



OKLAHOMA PECAN GROWERS ASSOCIATION

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Michael Smith, Editor

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President's Corner

Robert Schoenecke, OPGA President

As President of OPGA, the past three years have gone by rather quickly and as an industry we have experienced all that mother nature could throw at us. Specifically, two ice storms in one year, an early freeze and drought, all of which claimed their toll on Oklahoma pecan production. In spite of these occurrences OPGA membership is still growing and with mounting interest after this year's harvest we could expect to see a good attendance at this year's annual convention.

I believe that the Board of Directors have done a great job in putting together another informative and family friendly program. By now, you should have received your conference information packets, so mark your calendars for June 29, 30 & July 1 for our annual meeting in Tulsa. We especially need more participation in the Pecan Food Show, particularly in the junior division. The past couple of years there were no entries in some of the categories and classes, so this would be a great opportunity for the juniors. Check your convention packet for the rules and plan to participate.

I look forward to seeing you in Tulsa.

The Effects of Weeds on Orchard Establishment

Michael Smith

OSU Horticulture & Landscape Architecture Dept.

Vegetation in the close proximity to pecan trees dramatically reduces growth and even survival. Vegetation competes with trees for water, nutrients and at times even sunlight. It also reduces tree growth by producing chemicals that inhibit growth of other plants. This growth inhibition by chemical means is called allelopathy. The combination of competition and allelopathy is termed interference.

Studies were designed to evaluate the allelopathic affects of bermudagrass, tall fescue and cutleaf evening primrose on seedling pecan tree growth. The two grass and one dicot species in 1-gallon containers plus a control (container with media but no plant) were placed in funnels with tubes running to pecan trees below. When the plants above were irrigated, water leached through the containers to irrigate the pecan trees. After three months, pecan tree root and top dry weight was about 15% less than the control when irrigation water was from bermudagrass or tall fescue. Irrigation water from primrose reduces root dry weight about 20% and top dry weight 25%.



A field study was designed to evaluate interference of cutleaf evening primrose and Palmer amaranth on growth of 'Apache' pecan seedlings growing in a Teller sandy loam that was not irrigated. Rainfall during the 3-year study averaged 32 inches. Cutleaf evening primrose is a low-growing, cool-season annual that germinates in the fall and completes its life-cycle about June. Palmer amaranth, a member of the pigweed family, is a warm-season annual up to five feet tall that germinates during late May and grows until fall freeze. Treatments were two weeds of either species or in succession planted one foot on either side of the tree within a 12 feet diameter circle maintained vegetation-free. After three growing seasons, either primrose or Palmer amaranth alone also reduced tree growth. The combination of the two species was additive, reducing tree growth 350 % compared to the control (vegetation-free).

Another study determined the optimum vegetation-free area surround young pecan trees in a bermudagrass groundcover. 'Kanza' trees on Giles rootstock were six feet tall when transplanted into a Teller sandy loam soil. Trees were irrigated with a solid-set sprinkler system as needed and fertilized following standard practices. Treatments were 0, 3, 6, 12 or 24 ft diameter vegetation-free circles centered on the trees. Vegetation was controlled with glyphosate and oryzalin. The optimum size of the vegetation-free area increased as tree size increased. A 3-ft diameter vegetation-free was adequate through the third growing season. The fourth season a 6 ft or larger diam-

eter circle produced trees with the maximum growth. Beginning in the fifth growing season and thereafter, trees in the 24 ft diameter vegetation-free circles grew more than in the other treatments. Production began in the fifth growing season, but yield was small until the seventh season. Yield was positively related to the size of the vegetation-free area surrounding the tree. During the seventh growing season, trees without vegetation control, other than mowing, produced 4 lbs/tree and those in 24 ft diameter vegetation-free circles produced 18 lbs/tree, a 334% increase.

