OKLAHOMA PECAN GROWERS ASSOCIATION

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In This Issue

President's Corner

Robert Schoenecke, OPGA President

I have thought about how and what to say about the year 2006 and the most clever statement that I think that can be made is "Thank Goodness It's Over". Just as the year began with wild fires and drought conditions it progressed to a year filled with record breaking drought conditions and hot weather that took its toll on many areas of agriculture including the pecan industry. What looked like the promise of a good or decent crop according to USDA estimates and reports from producers was turned to lowering of the estimate and next to nothing crop for many producers.

As we face the year 2007 we can look ahead with the experience of 2006 and as normal we should trust that this new year will be better for the pecan producer. However, at the time of this article, we are experiencing a very treacherous ice storm that I'm sure has many producers concerned about their trees, me included. Hopefully when the sun returns and the ice melts we can be thankful for the much needed moisture and look forward to what 2007 has in store.

As president of the association I have received several phone calls from reporters, salespeople, analysts and the list goes on. However, I recently received a call from a representative of USDA concerning their programs to enhance rural development. I have a meeting scheduled with them for an explanation of these programs and how we as an association might qualify for their assistance. This program is also available for producers as well. Hopefully, I will be able to get more information at this meeting and will try to pass it on to you.

As president and on behalf of the directors we continue to look for programs and information that we could use to promote our product and association. If you know of any or have any ideas, please let one of us know.

2007 OPGA Show & Meeting

Make plans to attend the OPGA Annual Meeting and Show on June 17 – 19, 2007 at Lawton, Okla. The meeting will be located at the Great Plains Technology Center. A block of rooms has been reserved at the Best Western Hotel and Convention Center (580-353-0200, be sure to tell them you are with OPGA). Details of the meeting will be mailed under separate cover in April.

Fruit and Nut Genebanks in the U.S. National Plant Germplasm System

Joseph Postman, Kim Hummer, Ed Stover, Robert Krueger, Phillip Forsline, L.J. Grauke, Francis Zee, Tomas Ayala-Silva, and Brian Irish
U.S. Department of Agriculture (USDA)–Agricultural Research Service (ARS **)**

Abstract. The year 2005 marked the 25th anniversary of the establishment of the U.S. Department of Agriculture (USDA) National Plant Germplasm System (NPGS), repositories devoted to clonally propagated, horticultural fruit and nut crops. During this quarter century, facilities in Hilo, Hawaii; Mayaguez, PR.; Miami, Fla.; and Riverside, Calif. were developed to preserve collections of tropical and subtropical fruit and nut crops; facilities in Brownwood, Texas; Corvallis, Ore.; Davis, Calif. and Geneva, N.Y. preserve the temperate crops. Each of these facilities now has internationally recognized, globally diverse collections of genetic resources for their assigned genera. Germplasm of unique genotypes are maintained as growing plants, evaluated for phenotypic and genotypic traits, documented in a national public germplasm database, and freely distributed as clonal propaggules to researchers and other germplasm users around the world. Seed collections represent wild populations for some crop relatives. These 8 genebanks maintain 30,000 accessions representing 1600 species of fruit and nut crops and their wild relatives. The genebanks distribute more than 15,000 accessions annually to international researchers. Although originally conceived as working collections for crop improvement, NPGS genebanks have also become invaluable in providing the raw materials for basic plant genetic research, reservoirs for rare or endangered species or vulnerable landraces, archives of historic cultivars, and field classrooms for educating the public. These collections preserve botanical treasures as well as the American horticultural heritage for now and for future generations.

Evaluating Pecan Problems

George Ray McEachern, Retired Extension Horticulturist, Texas A&M University

The Pecan Tree Is A Survivor

Along the 10,000 miles of rivers and streams in Texas there are many very large pecan trees which are living testimony of their tremendous survival potential. These trees have made it through extreme droughts such as the early 1950s where little or no rain occurred for four straight years, yet the pecan survived when other species of large trees died.

