OKLAHOMA PECAN GROWERS ASSOCIATION

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OKLAHOMA PECAN GROWERS' ANNUAL MEETING JUNE 12-14, 2014

Mark your calendars for the annual meeting beginning on Thursday June 12 to register, visit old friends, and see the latest pecan equipment and products. Thursday beginning at 6:00 pm "Top of the Town" the annual fundraiser for the Child Care Resources Center hosted by the Community Service Council is available for our members. This event provides access to great venues and views in downtown Tulsa not normally open to the public. In addition, local restaurants donate their favorite delicacies to satisfy your appetite accompanied by live music at several locations. Transportation to this event is provided. Tickets are $40 when purchased from OPGA during pre-registration.

Friday, June 13 kicks off the educational program, food show, pecan show and additional opportunities to visit with venders at the meeting. The educational program includes information for pecan fertilization and pest control. Two featured areas this year are pecan marketing and a discussion panel investigating the merits of a marketing coop for native pecans. The other featured area includes a study characterizing the incidence of human pathogens in grazed and non-grazed orchards followed by potential solutions to mitigate nut contamination.

On Saturday, June 14 our group will travel north to visit Selman orchard near Skiatook. The field day will include a tour, short educational program, and equipment demonstrations followed by lunch courtesy of Farm Credit Services.

OPEN SEASON ON PUNXSUTAWNEY PHIL

Walt Thrun

These past few months made many of us wish for the glorious days of global warming that we experienced last year.

Regardless of the weather there are still annual orchard chores to do during the winter beginning with disposing of the piles of sticks left from the harvesting crew last November. There is the annual pruning and disposal of the pruned branches. We attempt to prune any branch that interfered with mowing the previous summer. Many branches 6-8 inches in diameter at the collar and 20 or more feet long are cut off and pushed off the orchard floor before the fertilizer truck arrives about the 3rd week of March. Removal of such branches not only enhances mowing but also allows for more air movement in the lower part of the trees to help with the scab problem along with facilitating better spray coverage for the upper branches.

Scion wood was cut at the end of December for this spring's grafting season. The beavers really taught us a valuable lessen. When they cut off a 6-8 year old tree near the waters edge, the resulting sprout/sprouts are extremely vigorous. We graft those healthy sprouts to grow propagation wood. It is not uncommon to grow a half dozen very healthy sticks ½ to ¾ inch diameter 4 feet long per sprout per year.

During the last week of April or first week of May, we'll graft. We only have about 50 trees to do this year. Seeing we have such vigorous graft wood, we typically experience a success rate exceeding 75%. The magic number in grafting is 4. The new growth should be 4 inches long at the end of the 4th week and 4 feet long at the end of the 4th month.

Our orchard is a random orchard, i.e. we began 30 years ago by grafting hundreds of volunteer random sprouts throughout the then pasture. Where there was an opening, we planted native nuts from healthy native trees. We felt that native nuts from very healthy native trees grown in a proven location conducive to pecans would provide excellent root stock on which to graft cultivars. As a result our orchard has trees of various ages and sizes. Mathematically (or geometrically) we should have more canopy area through the years with varied size trees than if we had rows of the same size trees where every other tree is removed after a given length of time. Spraying and mowing presents a real challenge, however.

After such a tough winter, we are really looking forward to spreading nitrogen and waiting for bud break and the appearance of catkins. Then it will be time to begin zinc foliar application. We'll do at least 3 zinc applications and tank mix fungicide if warranted by temperature and humidity patterns. Our orchard location plus our predominant 'Maramec' variety will require at least 6 fungicide applications ending normally the second week of August just in time to begin preparing for weevils.

We're excited to begin another season building on what we learned last year. In December as I was preparing to renew my private applicators license, I learned that pesticide resistance can be a problem if the same class of pesticide with the same mode of action is used repeatedly without rotating. I also learned from experience to be more aware of fungicide choices to insure that powdery mildew control is considered along with scab.

Remember the veterans we mentioned in the last newsletter? Well beginning in May, the Veteran's Center will bring them out in buses and vans and we'll have breakfast on the river once a month throughout the summer. We scramble eggs in a large cast iron skillet on an open fire and lay plywood on the ground in front of their tables for their wheelchairs. The Veteran's Center told us that Rolling Thunder will escort them for this year's outings. As they drive through the orchard, they observe the growth of the pecans anticipating the harvest in November. This is their favorite outing.

