



OKLAHOMA PECAN GROWERS ASSOCIATION

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Michael Smith, Editor

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Tree Transplanting

Michael Smith

OSU Horticulture and Landscape Architecture

Pecan orchards are planted using bare root or container-grown trees, or native trees transplanted with a tree spade to the desired spacing and pattern. This discussion will concentrate on orchard establishment using bare root trees.

Trees should be purchased from a nursery that produces high quality, pest free trees that are dug and handled properly. Nursery trees infected with crown gall (Fig. 1) should be avoided, even those not currently showing symptoms when others in the field are infected. Crown gall lessens tree vigor and subsequent production is reduced. Another problem encountered on some nursery stock is nematodes, particularly root knot nematode (Fig. 2). Nematodes are most common on sandy soils, so trees grown in a heavy textured soil (clayey) or in fumigated soil are unlikely to be infested. Orchard locations that are sandy should be checked for nematodes prior to planting, particularly if a highly susceptible crop, such as peanuts, has been grown on the site. Another problem that must be avoided is Asian ambrosia beetle infestation (Fig. 3). This pest attacks both healthy and stressed trees. Adults tunnel deep into the trunk and branches, creating galleries to cultivate ambrosia fungus. Adults and developing larvae feed on the fungus rather than the host. Infested trees typically die, and infestations can spread to other trees. Other pests attack nursery trees that can lead to poor transplant survival or reduced tree vigor. Beginning with a healthy pest free tree is critical for success.

Nurseries must handle the trees such that roots are not compromised or killed during digging and storage. Roots should be kept moist and the trees stored in cool conditions. Pecan tree roots are killed when frozen.

Transport from the nursery to the orchard site is best when done in per-



Fig. 1. Pecan roots infected with crown gall.

son. Relying on a trucking company for transport is risky since trees may be frozen or roots desiccated in transit. Such damage is not readily apparent, but dramatically affects tree survival. Planting should be as soon as possible. Trees can be stored for a short period in an area that protects them from freezing and direct sunlight. Roots should be kept moist; usually they can be left in the shipping bundle and water added to the packing material as needed. If trees must be held longer they can be “heeled in” (Fig. 4). This involves digging a trench and laying the trees in at about a 45° angle, covering the roots and leaving the tops exposed. Trees can be held in this manner until budbreak.

Tree location should be marked with perennial vegetation killed in the tree row the previous fall. Roots should be protected from drying during transport to the field and while planting. A convenient method is to place the roots in a barrel of water while awaiting planting. Holes should be dug no deeper than needed to accommodate the tree roots. This is especially important since excessive hole depth results in the soil “settling” causing trees to be planted too deep. Survival and vigor are decreased and yield potential is reduced when trees are planted too deep. In addition, trees planted too deep are more susceptible to lodging during storms than those planted at the proper depth (Fig. 5). It is better to plant trees too shallow than too deep.

Hole diameter should be only as large as needed to comfortably accommodate the root system, typically about six inches in diameter. A small hole will allow the root system to escape the disturbed soil sooner than a large diameter hole. This is more important if the soil has a high clay content or the first year is wetter than normal.

Pecan trees have a dominate tap root with branching



Fig. 2. Roots infested with root knot nematode. Credit: Clemson University - USDA Cooperative Extension Slide Series

side roots. Normally, trees are shipped with long tap roots; over 30 inches long. At planting, tap roots should to be pruned to 18 inches or shorter with lateral roots removed. This may seem contrary to initial assumptions, but this recommendation is supported by three studies. Tree survival and growth does not depend on the root at planting – it depends on the generation of new roots. New roots develop near the cut surface (Fig. 6), just like new shoots develop near the end of a cut branch. Roots need oxygen, just as other



Fig 3. Trunk infested with Asian ambrosia beetle. Note the tooth pick like projections on the trunk. Credit: University of Florida.

parts of the tree need oxygen for respiration. Oxygen decreases with soil depth; therefore, young roots developing from long tap roots deep in the soil may be deprived of oxygen and grow slowly. New roots from short tap roots typically grow rapidly resulting in rapid tree establishment and good survival. Pruning tap roots to 18 inches or shorter is more important on clayey, poorly drained soils or during wet growing seasons than when on well-drained, sandy sites.