The pecan is uniquely adapted to the hot, dry, windy Texas climate because it can tolerate stress. If pecans are stressed in the fall, they will not set a large crop the following year, and the tree will survive on food stored in the trees' massive limb, trunk and root system. On weak trees, the crop is shed by various ways throughout the season. This could be physiological drop, pollination drop, casebearer drop or waterstage drop. The shedding of pecans is an important natural stress management tool which contributes to the long survival of pecan trees. It is very difficult for pecan trees to absorb zinc from the soil; consequently, native trees do not make vigorous growth once they are mature and begin bearing. This natural vigor control via zinc unavailability plays an important role in long term native tree survival. Also, many alluvial river bottom soils have good depth, good internal drainage and a very high water holding capacity which are additional reasons native trees are good survivors.

What Kills Pecan Trees . Many things can kill a mature bearing pecan tree. Usually it is a combination of factors. Planting improved grafted varieties on poor soil is the most common reason pecan trees die in Texas. When no irrigation, no zinc, no nitrogen, no weed control, no insect management, no disease prevention are combined with a heavy crop on pecan trees growing on poor soil, death could be expected. A large number of mature pecan trees died in Texas in 1988, 1989 and 1990. This could occur again in 1996 because of the extremely heavy crop in 1995 combined with the very dry conditions of the 1995 growing season. If a major freeze occurs in the winter, especially early winter, tree death could occur.

Poor Soil Depth and Texture. Native pecan trees grow beautifully along rivers and streams in Texas because of water availability, good soil depth and good internal soil drainage. This is the ideal site for pecans — native, commercial orchards or landscape trees. In many areas of Texas there are deep, well drained sandy or high-calcium clay soils which can also support beautiful and productive trees. However, many soils are too shallow and simply do not provide enough space or volume for the massive root system needed. For example, mature pecan trees require over 2,000 gallons of water per week, and this volume needs to be held by only 25 percent of the soil space. When soils are very shallow or very tight clay, very special management will be needed. Irrigation will need to be weekly and zinc and nitrogen needs to be applied in very small but frequent applications. Commercial orchards should never

be planted on shallow or poorly drained clay soils; however, beautiful landscape trees can be maintained, especially if they are natives or seedlings which are not grafted.

Poor Soil Drainage. The growth and development of healthy pecan trees depends on healthy roots. Good root growth occurs when the soil is 50 percent particles, 25 percent air and 25 percent water. When the pecan soil is dry the tree will survive by shedding the crop and making very little growth; however, when the soil is too wet, the tree roots will die and this can result in tree death. Good soil drainage is essential for good soil aeration and subsequential root growth with normal water and mineral absorption. When poor soil drainage occurs there is limited oxygen in the active root zone. This has very serious plant physiological consequences; low root zone oxygen results in death to small roots, reduced active transport of minerals and water into the roots, reduced hormone production by the root tips, and increased salt toxicity. Saturated soil also is an ideal environment for the development of many soil root rot diseases.

Over Cropping. A very large crop of pecans on mismanaged trees is a major problem. Poor soil, tree crowding, weed control, irrigation, zinc foliar sprays, nitrogen fertilization, insect control and disease prevention become very important during high crop years such as 1993 and 1995. Some growers are lightly shaking their tree trunks on overcropped trees during the waterstage to reduce the crop size and prevent stress. The most common symptom of overcropping is poorly filled kernels. However, when in combination with other limitations, limb death in the top of the tree or total tree death can occur.

Freeze. The pecan does not have an obligatory rest period such as apple or peach does, and it does not become dormant in the fall unless the weather is very cool. If growing conditions are ideal in the fall, pecan sap remains active. If a freeze occurs, it can kill the live wood, bark and cambium tissue. Bearing trees which are stressed are freeze-susceptible. Varieties such as Wichita, Barton and Mahan are very freeze-susceptible. Young pecan trees which are growing when an early fall freeze occurs can be killed to the ground. This is why nitrogen fertilizer is never applied to young trees after the month of June. Freeze damage usually occurs on the south or southwest side of the trunk next to the ground line. Cutting through the bark with a knife can expose brown, freeze-damaged tissue soon after it occurs. Trees with frozen trunks will produce healthy shoots from the ground line the next growing season.