It will be a good year.

DROUGHT GROWS DESPITE RECENT RAINS

Reprinted from Oklahoma Climatologically Survey - http://climate.ok.gov/index.php/site March 27, 2014

The dust storms, wildfires and reports of struggling crops and pastures that have plagued the state over the last few weeks are evidence that drought has continued to strengthen across Oklahoma. Recent rains did help curb the drought's growth across a few select areas, mainly in south central and southeastern Oklahoma where 3-5 inches fell over the last 30 days. Up to a half-inch of moisture fell in localized areas on March 26, but most of the state recorded less than a quarter-inch. That continued lack of moisture has allowed the drought, which had been growing slowly but steadily through the dry winter, to intensify more quickly as we entered spring. The latest U.S. Drought Monitor report released Thursday morning indicated a significant increase in extreme to exceptional drought across the western third of Oklahoma, now encompassing 24 percent of the state. That's an increase of nearly 10 percent in just the last week, and 20 percent since October 1, 2013. Moderate to severe drought covered approximately 53 percent of the state and nearly 19 percent was considered to be in "Abnormally Dry" conditions. Only four percent of Oklahoma was portrayed devoid of any dry conditions. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification. Abnormally dry is not a drought intensity, but can signify areas that are approaching or escaping the moderate drought category.

March has seen a continuation of dry weather that began late last summer and deepened through the winter. The climatological winter (December-February) was the 11th driest on record across the state, dating back to 1895, with an average deficit of nearly 3 inches. Central Oklahoma suffered its ninth driest winter on record at 3.65 inches below normal. Oklahoma City's December-February total of 1.69 inches was its ninth lowest total since records began back in the winter of 1890-91, 3.16 inches below normal. Tulsa fared a bit worse in the rankings with a total of 2.23 inches, a deficit of 3.77 inches for their sixth driest winter on record dating back to 1893-94. March has not been much of a help outside of south central and southeastern Oklahoma. Most of the northwestern half of the state has received less than an inch of rainfall for the month thus far, from 40 percent to less than 20 percent of normal over that time frame. The Oklahoma Mesonet sites across far western Oklahoma and the Panhandle have recorded less than a half-inch through March 27.

The impacts from the drought intensification are both subtle and obvious. Massive dust storms, fueled by the barren, drought-afflicted fields across the High Plains from Colorado down through Texas, have reminded some of the 1930s Dust Bowl days. Wildfires have been a particular problem since January, associated with an abundance of days with low humidity and high winds, weather patterns which also act to accelerate drought intensification. The latest "Oklahoma Crop Weather" report released on March 24 from the USDA's National Agricultural Statistics Service indicated 42 percent of Oklahoma's winter wheat crop was in "Poor" to "Very Poor" shape, an increase from 24 percent in those two categories from early February. The latest report categorized 72 percent of the state's topsoil and 80 percent of the subsoil to be "Short" to "Very Short" of moisture. Most lakes across western Oklahoma remain in perilously depleted conditions. Tom Steed Lake, the main water supply reservoir for the city of Altus, is down to 25 percent of normal capacity. Nearby Lake Altus-Lugert, an important supplier of agricultural irrigation, is down to approximately 11 percent of capacity. Canton Lake and Foss Lake are down to 23 percent and 48 percent, respectively. Even a few bigger reservoirs outside of western Oklahoma show serious impacts of the long-term drought. Skiatook Lake in northeastern Oklahoma is approximately 10 feet below normal at 72 percent, and Lake Texoma along the border with Texas is at 67 percent.

The key to drought recovery is an active spring rainy season. Twenty years of statewide rainfall data from the Oklahoma Mesonet pinpoint Oklahoma's primary rainy season to be from mid-April through mid-June, although a secondary rainy season can be found during the fall months. The latest April-June outlooks from the National Weather Service's Climate Prediction Center (CPC) provide no clues for spring rain chances. The state is portrayed in the "Equal Chances" category, which means the forecasters see equal chances of above-, below- and near-normal precipitation amounts in the absence of any strong climate indicators. The forecasters do see increased odds for above normal temperatures across the state during spring. CPC's U.S. Seasonal Drought Outlook for that same period has encouraging news for the eastern half of the state with "drought remains but improves" indicated for the I35 corridor and "drought removal likely" farther to the east. A dreary prediction for the western half of the state, however, with "drought persists or intensifies" forecast for that area.