These results strongly support maintaining a vegetation-free area surrounding trees during establishment through the first years of production. The data further supports the vegetation-free area to be as large as practical. Mitigating circumstances that limit the size of the vegetation-free area surrounding trees are erosion potential of the site, equipment access into the orchard, ease of harvest and pollution potential from dust. In addition, there may be negative impacts from large vegetation-free areas in the long-term. For instance, maintaining an area vegetation-free may make the soil more susceptible to compaction and will lead to a reduction in soil organic matter. Reduced organic matter and compaction reduce water infiltration rates and availability of some nutrients. It is likely that optimum management may include vegetation-free areas as large as practical initially, and then the size reduced as the trees mature to avoid some problems created by an absence of vegetation.



Pecan Research at the Noble Foundation Increases
Charles Rohla
Horticulturist, Noble Foundation

The Samuel Roberts Noble Foundation has been involved in the pecan industry since 1973. At this time, the Red River Demonstration Farm was purchased. The Red River Demonstration Farm consists of both native and improved varieties on over 500 acres of bottom land along the Red River south of Burneyville, Oklahoma. Over the past 35 years, the Foundation has conducted numerous research projects at this location. Several of these projects were in collaboration with Oklahoma State University. A long term study evaluating the benefits of using cattle to graze the under story of the pecan orchard was conducted. Other studies with Oklahoma State University ranged from determining proper trapping methods of pecan weevil to monitor emergence, monitoring pecan scab to determine control methods and timing and the benefits of using legumes in the under story of the pecan orchard as a nitrogen source.

The Foundation continues to be actively involved with pecan research. Recently, the Foundation acquired a piece of property from a long term cooperator who was actively involved with pecan production. This cooperator asked that more pecan research be conducted using this property. With that, the McMillan orchard was started in the spring of 2007 with a planting of 540 Pawnee, Kanza and Nacono trees. The following spring an additional 320 Oconee, Choctaw, Maramec and seedlings were planted. With these plantings several research projects are being started.

In 2008, an irrigation study evaluating two sprinkler systems and three different subsurface drip systems compared to one another and to a control will begin. The objective of this study will be to determine which of these systems are the most economical, promotes the greatest growth and eventually the greatest production. A secondary study will be conducted concurrently to compare different techniques to determine when to irrigate.

An evaluation of tree shelters will be conducted at this site as well. Different shelters will be compared to determine if any contributes to a dangerous increase in temperature and/or humidity around the tree trunk. Several growers use different materials to protect the trees from herbicide damage and sunscald. Some have questioned using tree shelters because of the increased greenhouse affect that the shelters may have on the trees. Some believe that the increased humidity may increase the likeli-

hood of disease and death to the trees. Tree shelters are used in the forestry industry to promote growth of the trees, but is this additional growth beneficial to pecans? To protect the trees from herbicide damage the shelter needs to last at least three or four years. To better understand the economical benefit of the shelters, the cost of the shelters will be evaluated along with the labor each shelter requires. Also, we want to determine if the increase in temperature around to trees will encourage earlier budding which can increase the cause of late spring freeze damage?

Nickel fertilization has been at the forefront of research in the southeast. A survey of orchards in Oklahoma and North Texas was conducted in 2007 using leaf samples to determine if there was a shortage of nickel in either state. Results indicated that some orchards had a low level of nickel in the leaf samples. Therefore, Oklahoma State University along with the Foundation has started a study in these orchards to determine the effects of nickel application on the trees. In addition, we would like to determine the rate that nickel should be applied and the leaf sample range that should be adequate for this area. Nickel applications have been suggested for helping with the growth of young trees. Therefore, a nickel study was started last fall at McMillan to determine if nickel fertilization in the Fall and/or Spring will increase the growth of young pecan plantings.

Leaf samples are a critical tool that are used in managing pecan orchards and in research. Last year the Foundation began using a new lab to run leaf samples. This new lab ran copper as part of their routine analysis. During the first year of analysis from the lab, low copper levels were noticed in a handful of orchards. After evaluating these orchards for symptoms, it was decided to evaluate the benefits of applying a copper foliar spray to the trees to raise copper levels. Also, we wanted to determine the rate that needs to be applied to other orchards that exhibit a deficiency. This study is being conducted on producers' orchards in both Oklahoma and Texas.