Tree Crowding. The most difficult cultural practice pecan growers must accomplish is tree removal when crowding occurs. Shade from tree crowding reduces the total photosynthesis and with less food the tree will be less healthy. The first stage of crowding is low percent kernel. This is followed by alternate bearing and death of shaded limbs. As crowding continues limbs continue to die, moving higher and higher each year. The final stage of crowding is no production or production only in the very top of the tree. Once trees are thinned, as many as six years may be required for the trees to come back into production. Some growers attempt to maintain production via mechanically hedging the trees with large saws, however, this only prolongs the problem. Only 30 percent of the trees' production potential will be harvested from hedged trees when a three- to five-year hedging cycle is used. The solution to tree crowding is tree removal the year the lower limbs touch. It is best to remove trees immediately after a heavy crop. The winter of 1995-96 will be an excellent time to remove trees because the 1996 crop is going to be very low in Texas.

Cotton Root Rot. There are many disease which are serious problems for Texas pecan growers. Many destroy the foliage or the fruit; however, Cotton Root Rot kills the tree. Death comes fast in late summer with all the leaves turning brown and remaining on the tree. This is a major cause of tree death in Mexico where a combination of high soil pH, high soil temperature and poor drainage occur. Under these conditions, it is almost impossible to control Cotton Root Rot. In Texas, the problem occurs mainly in the southern counties, near Mexico where similar conditions exist. Rapid tree death in late summer or early fall with no shoots developing from the tree crown is the most common symptom. The fungus can be identified with a microscope.

Management. Growers do their best in taking care of their trees, but occasionally the trees have problems and die. Time, money, orchard size, labor, equipment, knowledge, bad luck, personal problems or many other limitations can cause pecan growers to let management slide for a year or two. Because the pecan is a strong survivor, the tree will live for years without showing any serious signs of stress other than poorly filled nuts on alternate years. Eventually the trees will stop bearing altogether, but can remain alive. With total neglect and poor soil, the trees can eventually die.

Good management is difficult and expensive but it can bring pecan trees back into profitable production if water is available and if the trees are on good soil. However, trees on poor soil without irrigation will be difficult to manage for a profit. Good looking landscape trees can be

managed on almost any soil if hard work, money, and water are not limiting factors.

Commercial orchards, which require a profit, need good management plus well drained soil, wide tree spacing, weekly irrigation, weed control, foliar zinc sprays, nitrogen fertilization, insect control and disease prevention. Unfortunately, the failure of only one of these factors can kill the entire program.

Problems From Varieties

Native pecan trees have been in Texas for a very long time with nature to manage their success. When man decided to select, propagate and plant orchards with larger nut size and heavier fruiting, the natural limits of the pecan were exceeded and man's management became essential, otherwise the trees stress and die. One must always remember that small native nut size, alternate bearing, low yield and many other characteristics of native pecan production are a vital part of pecan survival in Texas and should be considered good. Today's pecan growers push their trees far beyond the natural limits of production of native pecans. Orchards with the best varieties have a high profit potential, but pecan growing is a high risk business even with the best of management. Old standard varieties, Stuart and Western, are the highest planted varieties in the industry because they tolerate stress and are easy to manage. In the future, varieties may become the standard because of management ease.

Landscape trees usually receive very little management; therefore, native or seedling trees are the best choice. If a grafted variety is essential, disease-resistant varietes with small nuts and moderate production would be the best choice. There are a few low yield varieties such as Jackson, Elliot, Vogt, Schley, and others which do not produce yields high enough to be of commercial value, but make excellent landscape trees. If the landscape soil is excellent and some management could be given, productive varieties with small nut size such as Caddo, Candy, Osage and Prilop could be planted.

Signs Of Trouble

Many times growers have trees which are in trouble but they cannot see it. Consequently, it is good to have other growers, county Extension agents, or pecan specialists look at the trees to see if problems exist. Foliage, crop and tree decline can be slow and hard to recognize if you are in the orchard every day. Problems are slow to become obvious because pecans store food reserves in limbs, trunk and roots. The tree can look healthy to the untrained eye until all of the stored food is utilized, then problems become very easy to see. During heavy crop years such as 1995 in Texas, growers have a good chance to see how healthy their trees are. Signs of trouble can be many. The good news is that these problems can frequently be corrected with good management if the trees are on good soil.