Trees should be placed in the hole at the same level they grew in the nursery, and the hole filled with the same



Fig. 4. Diagram of nursery trees being heeled-in. Credit: L.W. Ramsey Agency. How to plant a Tree

soil that was removed. No amendments should be added to the soil since this would change the texture, thus restricting water exchange between the hole and the undisturbed soil. Soil should be packed, but not compacted, and then the tree watered. If the soil settles, additional soil must be added and the trees watered again.

Subsequent survival and growth depend to a large degree on weed control. This topic has been covered in other OPGA Newsletters and CR-6242 Weed Control in Pecans, Apples, and Peaches is available at <http://pods.dasnr.okstate.edu/docushare/dsweb/View/Collection-217>. Trees should be fertilized with a complete fertilizer, such as 13-13-13, in small amounts, i.e. ¼ pound per application. The first application should be made shortly after budbreak. Fertilizer should be spread about six inches from the tree in a band about 18 inches long. Up to four fertilizer applications spaced at two week intervals can be



Fig. 5. Tree planted at the proper depth showing brace root development. Trees with well developed brace roots withstand storms better than those without brace roots that were planted too deep.



Fig. 6. Root growth from trees transplanted with 30-, 20-, or 10-inch tap roots. Note the abundant and vigorous root growth from the trees with 10- or 20-inch tap roots on the right and center compared to sparse low vigor roots on the 30-inch tap root on the left.

applied during the first year. However, if the trees are not actively growing, as is frequently the case with first year trees, subsequent fertilizer applications should be omitted.

Irrigation is clearly a profitable investment for a pecan orchard. It improves tree survival and growth, improves production and reduces alternate bearing. Other articles in this Newsletter have discussed benefits of irrigation and given guidelines of peak water demand for pecan orchards. These articles can be accessed at <http://www.hortla.okstate.edu/pecan/opga/index.html>. One thing to keep in mind when establishing a new orchard is that no amount of irrigation and fertilization can compensate for poor weed control. Maintaining a vegetation free area surrounding the tree of at least 6 feet in diameter with herbicides and/or mulch is imperative for optimum orchard establishment.

Horticulture Pecan Research Endowment

Michael Smith

OSU Horticulture & Landscape Architecture

During July 2008, I initiated a drive to create an Endowed Professorship with the focus on horticultural research on pecan. The goal is to reach at least \$250,000 before matching funds, courtesy of T. Boone Pickens, are expended or utilized for other priorities. About \$30,000,000 remains to match contributions. When successful the fund will grow to \$500,000 with Mr. Pickens match, and then the state of Oklahoma will contribute an additional 25% match, i.e. another \$125,000. Most of the interest from this Endowment will be used to support pecan research. Some money will return to the principal to reduce the negative effects of inflation. A small amount of the interest will be used for salary enhancement so that the best scientist can be attracted to this position. If we do not achieve the goal before the matching program ends, the donated money will be converted to an endowment for pecan research, but contributions will not be matched and an Endowed Professorship will not be created. Interest from the endowment would support pecan research. Either way, growers demonstrate that pecan research in Oklahoma is important and they are willing to support such activity.

As of this writing contributions total \$47,950, and the Oklahoma Pecan Growers' Association has pledged \$20,000. There have been contributions from Oklahoma, Kansas and Texas producers, and one company. This has proven to be a difficult financial period to fund this endowment. Economic conditions in the U.S. and the world are

challenging. In addition, pecan production was down this year in Oklahoma and elsewhere. It was especially disappointing in the northern half of Oklahoma since producers expected a good crop following the crop loss in 2007 to a spring freeze. Pecan markets are also of concern since there has been little interest from shellers in buying this crop. Creation of an Endowed Professorship will ensure that pecan research at O.S.U. continues indefinitely. We have about 4 years to reach our goal, unless Mr. Pickens gift is depleted sooner. Checks should be made out to the **O.S.U. Foundation** and mailed to:

Michael Smith, Department of Horticulture and Landscape Architecture, 358 Agricultural Hall, Oklahoma State University, Stillwater, OK 74078-6027. Contributions to the Endowment are tax deductible.

Below is a list of those contributing to the Endowment.