Several other pecan studies are planned for the future at the Noble Foundation. Evaluating different herbicides commonly used around native pecans and the effect they may have on the pecan tree is one we hope to start soon. Another study that has gained some interest because of the increased fertilizer cost is reevaluating legumes in the orchard and the benefit to production that they may have.

For those interested in learning more about Noble Foundation Research Projects, please contact me at 580-224-6451 or ctrohla@noble.org.

AgriTourism and the Oklahoma Pecan Growers Association

Eric T. Stafne

OSU Horticulture & Landscape Architecture Dept.

The Oklahoma Pecan Growers Association is undoubtedly the largest and most well-organized producer group of the fruit and nut commodities. This is not surprising considering the pecans comprise a much larger acreage than any of the other fruit and nut crops grown in Oklahoma. A couple other commodity groups exist such as the Oklahoma Grape Growers and Wine Makers Association and the Oklahoma Fruit Growers Association. The latter group is essentially non-functional and more or less exists in name only. The former group is organized, although somewhat fractured. What do these small groups have to do with the OPGA? That is a good question. Some of you might answer “nothing at all” and you would be correct as it stands now, but is it the best answer?

AgriTourism has become a strong economic incentive for producers of many agricultural commodities in recent years; in fact, it is an industry that accounts for more than 4 billion dollars in Oklahoma alone. There are two websites that give the lowdown on AgriTourism in Oklahoma: <http://www.oklahomaagritourism.com/> and <http://agritourism.travelok.com/>. I recently visited these sites and was somewhat surprised to see that only a few pecan operations were listed. This seems to be a fantastic opportunity for pecan producers to attract customers. Creative ideas can lead to increased income. Who wants to visit a boring old pecan orchard? You might be surprised if an enticement is offered. Create a picnic space where families and pets can roam under the shade. Offer educational opportunities such as field days on what it takes to be a pecan grower (we can help with this one). Allow customers to help with harvest, cracking, shelling, etc. – all for a fee. Have folks adopt a tree in your orchard and have them pay for the privilege of getting those specific nuts. The options are only limited by your imagination. Create pecan tastings (similar to wine tastings) to let potential consumers decide for themselves which variety they like the best. Or, better yet, work with a local winery to pair pecans with wines. There are 55 wineries now in Oklahoma with more on the way this seems like a natural fit for both parties! Pecans also compliment other fruits such as berries and peaches. In the current economic environment cooperation among businesses with complimentary products and the same goal should work together instead of going it alone.

As a first step in exploring these opportunities, I have

invited Abby Cash (Director of Oklahoma AgriTourism), Jeff Weeks (Oklahoma AgriTourism Coordinator – Eastern Oklahoma), Marsha Butler (Oklahoma AgriTourism Association Board member and Summerside Vineyard and Winery owner, Vinita, Oklahoma), and Bob McBratney (owner, Stone Bluff Cellars near Haskell, Oklahoma) to participate in the field day of the OPGA annual conference on July 1. I hope that you take the opportunity to interact with these folks and come prepared with some creative ideas to enhance your business.



Paper Shell Pecan Trees

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580-345-2875

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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 + 8% sales tax or AG exemption. Wes Rice, 580-765-7049, 333 Braden School Rd., Ponca City, OK 74604

ORCHARD MANAGER

I am looking for a person with pecan growing/operating experience to manage a recently planted/grafted 80 acre pecan orchard. Must have references and the ability to operate and maintain most equipment appropriate for an irrigated pecan orchard. The orchard is located approximately 5 miles north of Tulsa between Skiatook and Tulsa.

Salary is negotiable and on-site housing can be provided as part of the salary package. Responsibilities will include the establishment of a new orchard on an adjacent 100 acres. Please submit your resume, salary requirements, and references to Dewey Bartlett at 1648 S. Boston Avenue, Tulsa, OK 74119. Any questions, please call at 918 587-4154x100.

Oklahoma Pecan Growers' Association

c/o Horticulture & Landscape Architecture

Oklahoma State University

358 Agricultural Hall

Stillwater, OK 74078-6027

Return Service Requested



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' Association
Janice Landgraf, Treasurer
RR 1 Box 148
Madill, OK 73446
okpecan@trinex.net (580) 795-7644

Name _____

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