A Guide for Evaluating Pecan Problems

Poorly Filled, Wafer Kernels ..... Soil, Irrigation, Heavy Crop, Management

Kernels with Air Centers and Fuzz ..... Drought Without Irrigation or Other Stress

Green or Black Sticktight Pecans in November ..... No Late Season Irrigation or Other Stress

Pecans Sprouting (Vivipary) While on The Tree ..... No Late Season Irrigation or Other Stress

Rapid Tree Death in August or Early September ..... Cotton Root Rot

Blue, Green and Grey Moss (Lichens) on Limbs or Trunks ..... Shallow Soil, No Management

Little Leaves, Short Shoots ..... Zinc, Soil, Irrigation, Nitrogen, Weeds

Little Yellow Leaves on Young Trees ..... No New Root Growth, Too Much or Too Little Water

Young Tree New Growth Dies Repeatedly ..... Root Desiccation or Freeze Damage at Nursery

Small Leaves Which Curve ..... Zinc Deficiency

Leaf Edges Wavy ..... Zinc Deficiency

Leaves With Dark Interveinal Discoloration ..... Zin Deficiency

Galls on Nuts, Cluster, Leaves ..... Pecan Phylloxera

Young Tree Dead, Small Holes in Trunk with Sawdust Tube Sticking Out ..... Ambrosia Beetle

Small Fat White Grub with Red Head in Pecan ..... Pecan Weevil

Small, 1/8" Hole in Shell with Kernel Eaten ..... Pecan Weevil

Small White Grub Tunneling in the Shuck ..... Hickory Shuckworm

Small Limbs Drop in Late Summer or Fall with Perfect Circle Cut in Bark ..... Twig Girdler

Mass of Dark Grey Caterpillars Eating Foliage ..... Walnut Caterpillar

Mass of Thick Grey Webbing Filled with CaterpillarsiIn Late Summer ..... Fall Webworm

Summary

Pecan culture in Texas, whether it is commercial, native or landscape can be a very rewarding profession or avocation. There are millions of trees which produce good crops and reward the owners with a lifetime of satisfaction, pride, beauty and profits. The material presented here is not intended to discourage anyone who wants to grow pecans, but rather to help the grower who could be having problems. When all things are right for pecans at a site in Texas, there is no better crop one could choose.

Lessons Learned from 2006 Pecan Crop

Charles Rohla, Noble Foundation

Early in summer 2006, the United States Department of Agriculture predicted Oklahoma pecan production would be around 20 million pounds. This prediction indicated an above-average crop. Prices were forecast to be high, which was very good news for pecan producers. However, by the time the final counts are in, it appears we may fall below these predictions.

As the early crop set looked good, many factors contributed to the 2006 crop being less then predicted. In some areas, insect damage was a major factor in the final production. First-generation pecan casebearer was later than computer models predicted. Therefore, scouting for this pest was critical in controlling it. Producers who actively scouted and sprayed at the appropriate time easily controlled not only first-generation pests, but also the second-generation when they used chemicals with a long-acting residual. With the lack of rain, scab was not a problem in 2006, even on varieties that are very susceptible to the disease. At the same time, the lack of rain caused severe physiological problems with the pecan crop. Water is required for pecan sizing, which occurs during the early summer. Without water, this year's pecans did not size normally. In most areas without irrigation, pecans were one-third to one-half the size of normal. Even with irrigation, this was a problem in some locations because producers could not make up the water deficit. However, this was not all bad news. With the lack of water during pecan fill in late summer (August), the smaller-sized pecans were able to fill, resulting in higher-quality pecans.

In some locations, the lack of rain affected crop retention, as well as leaf retention, on the tree. It is extremely important for the trees to retain leaves as long as possible. As the soil moisture decreased, the trees started to struggle to find enough water to fulfill their daily requirements. Most plants start to wilt when they are stressed. However, pecans do not. Therefore, when growers finally notice the signs of the tree stressing, it may be too late. Some trees aborted their crops — some lightly, while others lost their entire crop. Some trees even dropped their leaves, their last effort in an attempt to survive the drought.