In the longer term, CPC experts continue to see good chances of El Niño developing this summer and possibly lasting into the next fall and winter. CPC issued an El Niño watch earlier this month indicating conditions are favorable for the development of El Niño conditions within the next six months. This warming of the ocean waters in the equatorial

pacific often brings the southern tier of the United States cooler and wetter weather during the cool season, October through April. Many experts think this could be a particularly strong El Niño, which would be important for Oklahoma since a weak or moderate El Niño would diminish the chances for above normal precipitation. Historical precipitation data suggest a weak El Niño could bring dry weather to the state. El Niño has little impact across Oklahoma outside of the cool season.

TO SPRAY OR NOT TO SPRAY: MANAGING & MONITORING PECAN NUT CASEBEARER (PNC)

Pecan nut casebearer larvae can tunnel into nutlets shortly after pollination and can potentially destroy all nutlets in a cluster. The most effective control method is a well-timed insecticide spray. The insecticide must be applied after egg hatch but before the larvae tunnel into the nutlets. Insecticides should only be applied if the nut load and infestation level warrants a treatment. Monitoring should begin in early to mid-May to prepare for the flight in late May.

To detect PNC you can use a pheromone trap baited with a lure. The lure will attract male moths to the trap. There are many different types of traps available: Pherocon VI, Pherocon 1C wing trap, Intercept-A trap, etc. The Pherocon IV and Intercept-A traps have removable liners that make them easier to use than the wing traps. Remember to keep lures frozen until use. The lures should be replaced every 6 weeks. Place 3 traps in different locations in the lower canopy. Monitor these traps every few days, at least three times a week. Replace the liners when the sticky material has been covered with debris.

Begin looking for PNC eggs 7-10 days after the first PNC moth catch in your trap. PNC eggs can be found at the tip of the nutlet (figure 1). You will need a good hand lens to see them. Also look for hatched eggs, larvae, and larval entry in the nutlet. Examine 10 nut clusters per tree. If you find two or more infested clusters before 310 clusters are sampled, the PNC population is large enough to damage greater than 5% of the harvest. Apply a labeled insecticide in the next few days. If you do not find an infestation, repeat scouting in 2-3 days. Oklahoma State University has an in depth fact sheet on PNC, which can be found at the following link: http://goo.gl/ENUu7P .

If you plan on monitoring please think about participating in the PNC data collection program. This is a web-based data entry system. All pecan stakeholders with an interest in participating are encouraged to apply. The program rationale is to provide real time PNC data entry from the field to drive a PNC Risk Assessment Model that will appear in a Belt-Wide Map in real time to aid producers in making PNC management decisions in the current season. The public map page can also be used to view the results of previous seasons.

To take part as a cooperator in the PNC Data Collection Program of Pecan ipmPIPE:

1. Register online at http://pecan.ipmpipe.org/cooperator_programs/pnc/pidss.cfm as a member of Pecan ipmPIPE, preferably by May 1. You will be sent a unique passcode to your email with instructions to activate your account. If you registered in previous years this step is not necessary. If you have forgotten your password, you can retrieve it from the login page.

2. Log into the system. Your username/password is saved in a session unless you log out.

3. Request to be part of the program using the 'Become a Cooperator' link.

4. Begin Collecting and reporting data from your orchard.

Please note that free PNC traps/ lures are no longer available from the parent program. USDA funds have been expended. However, some local, regional and state coordinators of pecan IPM do include this. Please contact your local Pecan IPM agent to check availability (Jackie Lee, Jackie.lee@okstate.edu).

Collecting PNC data:

PNC pheromone traps should be placed in the field and inspected at least 10 days before first moth catch is expected (early to mid-May). This allows firm establishment of the baseline to determine when moths first begin emerging because "zero" moths in the traps provide strong evidence that the PNC is still in the pupal stage and the flight has not yet begun. Then, the first moths (that are found in the traps after the "zero" catch dates are recorded) are known to also be the first moths that are emerging in the flight. The regular tracking of this flight during the few weeks that moths are

active provides an accurate picture of how that generation interacted with the pecan crop.

