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**March 11, 2016**  
**#16-1**

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### GENERAL

This is the first Pecan IPM newsletter for 2016 and during the season I will write 8 – 10 letters covering activities, events and happening as related to pecan IPM. I also invite anyone that has a particular question or problem related to pecan IPM to send me a note and I am always open for discussion topics.

A new season is just around the corner and although it is only March there are a few pest management activities that need to be addressed. First would be sprayer calibration and maintenance. Time spent maintaining and calibrating a sprayer is time well spent. Second, **IF** there is a scale problem then a dormant oil can be applied before bud break and third, it is time to order PNC traps and lures.

### INSECTS

#### Obscure scale:

As the name implies infestations are obscure and difficult to spot. Infestations, especially heavy infestations will appear as if someone has sprinkled ash on the limbs as shown in the attached picture. When checking for this type of infestation it is best to check on 3 or 4 year old wood.

In the life cycle of this scale, females will excrete a waxy covering about 1/8 inch in diameter under which they feed and lay eggs. When immatures emerge from eggs they are referred to as crawlers which are the only mobile stage of this insect. Once a crawler has moved

and settled in a new location it begins to feed, excretes the waxy covering and it will never move again. Fortunately, there is only one generation per year.

These insects feed by inserting their mouthparts or styles into the conductive tissue of the tree and feed on the plant sap. They do not produce any honeydew. Heavy infestations can cause limb dieback and will reduce overall tree vigor.



**Figure 1. Obscure scale**

There are some beneficial lady beetles and mites that feed on scale and a few parasites which help, but if control is needed that control will have to come from the application of a dormant oil. Although we now have some highly refined light summer oils, pecan is considered an oil sensitive crop and any oil application needs to be restricted to the late dormant season.

It is the general thought that oils kill insects by suffocation where the oil covering prevents respiration. Although the exact mode of action can be debated the bottom line is that there has to be good coverage.

Scale control can be difficult and with heavy infestations it could take a couple seasons for management. Some of the difficulties for control include: the scale's waxy cover provides protection against pesticide exposure; some crawlers tend to settle under the protection of older scale covers, thus producing a layering effect; and crawler activity extends over a long period of time.

During the growing season, when dormant oil cannot be used, insecticide treatments can be used to control crawlers but these treatments must be correctly timed for crawler activity.

There are several types of horticultural oils on the market today which can cause some confusion, plus, labels on horticultural oils will contain a different terminology. Not all horticultural oils are the same and an understanding of label information is necessary to know the difference. The following is a brief description of different types of oils and an explanation of some of the information that should be found on the label.

**Dormant Oil:** This class of oil is the heaviest of the horticultural oils and is formulated for use on dormant plants only. Apply these oils as late in the dormant season as possible but **before budbreak**. Dormant oil effectiveness increases as temperatures increase and insect metabolism is accelerated.

**Summer Oils:** Summer oils are slightly lighter than dormant oils and are formulated for use during the spring and summer on some plants.

**Superior Oils:** This class of oil is the most highly refined of all the horticultural oils. These oils are used primarily during the growing season; however, they may be used as a dormant oil by changing the rates.

When purchasing a horticultural oil it is important that you understand the information on the label. The following information should be on the label and will assist you in determining the quality.

**Unulfonated Residue (UR):** this number is a measure of purity or degree of refinement and is always listed as a percent with 92 being the minimum. The higher the percent, the higher the purity.

**Viscosity:** This is a property used to define oil heaviness and is expressed in seconds. Horticultural oils fall into the 60 to 200 second range, with the heavier oils rating 100 or higher. The higher the number the more persistent the oil on the plant. Dormant or semi-dormant plants will tolerate heavier deposits than trees in leaf.

**Distillation:** distillation temperature range is a measure of the volatility of an oil. Horticultural oils have a distillation range of 400 to 488 F. The lower the distillation temperature the quicker the evaporation. Dormant oils will have a distillation range of around 438 F while superior oils will be around 412 F.

**Gravity:** This is another method of weighing oil. When related to viscosity and the UR it can provide an index to oil paraffinicity. Oils should be largely paraffinic to be safe for plants. Gravity is measured in degrees and the higher the number the more paraffinic the oil. Thirty degrees is the minimum standard.

Horticultural oils are an effective and safe way to control scale on pecans. In Texas, dormant oils are permitted in the Texas Department of Agriculture's certified organic production (Organic Food Standards and Certification, Texas Administrative Code, Title 4, Part 1 Chapter 18).

Pecan is considered an oil sensitive crop therefore only dormant oils are recommended. Before purchasing and applying any type of horticultural oil **ALWAYS READ THE LABEL**. When applying, **make sure there is good agitation in the tank**. Even though you are making an application to a dormant tree, injury or tree death can occur if there is poor agitation which allows the oil and water to separate and trees receive high concentrations of oil.