While driving through several orchards this summer, it was obvious that soil types and management practices played a major role in how the trees responded to the drought. Areas in orchards along rivers and streams that appeared to be on sandier soil ridges dried out faster and the trees stressed and some lost their leaves. In other areas of the orchard — where water normally stands in wet years — also suffered this year. These areas most likely contain more clay and are tighter soils, which result in the trees having a shallower root system. With the extensive drought, these areas dried out, and with the shallow root system, the trees stressed from lack of water. Many of these trees lost their crop and several had shed their leaves earlier.

Growers who properly fertilized their trees retained more crop and leaves on their trees than did growers who did not properly fertilize. In several orchards we visited in summer 2006, it was obvious whether an orchard was fertilized or not. The trees in the fertilized orchard had darker green leaves, a better crop load and the trees retained their leaves better than the trees in unfertilized orchards.

The final straw was the damage caused by pecan weevil. Weevils usually emerge after a good rainfall. With the lack of rain, some weevils were able to emerge through the cracks in the soil, therefore earlier then normal. These weevils may not have caused a great deal of damage, but they were out in the orchards. After we started to receive rain, the emergence really started. Producers who trapped and scouted were able to make spray applications when weevils were out and not just after the rains, resulting in optimal control. Producers who did not trap and scout may have missed the late emergence. This late emergence is the one that most likely caused the most damage to the 2006 crop.

Many lessons can be learned from 2006 growing season. Among the most important are the importance of water, proper fertilization and pest management. Water is very important not only for tree survival but also for crop production and retention. Pecan trees do require fertilization. The best way to determine what and how much to fertilize is by taking a leaf sample in July. This will tell what the tree lacks in nutrients. Once the crop is set, it is very important to do everything possible to keep that crop. To ensure this, pest management is very critical. If producers used only computer models or the calendar to determine when to spray for pecan casebearer, then they sprayed too early. If producers sprayed for weevil only after rainfalls, they may have missed the explosion of mid and late emergence that has caused the most damage this year.

Cyclic Decades of Cold Temperatures in Oklahoma

Eric T. Stafne
OSU Horticulture & Landscape Architecture Dept.

In trying to understand some of the unique and varied weather we have here in Oklahoma, I requested some Mesonet data for all 77 Oklahoma counties. My request was to find any recorded event of -8 F or lower. This temperature, -8 F, is related to some other work I was doing with grapes, but I thought some of the trends I saw in the data would be of interest to pecan growers as well. I wanted to see if I could separate out areas of the state that were more prone to these low, winter temperatures. It is a work in progress at this point, but I did come upon some very interesting data.

With the data I received, I made a figure by decade of the cumulative weather events observed below -8 F. On the left hand side (the Y axis) are the cumulative number of observed -8 F or greater events over all 77 counties. On the bottom (the X axis) are the decades from the 1900s to the 1990s. I excluded data from the 1890s and 2000s because complete decade records were not available. Some counties are not represented due to missing data. The temperature data for some counties reaches back to the 1890s, but others only the mid-1900s. These temperatures are indicative of only a single site; therefore, are only useful in a broad, macroclimatic sense. These temperatures cannot take into account elevation, slope, aspect, or any other meso- or micro-climatic locations.

The most interesting part of these tables is not what counties are in the list, but rather the cyclical patterns in climate over the last century. In the 1900s there were a total of 53 observations of -8 F or below during the decade. This was followed by 126 in the 1910s, quite an increase. Yet, in the 1920s the number dropped to 31, indicating that few observations in few years occurred. That number rose to 90 in the 1930s and up to 114 in the 1940s. The higher the number is indicative of more years during the decade having a -8 F or greater temperature, thus overall having colder conditions throughout the decade. The 1950s saw a decline back to 45 observations, with a slight increase in the 1960s to 55, and another increase during the 1970s to 75. Then came the coldest decade in terms of total years and observations – the 1980s. A total of 182 observations were recorded during this decade. Several cold temperature records were set during the winter of 1989. However, the 1990s again had few observations, only 34, and most of those in one year: 1996. My inclination is to be cautious in drawing conclusions. Even though 100 years seems like a long time, it is a proverbial drop in the bucket in terms of how long the Earth has been around. It appears that a cycle occurs; we have a decade that is relatively "warm", followed by increasing cold for a decade or two (or three), then another warm spell.