2008 Contributors

- Paul and Maxine Haydon
- Bert and Elizabeth Blumer
- J.D. and Dwayne Scott
- G.F. Parsons
- Edward L. Boyd, Jr.
- John Barnes
- Henry Bellmon
- Alvin and Debra Stein
- Michael and Carole Smith
- Virginia Merritt Autry
- Tim Montz
- Bag-A-Nut, LLC

2009 Contributors

- Joe Ihle

Evaluating Soil Drainage

Charles Rohla

Noble Foundation Horticulturist

During recent visits to pecan operations, I have noticed that some growers are planting pecans in less than ideal soil types. During our discussions, the most frequently asked question is ‘Will my trees grow and will I be able to make a profit?’ This can be a difficult question to answer. The answer will greatly depend on the degree of management needed in the orchards. I have heard some growers say that if they can get a tree to survive the first three or so

years then the tree has a better chance of survival. I agree that the first three years are perhaps the toughest on tree survivability. However, after three years several things can happen to a tree or even a site that might affect production. With less than perfect sites, the most common problem is internal soil drainage. Too much drainage occurs on sandy sites and too little drainage occurs in tighter soils. Nonetheless, steps can be taken to help improve both situations.

To determine the internal drainage of soil, a percolation test should be used at various locations throughout the orchard. Dig a hole 30 inches deep with a post hole digger. Fill the hole with water and allow it to drain out. Refill the hole with water and evaluate the length of time it takes to drain out. If water drains out within 1-2 hours, then the site has extremely good internal drainage. If water does not drain within 48 hours, then internal drainage is extremely slow. If water does not drain below 12 inches from ground level, then this site is not recommended for planting pecans. If pecans are planted on these sites, oxygen availability is decreased to the root system and roots start to die a few hours after being deprived of oxygen.

In some circumstances, steps can be taken to improve soil drainage. If soil is sandy and internal drainage is too fast, the addition of organic matter will help with water holding capacity. To build organic matter in the soil, a green manure crop can be used. Grow a crop that produces large amounts of biomass and then work the crop into the soil. As this biomass breaks down it increases the organic matter. Mulches can be used around the trees to help conserve moisture in the soil around the trees. This is extremely important if limited water is available or irrigation is not being used. It is important to remember that in sandy soils without irrigation, available water in the soil is limited and that growth of the trees will be affected along with production and quality of the crop. If soil drainage is slow, steps can be taken to help improve the drainage. Deep soil ripping may increase drainage. After ripping is complete the site should be tested to determine if drainage is improved. Also, planting on berms or raised beds has been used to help establish trees on soils that have drainage problems. It is also important to establish drainage ditches that will allow the surface water to drain off the site, which will aid in the internal drainage.

Site selection is imperative when determining where to plant your pecan orchard. However, property limitations can dictate our planting sites for us. The key to successful planting is to ensure that steps are taken to give your planting the best chance for growth and survival.

Methods of Tree Establishment

Charles Rohla

Noble Foundation Horticulturist

Over the past three years, I have worked with landowners that have planted or are planning to plant a combined 100,000 trees. Some landowners are planning orchards complete with irrigation systems and goals of high production yields and high profits, while others just want to have trees that they can harvest when Mother Nature blesses them with a crop.

Landowners with dreams of a profitable irrigated orchard will normally begin their orchards using grafted trees. This will enable them to produce a small harvest after 5-7 years and hopefully a profitable harvest after 10-12 years. These growers set high production goals in the range between 1250-1500 lbs per acre, after the trees are in full production. Producers with ideal locations (suitable soil and ample water) aim their goals higher with a range of 1500-2000 lbs per acre. These managers are willing to conduct extensive management practices (weed control, fruit thinning, pest control, etc.) and provide the needed water and nutrients to the trees.

The landowners seeking a lower maintenance orchard have a number of options when planting. These options should be closely examined before determining which method to use. Typically, producers are looking for an enterprise that may provide revenue from their land with little input costs after the initial investment. A few producers will start by planting nuts in the ground. This method is initially the cheapest; however, in the long run it may actually be the most expensive once you factor in the length of time it takes for a return on investment due to the need for extensive management. Some landowners choose to use state forestry bareroot seedlings, which is a very inexpensive method. However, seedlings are perhaps just a step above starting with a nut. Both of these methods have extremely low survival rates unless several years of extensive management are invested. Another option is to plant container trees. These trees may range in size from seedlings to three-year-olds. The seedling containerized trees typically have a better survival rate than the bareroot seedling because containerized trees have an established root system. However, the same level of extensive management will be required to have increased survivability. The older container trees, have the advantage of an increased size of the root system. Some growers will elect to graft the tree, lessening the initial cost of planting. The container or bareroot grafted trees have the highest initial establishment cost. However, once you factor in the cost of manage-

ment and the survival rate of the trees, in the large containerized or large bareroot trees will turn out to be the cheapest method of establishing an orchard.

