PLANT DISEASE AND INSECT ADVISORY

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Pecan Weevil Time Quickly Upon Us

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Unlike last year the heavy rains held off through the month of July and hit us hard in August instead. The consequences of this rain are plentiful. Excellent moisture conditions will allow us the luxury of filling the fair to moderate pecan crop across the state. It will also increase pressure from weeds which profit from the rain, and even worse, it marks the last piece of the puzzle to permit pecan weevil emergence. The consolation as far as pecan weevil emergence is concerned is that this 2-3 inch rainfall event has been relatively widespread, although you can see some exceptions from around the state. This consolation may present itself in the form of a quick peak of weevil activity that can be controlled with a limited number of insecticide applications. Please keep in mind as you read through this information that the management program for pecan weevil is directed at one event and that is to prevent female weevils from ovipositing in nuts. To do this, a sound, and long range management program should include: 1) Monitoring soil moisture conditions and knowing your soil type, 2) monitor kernel development of the earliest maturing varieties to know when they are the most susceptible to oviposition, 3) use some type of adult weevil trap (Circle trap) to monitor patterns in emergence that may be specific to your region and 4) use a recommended, effective insecticide.

Rainfall and/or soil moisture can be major factors in anticipating the arrival of pecan weevil emergence. Throughout much of Oklahoma (at least on a wide diagonal from southwest to northeast corner), rainfall and soil moisture are nearly ideal for weevil emergence (Figure 1). Parts of extreme southeast and northwest Oklahoma continue to be very dry and are in need of

more rain (Figure 2). Weevil emergence may be delayed in these areas, depending on soil type and subsequent soil moisture. Intermittent showers in these areas, where a deficit exists, may only serve to allow the emergence period for pecan weevil to be prolonged.

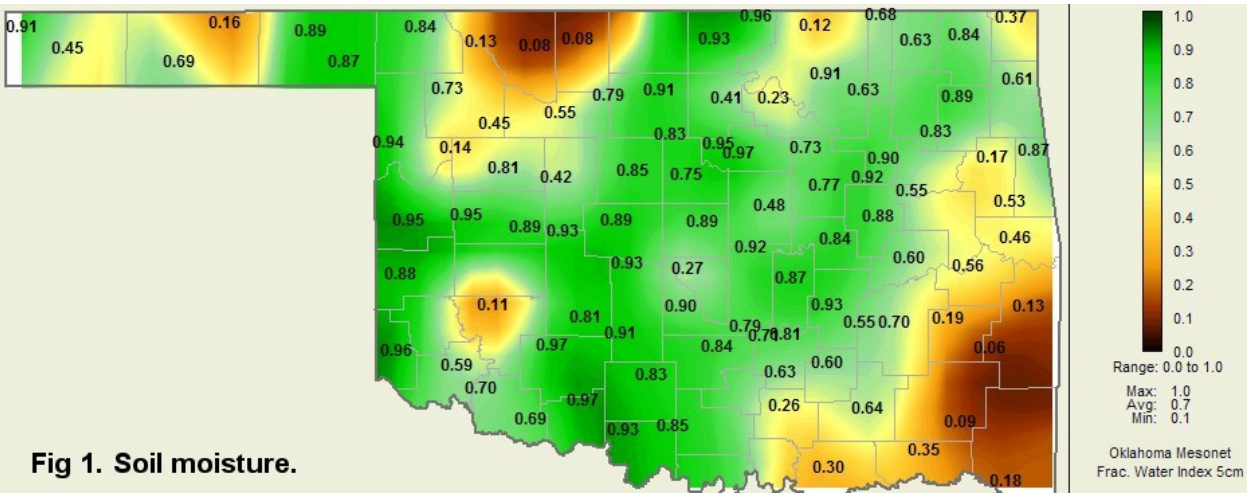

Fig 1. Soil moisture.