Data entry forms are accessed by logging into the website (http://pecan.ipmpipe.org/cooperator_programs/pnc/pidss.cfm) and selecting the 'enter data' menu item.

The ideal reporting schedule is daily, and if it is convenient for you to do so, we would like to receive daily information. Alternatively, trap checking and reporting schedules of three (i.e. MWF) or even two (i.e. Monday and Thursday) times per week are of value to us.

Regular online reporting of the PNC moth catch data is essential to allow us to produce the real-time PNC Risk Map. Additional data on egg lay, hatch, nut entry, % infestation of nuts by larvae, crop load, etc. is not essential, but very useful for model validation and management evaluation. We would appreciate your recording this as well on the forms provided. Consult the website or contact us if information is needed on how to do this. Such information will assist us in expanding our knowledge about PNC activity and help us serve you better. Participation can also be through your state/local PNC expert. The belt-wide program is designed to facilitate and not replace local expertise. Contact your local Pecan IPM expert (Jackie Lee) as needed.

Figure 1. Pecan nut casebearer egg in two locations on nutlet.

PNC pheromone and trap Suppliers are listed below:

Advanced Pheromone Technologies, Inc.
P.O. Box 417
Marylhurst, OR 97036-0417
Ph: 315-299-2598
toll free: 877-244-9610
fax: 971-327-8407
email: infoatapt@comcast.net

Gempler's
P.O. Box 270
100 Countryside Drive
Belleville, WI 53508
Order by Phone: 1-800-382-8473
Order by Fax: 1-800-551-1128

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

ISCA Technologies / Moritor Technologies
P.O. Box 5266
Riverside, California 92517 United States of America
Tel: 951-686-5008
Fax: 815-346-1722
email: info@iscatech.com
Web: www.iscatech.com

Trece, Inc.
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Adair, OK 74330
Ph: 918-785-3061
Order Center 866-785-1313
Fax: 918-785-3063
Email: custserv@trece.com
Web: http://www.trece.com

MOVEMENT OF ADULT PECAN WEEVILS WITHIN PECAN ORCHARDS

Ted E. Cottrell and Bruce W. Wood
United States Department of Agriculture, Agricultural Research Service,
Southeastern Fruit and Tree Nut Research Laboratory, 21 Dunbar Road, Byron, GA

The pecan weevil is an indigenous pest of pecan in North America. Understanding the movement of this pest from the orchard floor to host trees could lead to pest management practices that exploit weevil behavior and thus reduce insecticide application to the entire orchard canopy. Furthermore, no information exists on diel periodicity (day vs. night fluctuations) of pecan weevil movement.

Movement of adult pecan weevils crawling and flying to the host trunk, flying to the host canopy, crawling within the host canopy and flying between host trees was studied using four types of passive traps over four seasons. Each trap type was used to capture weevils at different locations on or near the tree and to discriminate flying versus crawling behavior.

More pecan weevils crawl to the trunk than fly and a proportion of the population flies directly from the orchard floor into the pecan canopy. The majority of this movement occurs at dusk.

The vertical distribution of weevils was generally uniform throughout the canopy but more weevils were captured in suspended traps nearest tree tops, rather than traps near the ground, when flying between trees and this was significantly so for 2 of 4 years.

The results of the present study are contrary to previous reports suggesting that most adult pecan weevils fly to the pecan trunk after emergence from the soil; however, our results did indicate that a proportion of the population flies directly from the orchard floor into the pecan canopy and thus would circumvent strategies that attempt to control weevils moving up the trunk.