When deciding to plant a pecan orchard, it is imperative to determine the level of management you are willing to spend and time you are willing to invest. Years to production and survival rate will directly impact your return on investment. Once management practices are decided, you can then select the suitable method for planting your trees.

The Upcoming 2007 Census of Agriculture

Eric T. Stafne

OSU Horticulture & Landscape Architecture

The title of my article sounds strange – even to me as I wrote it. Why is a two-year-old census “upcoming”? Well, these things take time to compile, verify, and report. Of course, then it is outdated as soon as it is published, but that is the best that can be done at this point. Maybe some day you will be able to upload your information directly to the USDA and have it go into a mass database where it can be instantly added. I don’t foresee that in the near future however. By the way, you are reporting your statistics, right? I took the following from the USDA website:

“Producers can show the nation the value and importance of agriculture and they can help influence decisions that will shape the future of American agriculture. By responding to the Census, producers are helping themselves, their communities, and all U.S. agriculture.”

And let’s not forget funding (i.e. grants and other monies) which can impact you directly (loans, farm policy) or indirectly (such as research grants, etc.). I suspect many of you do respond to the census, but just like in voting elections, many of you do not. There are many valid reasons for not reporting your pecan production – you don’t have time, you had other things come up and it didn’t seem important, or you just don’t want the dang government knowing your business. Okay, understood. But, realize you are really helping the industry, and as an extension of that yourself, by reporting. In the last issue of the newsletter, the Oklahoma pecan production from 1944 through 2007 was on pages 12 and 13. In looking at these figures, it strikes me that pecan production in Oklahoma has not changed appreciably since 1944. In fact, in the last 10 years the average production was only less than 2 million pounds more than the 64-year average. However, this too is somewhat deceiving because it includes the monster 1999 crop. So, I decided to break it down by decade (Table 1).

Table 1. Oklahoma pecan production and population by decade.

Decade	Natives	Cultivars	Total	Population
1940s	19,977,000	1,690,000	21,667,000	2,336,434
1950s	15,887,000	1,377,000	17,270,000	2,233,351
1960s	21,570,000	1,550,000	23,080,000	2,328,284
1970s	11,160,000	1,140,000	12,300,000	2,559,229
1980s	16,720,000	1,430,000	18,150,000	3,025,290
1990s	16,820,000	1,380,000	18,200,000	3,145,585
2000s	13,663,000	3,150,000	16,813,000	3,450,654
Avg.	16,418,000	1,627,000	18,039,000	—

In looking at the table, the 2000s have been below average in native production, but well above average in cultivar (improved) production. This is really reflected in production since 2004. Good prices paid for pecans in the 1990s probably played a large role in this as more improved orchard went in and they are beginning to come into production in the last few years. But, when we look at total production in the 2000s we are slightly below average. In statistical terms, I would surmise this to be not significantly different from the mean. So, for the most part, the overall pecan production in Oklahoma has remained stagnant.

Why?

We have improved management techniques, better spray materials, and more productive cultivars. So why are we not producing a lot more pecans?

Of course, part of the issue is the native pecan population. There are just not a whole lot of new native pecan trees coming into production and, in fact, we are surely losing many to urbanization. This is likely reflected in the population increases, especially in the last 30 years or so (although by some standards this increase is fairly small compared with other states). Another reason could be the retreat from agrarian society. I daresay that most new folks moving into Oklahoma are not doing it to be agriculturists, but rather some other industry. Therefore, the number of pecan producers is getting smaller (in the 1940 Census of Agriculture there were 39,789 farms reporting pecan production; in 2002 just 2,879), but those pecan producers are producing more per acre. Pecans produced per farm in 1940 was just 604 pounds; whereas in 2002 it was 3,473 pounds, and even more in 1997 (12,741 pounds), 1992 (4,923 pounds), and 1987 (6,119 pounds). Which brings me back around to the census; we will see what the figures look like in the next couple of months (February 4, 2009 to be exact) from the 2007 census of agriculture: (<http://www.agcensus.usda.gov/Publications/2007/index.asp>). If you have not participated in the census in the past, consider doing so in 2012 because it helps everyone in the pecan industry (and also because it's against the law not to).