I always enjoy reading about historical pest management practices, which always reminds me that we have come a long way in our pest management practices but we still face the same problems as we did years ago. The following is from a 1929 TDA bulletin on some early scale management research.

TEXAS DEPARTMENT OF AGRICULTURE  
BULLETIN, No. 95, **March 1929**

“Growing Pecans in Texas”

By: J. E. Woodard, L.D. Romberg and F.J. Willmann

Obscure Scale, page 140....

“It seems that this scale is liable to become one of the worst pecan insects in Texas. Most of the pecan insects

will come and go....but this is not true of the obscure scale for if it once gets a start it will continue until it has killed the tree unless something is done to rid the tree of it. Two or three years are all that is required to kill an average sized tree and there are so many people that will not notice such a small insect as the obscure scale....”

Part of the text included results from a 1923 management trial that took 4 men 9 hours to put out 7 different treatments across 130 trees. I have added some of conclusions of this trial below.

“Two trees were sprayed with double strength lime sulphur. This did not injure the trees but it did very little good. Another tree was sprayed with pure kerosene and the tree never did show any sign of life when leafing out time came. Another tree was sprayed with pure crude oil. The scales were killed and the tree was slow about putting on foliage and died later in June. One tree was sprayed with oil drained from the crank case of automobiles, this tree never did show any sign of life.

Out of the seven different sprays used, some doing no good, some injuring the trees and some killing them, I would suggest that the only spray worthy of using is one pound of fish oil soap dissolved in one gallon of boiling water and one gallon of red engine oil was then added to this and thoroughly mixed. One-fourth pint of lye was added to seven gallons of water and then the soap and oil was added to this and thoroughly mixed and sprayed while hot”

#### **Pecan Nut Casebearer**

The following are a few businesses that sell PNC traps and lures. Texas A&M AgriLife Extension recommends 3 traps for 50 acres or less and at least 5 traps for orchards larger than 50 acres. Remember that any lure not being used should be stored in the freezer.

#### **Pecan Nut Casebearer Pheromone and Traps**

##### **Alpha Scents**

1089 Willamette Falls Drive,  
West Linn, OR 97068

**Sales:** 503-342-8611 — 971-998-8248

**Fax:** 314-271-7297

##### **Gempler's**

P.O. Box 44993

Madison, WI 53744-4993

Order by Phone: 1-800-382-8473

##### **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)

<http://www.greatlakesipm.com/>

#### **ISCA Technologies / Moritor Technologies**

P.O. Box 5266

Riverside, California 92517

Tel: 951-686-5008

Fax: 815-346-1722

email: [info@iscatech.com](mailto:info@iscatech.com)

Web: [www.iscatech.com](http://www.iscatech.com)

#### **Oliver Pecan Co. Inc.**

1402 W. Wallace, San Saba, TX 76877

800-657-9291

E-mail: [soliver@centex.net](mailto:soliver@centex.net)

#### **Pape Pecan House**

P.O. Box 1281

101 S. Hwy 123 Bypass

Seguin, TX 78155

Ph: 830-379-7442

#### **Southern Nut 'n Tree Equipment, Inc and PPI**

324 SH 16 South

Goldthwaite, TX 76844

1-800-527-1825

Fax: 325-938-5490

E-mail: [sales@pecans.com](mailto:sales@pecans.com)

#### **Trece**

P.O. Box 129

Adair, OK 74330

Ph: 918-785-3061

Fax: 918-785-3063

Email: [custserv@trece.com](mailto:custserv@trece.com)

Order Center: 866-785-1313

<http://www.trece.com>

#### **STATE/REGIONAL MEETINGS**

##### **2016**

The following are meetings that I am aware of to date or that have confirmed dates.

##### **County Meetings:**

###### **April 7, 2016**

Mills County Pecan Short Course

Contact: Tom Guthrie – Mills Co. CEA

325-648-2650

###### **April 14, 2016**

Comanche County

Contact: Mike Berry – Comanche Co. CEA

325-356-2539

**April 20, 2016**

Colorado/Fayette County field day  
Stephan Janak – Colorado Co. CEA  
979-732-2082

Or

Scot Willey – Fayette Co. CEA  
979-968-5831

**State Meetings**

**March 29-30, 2016**

Georgia Pecan Growers Annual Conference

Contact: Janice Dees

[Janice@georgiapecan.org](mailto:Janice@georgiapecan.org) or

229-382-2187

**June 2-4, 2016**

Oklahoma Pecan Growers Conference

Tulsa, OK

Contact: Amanda Early @

[Amanda.early@okstate.edu](mailto:Amanda.early@okstate.edu) or

405-744-8800

**June 16-17, 2016**

TriState Pecan Convention

Best Western Inn & Suites

Alexandria, LA

Contact: Stephen Norman

[pecans@rosaliepecans.com](mailto:pecans@rosaliepecans.com) or

318-448-3139

**July 10-13, 2016**

TPGA annual conference and trade show

San Marcos, TX

Contact: TPGA @ 979-846-3285

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