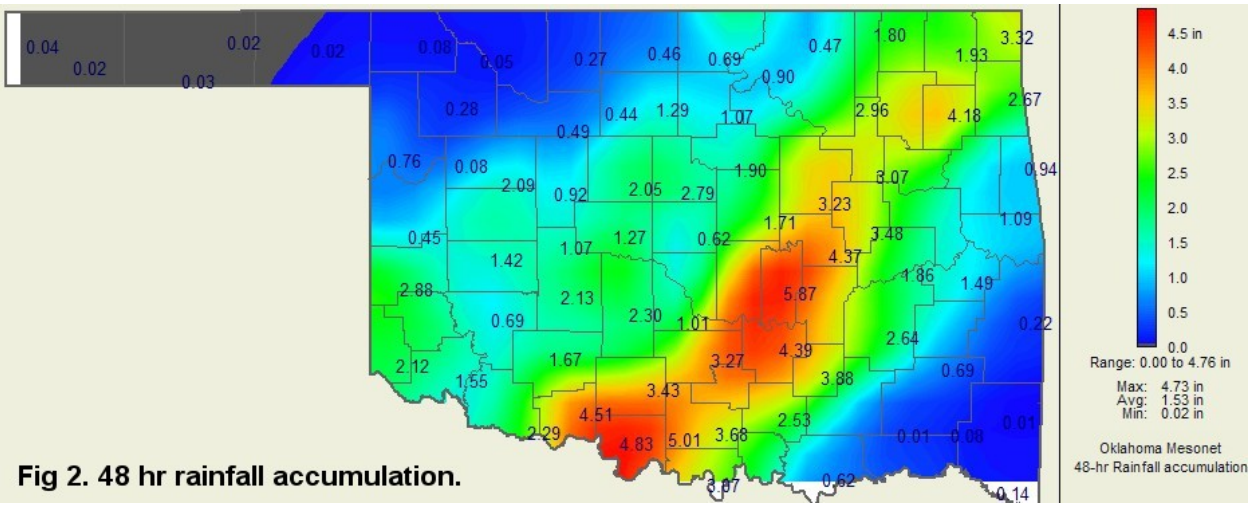

Fig 2. 48 hr rainfall accumulation.

Early in the emergence period, while pecans are still in the water stage, pecan weevils will attempt to feed and/or oviposit in pecans; however, their efforts are futile. Early feeding damage only results in aborted pecans that should not make it to harvest time, while oviposition is not successful until kernel development has reached the dough stage. This maturing occurs first at the tip of the nut. Certain cultivars (e.g. - Peruque, Pawnee, etc.) will mature sooner and provide good indicator trees for when emergence has begun. On average, female weevils will lay four eggs per nut. Subsequent feeding by larvae within the nut will naturally destroy the overall quality of that nut and can have the potential of frightening customers in retail stores. This suggests strongly that tolerance to pecan weevil damage and ovipositon is very dependent on your market strategy. Producers selling pecans to a sheller normally tolerate some damage; however, it does reduce the crop value or may require extensive cleaning. Producers that plan to market their crop directly to the public or wholesale their crop to retailers have little to no tolerance for pecan weevil larvae infesting the nuts.

Anyone new to the pecan business this year, which may have inherited a pecan orchard that has not been well managed, should become keenly aware that the pecan weevil is going to be a major

detriment to that crop and controls directed at managing this insect may need to be applied multiple times. Trapping weevils, recording rainfall, keeping good records and checking maturity of your cultivars will go a long way in telling the complete story of weevil impact for your area. In areas where management practices have not been followed well, and weevil presence is not monitored, the first application should go out at the onset of the dough stage of development. If adult weevils are still common 5 days after the first application then the second application goes out 10 days after the first treatment. The second and subsequent applications can be delayed or even avoided if trapping can be used to determine if emergence is continuing.

If you are in a bad management area where pecan weevils have not been managed well or where conditions prevent timely management, at least keep good records of rainfall, weevil emergence and time of year. All of these factors will eventually begin to reveal a pattern that may be unique for your area. Remember also that adult weevils from this year entered the soil in 2003 and 2002. Some weevils will exhibit a 2 year cycle while others go through a 3 year life cycle. What this means to a grower is that you cannot rely on controlling the problem but just managing it for one year.

Treatment considerations for pecan weevil are directed at the adult and intended to cause mortality by direct contact or by the adult weevil being exposed to a toxic dose through feeding or crawling on the host. For many years the insecticide of choice for pecan weevil has been Sevin. This is still an excellent choice; however, the costs associated with this material have become extreme. Unfortunately, for homeowners and commercial growers without an enclosed cab on their sprayer, this is still the only choice. Commercial growers may elect to use less expensive synthetic pyrethroids (e.g. Asana, Warrior, Proaxis, Ammo, etc.); however, some of these products can be more toxic to unprotected applicators. Carefully read and follow all label directions.

These "Hills" Are Alive with Short-tailed Crickets

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With the rains we have received over the last week, we will see a rapid stimulation of growth with our lawns. These rains also seem to help "grow" some dirt mounds in many lawns, mounds that are caused by the activity of a secretive insect called the short-tailed cricket. These crickets look similar to the common field cricket, but they have a short ovipositor (thus the name short-tailed cricket), and have small wings as adults.

Short-tailed crickets live in burrows below the turf. They are even more of a "night creature than their cousin, the field cricket, rarely leaving their nest except at night to feed or mate. Adult females begin to lay eggs in late spring or early summer. The eggs hatch, and the nymphs live in the same burrow until they molt 3-5 times (this occurs around mid to late summer). The nymphs strike out on their own to construct their own burrow which they will use to overwinter. As they continue to grow, they make their burrows bigger and dig them deeper into the soil. You can tell how many short-tailed crickets are in you lawn because each mound contains only one cricket.

These crickets feed on grass, weeds and pine seedlings, but they don't cause any real damage to the turf, with the exception of their visible mounds. Their mounds which can measure up to 3 inches across tend to show up beginning in October through November as the crickets become bigger. They will re-excavate the mounds each time it rains.

We typically don't recommend controlling them because they don't cause any serious damage to the turf. Some people don't like the visible mounds in their lawns, which will reappear each time it rains. An insecticide that is registered for late summer or fall control of white grubs and other soil insects will reduce short-tailed crickets.

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