Abstract reprinted from Agricultural and Forest Entomology (2008), 10, 363–373

SIZE OF THE VEGETATION-FREE AREA SURROUNDING PECAN TREES IN A TALL FESCUE SOD AFFECTS PRODUCTION

Michael W. Smith and Becky S. Cheary
OSU Department of Horticulture and Landscape Architecture

Vegetation control with herbicides is a common practice in pecan orchards benefiting both non-bearing and bearing trees. However, the appropriate size for the vegetation-free area surrounding bearing trees has not been resolved. Vegetation-free circles centered on the tree 0, 3, 6, 12, and 24 ft in diameter were established at planting in a tall fescue sod. Tree performance was evaluated through the seventh production year. Performance of non-bearing trees was reported earlier. Growth of bearing trees improved as the diameter of the vegetation-free circle increased to 12 ft. Yield was greatest when the size of the vegetation-free circle was 12 ft or larger during the first three years of production. During the fourth and sixth crops trees with 24 ft vegetation-free circles produced the greatest yields. The seventh year production was similar among vegetation control treatments. Measured nut quality attributes were not affected by the size of the vegetation-free area, but varied among years.

PECAN NUT SUTURE SPLIT

Michael Smith and Bill Goff

Pecan nuts with cracked shells reduce market grade and are usually removed during pecan cleaning. One type of crack is the shell suture that splits on certain cultivars with thin shells and high kernel percentages. 'Schley' nuts with diverse kernel moisture concentrations were dislodged from trees on cloudy and sunny days and exposed to ambient environmental conditions for one day on the ground. Samples were collected immediately after dislodging and after one day's exposure, sealed in a plastic bag that was placed in a cooler, and then transported to the laboratory where they were assessed for kernel moisture and split sutures. The number of nuts with split sutures was not affected by kernel moisture percentage or sunlight exposure when samples were collected immediately after dislodging. However, after 1 day nuts with high kernel moisture percentages with high solar radiant exposure (sunny day) had substantially more nuts with suture splits than those with low solar radiant exposure (cloudy day). At the lowest kernel moisture percentages the number of nuts with split sutures was insensitive to solar radiant exposure. During the first harvest 'Schley' trees should be shaken to dislodge nuts on cloudy days and harvested before exposure to bright sunshine to minimize suture split. This probably extends to other cultivars with a history of suture split. An alternative to shaking on cloudy days, though not tested, might be to shake trees in the evening and harvest the next morning before exposure to high light conditions. Later during the harvest season when kernel moisture was lower sunlight exposure has little, if any, effect on suture splits.

ENDOWMENT FOR HORTICULTURAL PECAN RESEARCH

This pecan research endowment currently has $117,511. The principal will remain intact and a portion of the interest will be added to the principal annually to increase the endowment. The rest of the interest will support pecan research. Dedicated endowments, such as this, allow locally important research projects that are not typically fundable by competitive grants. In addition, exploratory research projects that may lead to important discoveries can be undertaken. This type of project generally requires preliminary data to indicate that the idea is feasible before the project is eligible for competitive funding.

Contributions to the endowment will be added to the principal. This endowment will fund pecan research long past our lifetimes. Donations should be sent to Michael Smith, Department of Horticulture and Landscape Architecture, 360 Agricultural Hall, Oklahoma State University, Stillwater, OK 74078. Checks should be made out to the O.S.U. Foundation. Donations are tax deductable.

Classified ads may be placed in the newsletter for free by OPGA members. Send your ad to Mike Smith at** mike.smith@okstate.edu **and it will appear in the next newsletter and subsequent newsletters until notification to remove the advertisement.

NEW PECAN BOOK --- by Wes Rice., Pecans - Volume II, A Grower's Perspective.
Color pictures and descriptions of over 80 cultivars, including Oklahoma releases. Updates on all facets of pecan culture. Over 350 color pictures. Perfect bound - $32.95+$2.50 S&H and 8% sales tax or AG exemption. Hard cover - $46.95 +$3.00 S&H and 8% sales tax or AG exemption. Wes Rice, 580-765-7049, 333 Braden School Rd., Ponca City, OK 74604.

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MEMBERSHIP APPLICATION

We invite you to become a member of the Oklahoma Pecan Growers' Association. Membership includes the OPGA Newsletter, Pecan South and pecan Grower. Make your checks payable to OPGA and mail to:

Oklahoma Pecan Growers' Assocation
Amanda Early, Treasurer
2115 N. Dobi
Stillwater, OK 74075
amanda.early@okstate.edu 405-744-8800

Name _____

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Oklahoma Pecan Growers' Association
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Oklahoma State University
358 Agricultural Hall
Stillwater, OK 74078-6027

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