In my best determination of the weather data before me, I prefer to wait and see how things progress in years to come. My hunch is that these temperatures will continue to be cyclic and we will see a long-term pattern emerge. Another question is whether global warming is occurring. The data I present here doesn't adequately address that issue. I would need to look at individual temperature averages for winter and summer. Even if winters

are not getting as many -20 F readings, the -8 F and below readings are just as frequent as earlier in the decade.

Perhaps at some point we can begin to predict in advance what decades are most likely to have these extreme cold temperatures. If we come to the point where that can be done, then we may be able to advise pecan growers when to expect bud injury due to severely cold weather. It is more dream than reality at this point, mainly because we don't have enough data to make determinations yet. When it comes to climate data the more one has the better, but I will continue to monitor the patterns and maybe some day we will have a breakthrough.

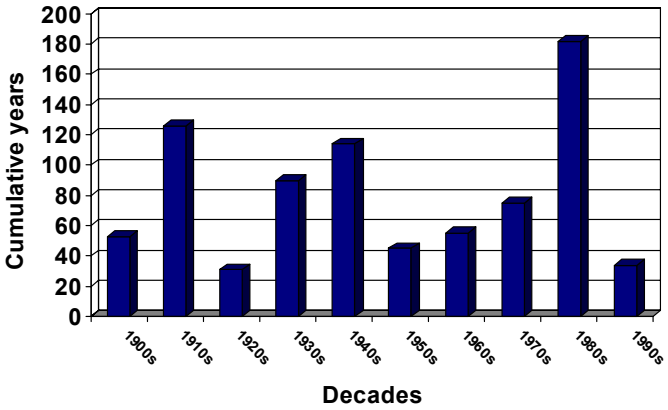

Fig. 1 The cumulative number of observations between 1900 and 1999 for all counties in Oklahoma (excluding Major and Washington) with a recorded -8 F. A shorter column indicates fewer observations and fewer years within the decade, whereas a taller column indicates more observations and more years within a decade having cold temperatures.

Oklahoma's 2007 Ice Damage

Michael Smith and Eric Stafne,
OSU Horticulture & Landscape Architecture Dept.

Oklahoma experienced a major winter storm during January 12-14, 2007. Ice damage was primarily along the highway 69corridor that runs from Big Cabin at I-44 to the Texas line south of Durant. The most significantly impacted area was from Pryor to Atoka. Some pecan tree damage occurred elsewhere, but most areas received primarily sleet with small to moderate amounts of ice accumulation or only rain in southeastern Oklahoma. Initial reports indicate that trees supported up to 3/8 inch of ice with little structural damage. However, in some areas ice accumulations exceeded one inch resulting in extensive damage. Pictures of a pecan orchard at Muskogee suggest that this was one of the hardest hit areas (see photos).

Oklahoma had extensive ice damage during January 2000 in an area that began about I-40 proceeding south to the Oklahoma and Texas border, and east of a line from about Okemah through Duncan, covering about 1/3 of Oklahoma's pecan production area. About 25,000 to 30,000 acres of pecans were damaged in that storm. The following winter, the western side of the state received significant ice damage. About 4,000 acres were damaged in that storm. Figures are very preliminary at this time, but it is likely that about 8,000 acres of pecans received moderate to heavy damage from the January 2007 storm. Although damage was significant from the 2000 and 2001 ice storms, most trees have rebounded to near full-recovery levels. Impact from an ice storm of this magnitude can take several years for a tree to reach pre-storm yields. Hopefully, it will be years before we experience another significant icing event.

United States Department of Agriculture
Rural Development
State Office
Stillwater, Oklahoma

Value-Added and Energy Grants Available Through USDA Rural Development

Stillwater, OK – USDA Rural Development State Director Brent Kisling announces FY 07 Federal grant dollars to assist Oklahoma farmers and ranchers with funding to expand their agriculture operations into value-added projects, make energy efficiency improvements, and to purchase renewable energy systems. "These two programs can help agriculture producers increase their economic opportunities by adding new value-added products to their operations, or reducing their current energy cost and consumption." Kisling also stated, "The funds provide an investment in our rural communities through job creation, new uses for agriculture products and wastes, and helping the nation meet its energy needs."

