the future. Usually, trees damaged by one generation will not be infested by the next generation because the foliage will not be at the right maturity. Damage can be extensive and is characterized by a significant loss of foliage where the leaf veins and rachises are left behind (Figure 1), and no webbing is present (unlike fall webworms – Figure 2). When these caterpillars are young, they appear to have obvious purple and white stripes running the length of the body (Figure 3).



Figure 1: damage by Walnut Caterpillar



Figure 2: Webworm damage on pecan tree



Figure 3: Early Instars



Late Instars

As they mature, and reach the last instar in their immature stage, they turn almost black and possess several long tufts of hairs across the entire body. The caterpillars will often congregate together, attacking one branch or series of branches, move to a large scaffold branch or trunk, and molt all together in a cluster, leaving their cast exoskeletons behind (Figure 4). Subsequently, they continue to feed on additional foliage and progress through five instars (larger sizes of larvae). During the final larval stage they will exit the tree and find a pupation site in the ground, among debris, or nearby turf. Generally speaking these insects, as well as webworms, are well-controlled in commercial orchards that use insect-growth regulators like Confirm or Intrepid, but native groves, homeowner trees, or roadside trees, that may not be well attended to may experience significant defoliation. While minor defoliation is not problematic, if the amount is extensive, this can affect the fruit production next year. Pecan growers need to retain tree foliage as late into the season as possible to enhance return bloom.



Figure 4: Cast Exoskeletons

This last point is related to aphid infestations that will likely be coming on quickly with hot, dry weather and the need to control pecan weevil. While the pyrethroids are likely the least expensive and best alternatives for weevil control, they can cause aphid flare ups. Growers should be cautioned against controlling weevils too early in the season. Weevils feed on about one nut every four days, and if these nuts are in the water stage, they will most likely abort. Many improved cultivars need thinning to make quality fruit anyway, but that does not mean you can let the weevils determine the crop load. Once the fruit has entered the dough stage of development (usually toward the end of August or first of September) an application for weevil can be made. Some areas will require 3-4 applications per year for weevil, while well-managed orchards may need only two on a well-timed basis. If aphids become a problem after the first application for weevil, it may be prudent to tank mix an aphicide in with the second application. Growers can use materials containing imidachloprid (Admire[®], Pasada[®], Sherpa[®], etc.), sulfoxaflor (Closer[®]), Flonicamid (Carbine[®]), or Spirotetramat (Movento[®]).

Disease and Insect Diagnostic Laboratory

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