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PECAN NUT CASEBEARER

PNC has been pretty much all over the board this spring. In some areas it was 2 weeks early (one producer said three weeks for him), some producers have had significant catches while others very few. To add to the confusion, cold nights (50 or less) tend to slow things down. I feel that it will be important to go back in the orchard about 4 – 5 days after treatment to scout for any new activity.

WALNUT CATERPILLAR

Well as one homeowner in Fort Bend County said ;
 “They’re baaaaack”.



Figure 1. Walnut caterpillar egg masses. Photo credit: Ken Rivet, Fort Bend county

On May 8th I received reports and pictures from Fort Bend County that first generation walnut caterpillar activity has started.



Figure 2. First instar walnut caterpillar larvae



Figure 3 Defoliated branch terminal due to walnut caterpillar feeding

The Fort Bend County infestation is primarily in a residential area however, a lesson learned in previous years is that the importance of recognition of the early

stages of an infestation is critical in order to prevent significant foliage loss. This lesson applies to both the urban sector and the commercial producer.

Signs of the onset of an infestation that all producers should be aware of are: recognition of egg masses; branch terminals with missing foliage; skelontized leaflets (caused by 1st instar larvae); dropping (frass) on the orchard floor, sidewalks, driveways and equipment and masses of cast skins or larvae on tree trunks or main scaffold limbs.

There are isolated or localized areas of walnut caterpillar activity every year, however, it has been a long time (early 1970's) since there was a major state wide infestation and we keep wondering if "this" year will be the next major outbreak. Because this insect has the potential to go from almost undetectable populations in one generation to major outbreaks in the next, the importance of monitoring and awareness cannot be overstated.

The walnut caterpillar is a foliage feeder of trees in the family Juglandaceae which includes hickories and walnuts. Here in Texas walnut caterpillar can have two or three generations per year based on developmental times with 245 frost free days being an approximate dividing line between areas that could have two or three generations.

Infestations start with female moths depositing egg masses which may contain 300 – 900+ eggs on the undersides of individual leaflets of mature foliage and it is believed that a single female will deposit only one egg mass in her life. Unlike fall webworm where egg masses can be deposited in layers and will be covered with "fuzz", walnut caterpillar egg masses will be in one layer and free of any covering. Eggs will take average 10 – 12 days to mature and larval feeding will be approximately 23 days before larvae leave the tree to seek pupation sites. Pupation time will be averages 14 – 17 days. Upon adult emergence there is a 5 day preoviposition period before the cycle starts again.

Walnut caterpillars feed in a colony and do not construct a web so initial infestations can be easily overlooked. Early indications of an infestation might be frass or dropping on the orchard floor or in town on sidewalks and driveways. Branch terminals with missing foliage but retained leaf rachis are other signs of an active infestation. When the fourth instar molts, the colony molts as a group on the main trunk or a scaffold limb

leaving behind a mass of cast skins and this is another indication that there are active larvae still feeding within the canopy. The emerging 5th and last instar larvae now feed as individuals and it is during this last instar when most of the feeding damage occurs. When the last instar finishes feeding larvae will leave the tree in search of pupation sites.



Figure 4 Walnut caterpillar colony

Parasites, predators and disease can help keep populations in check however, insecticide applications are usually needed to prevent an economic loss. Another factor that can influence succeeding generations is that females will seek out "mature" foliage for oviposition sites. If a preceding generation has caused a significant amount of defoliation, the resulting new grow does not seem suitable for re-infestation and the next generation can crash.

If an insecticide is required to prevent defoliation, there are numerous products that are selective for Lepidoptera larvae which would be desired. The main point here is for treatments to be applied before significant foliage loss occurs. Prior to any insecticide applications always check the label for mixing instructions, rates and grazing restrictions.

By understanding the life cycle, feeding signs and being observant, significant defoliation of commercial or residential trees can be prevented.

2017 COUNTY/ STATE/REGIONAL MEETINGS/EVENTS

STATE/REGIONAL MEETINGS

June 1-3, 2017

Oklahoma Pecan Growers Annual Conference
Ardmore, OK

Contact: Amanda Early @ 580-235-1875 or
Charles Rohla @ ctrohla@noble.org

June 22-23, 2017

TriState Pecan Conference
Contact: Steve Norman @ 318-448-3139
pecans@rosaliepecans.com

July 9-12, 2017

TPGA Annual Conference
Embassy Suites
Frisco, TX
Contact: TPGA @ 979-846-3285

August 25, 2017

Arizona Pecan Growers Annual conference
Desert Daimond Casino and Hotel
Tucson, AZ
Conatact: Mike Kilby
mkilby@cals.arizona.edu or 520-403-4613

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