The Value-Added Producer Grant Program was authorized by the Agriculture Risk Protection Act of 2000 (P.L. 106-224) and the 2002 Farm Bill (P.L. 107-171). Grants are available to independent producers, agriculture producer groups, farmer or rancher cooperatives, and majority-controlled producer based business ventures. The grants will be used to fund one of the following two activities: 1) planning activities needed to establish a viable value-added marketing opportunity for an agriculture product such as conducting a feasibility study, develop a business plan, or a marketing plan; or 2) acquire working capital to operate a value-added business venture that will allow producers to better compete in domestic and international markets.

The Renewable Energy Systems and Energy Efficiency Improvements Program was established under Title XI, Section 9006 of the Farm Security and Rural Investment Act of 2002 (the Farm Bill). Grants and loan guarantees are available to farmers, ranchers, and small businesses to purchase renewable energy systems or make energy efficiency improvements. Energy efficiency improvements projects may include installing or upgrading equipment to agriculture operation facilities, or businesses. Renewable energy systems can include bioenergy, anaerobic digester, geothermal, hydrogen, solar, or wind projects.

We encourage all those interested in the Value-Added Producer Grant Program to contact Sally J. Vielma at (405) 742-1039, or e-mail: sally.vielma@ok.usda.gov. or all those interested in the Renenewable Energy and Energy Efficiency Program, to contact Jody Harris at (405) 742-1036, or e-mail: jody.harris@ok.usda.gov.

USDA Rural Development in Oklahoma is committed to increasing economic opportunity and improving the quality of life for all rural Oklahoma. Information on all USDA Rural Development programs may be obtained by visiting the Agency's Oklahoma website at www.rurdev.usda.gov/ok, or by calling the Oklahoma State Rural Development office at (405) 742-1000.

100 USDA • Suite 108 • Stillwater, OK 74074
Phone: (405) 742-1000 • Fax: (405) 742-1101 • TDD: (405) 742-1007 • Web: http://www.rurdev.usda.gov/ok

PECAN GRAFTWOOD SOURCES - 2007

Eric Stafne, Fruit and Pecan Extension Specialist
Becky Carroll, Senior Agriculturist
Oklahoma State University

	Pecan Varieties																									Walnut		
Name and Address	Caddo	Cheyenne	Choctaw	Creek	Dooley	Giles	Graking	Greenriver	Houma	Kanza	Kiowa	Major	Maramec	Mohawk	Mount	Nacono	Navaho	Oconee	Osage	Pawnee	Peruque	Posey	Shoshoni	Sioux	Stuart	Waco	Wichita	Black	Carpathian	
Dick Hoffman 7104 E. 32nd Ave Stillwater, OK 74074 Phone: 405-372-3583	X	X	X	X		X	X			X			X	X		X	X	X		X	X		X	X	X	X		X		All varieties $1.50 per 12"stick (2 grafts/stick) Minimum order 5 sticks per variety. Add $6.00 for priority mail shipping. Call or write about varieties not listed.
Wes Rice 333 Braden School Rd. Ponca City, OK 74604 Phone: 580-765-7049 wrice@poncacity.net	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Price: $1.50 per 12" stick (2 grafts/stick). Minimum of 3 sticks per variety. Add $6.00 for postage & handling. 10 black walnut & other pecan varieties available if ordered by March 15.
Carole Smith Rt. 2 Box 423-2 Cleveland, OK 74020 Phone: 918-358-5796	X									X			X			X		X		X											All varieties $1.50/stick (2 grafts/stick). Minimum order 5 sticks per variety. Add $6.00 for priority mail shipping.

This list does not imply endorsement of listed suppliers by CES or discrimination against unlisted suppliers.
This list is for educational purposes only.

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 _____

Street Address _____

City, State, Zip _____

Phone (____)_____ email: _____

❑ Renew ❑ New Member

Grower Member	$50.00
Industry Member	$125.00
Extension/Research/Student	$40.00

Return Service Requested

Oklahoma Pecan Growers' Association
c/o Horticulture & Landscape Architecture
Oklahoma State University
360 Agricultural Hall
Stillwater, OK 74078-6027