Great Trees of Oklahoma

Oklahoma Forestry Services, in cooperation with the Oklahoma Forestry Association, maintains records on the largest specimens of many of Oklahoma's tree species. This list has been updated and published periodically since the early 1960's. The last publication was in 2000, but now the list is continuously updated, maintained, and displayed on the web. Currently there are more than 100 champion and co-champion trees contained in the list.

Below is the largest pecan tree on record in Oklahoma. If you have a larger tree, you can find out how to measure and report the tree to the Oklahoma Forestry Services at <http://www.forestry.ok.gov/champion-trees>.

Pecan - *Carya illinoensis*

Height: 108 feet

Crown: 110 feet

Circumference: 217 inches

Total Points: 352.5 points

Location: Southeast of Ft. Gibson

Last measurements were taken in 1997

Reported by: C.T. Morgan, A. Nevel, B. Lyons

Disease Profile: Anthracnose of Pecan

Damon L. Smith

OSU Entomology & Plant Pathology

In the last newsletter I wrote about bacterial leaf scorch (BLS) which is caused by infection of the tree by a bacterial microbe called *Xylella fastidiosa*. During that discussion I mentioned anthracnose and fungal leaf scorch (FLS) disease of pecan, which many of you might be familiar with. During this discussion we will focus on anthracnose.

Causal Agent and Disease Symptoms

While anthracnose may not be a problem in Oklahoma every year, it can be of concern in years with larger than normal amounts of precipitation. Anthracnose is caused by a fungus called *Glomerella cingulata*. The fungus is very common in the environment and causes many diverse diseases on a wide array of plants. Despite its widespread existence, the severity of the disease is highly dependent on environmental conditions as we will discuss below. Anthracnose is also implicated in the occurrence of fungal leaf scorch. Fungal leaf scorch of pecan is caused by a "disease complex" or several organisms acting together. One of the organisms involved is the pathogen that also causes pecan anthracnose. The other organism implicated in the FLS disease complex is a *Phomopsis* sp. Fungal leaf scorch has been associated with premature leaf drop and reduced fruit quality in the southeastern U.S. Symp-



Figure 1. Anthracnose lesions on pecan leaflets.
Photo Credits: Dr. Jason Brock and Dr. Lenny Wells,
University of Georgia.



Figure 2. Anthracnose lesions on pecan fruit.
Photo Credits: Dr. Jason Brock and Dr. Lenny
Wells, University of Georgia.

toms of FLS include brown areas that expand from the edges of leaves toward the center. In some cases, a dark brownish to black margin separating green tissue and brown tissue has been reported. In contrast, the foliar symptoms of anthracnose are typically described as irregular, reddish to grayish brown blotches that vary in size and can cover entire leaflets (Fig. 1). Within the blotches there may be black sporulation structures of the fungus present. On fruit, anthracnose manifests as shiny, dark brown, sunken lesions that occur on the forward portion of the fruit (Fig. 2). The lesions will typically be focused along the shuck suture or on areas of the shuck that have been wounded. Salmon-colored masses of gelatinous spores can be seen on nut lesions during periods of wet weather.

Disease Cycle

The anthracnose fungus survives the winter on peduncles of the previous year's crop. Spores of the fungus are produced in early spring, which coincides with budbreak in pecan. During periods of rainfall, the spores are dispersed via splashing water to developing leaves and fruit. Excessive rainfall and temperatures around 70 F will favor the formation of spores and infection events. These infection events often occur very early in the season on young tissue. The fungus then grows and matures within the developing tissue. Disease development typically doesn't occur until tissues are ripening or senescing late in the season. If trees are stressed due to factors such as a heavy crop load, excessive drought late in the season, and insect infestations, then the development of disease may occur more rapidly and be more severe.

Control

Cultural practices similar to those for control of scab in pecans can be effective in controlling anthracnose. Canopy management and promoting air movement in orchards will help dry leaves and developing fruit more quickly during wet periods, thereby reducing the number of potential infection events. Regular applications of fungicide to control scab will also be effective in reducing damage caused by

anthracnose. In orchards that have a consistent problem with anthracnose, implementation of fungicide programs earlier in the season, or a few limited and targeted fungicide applications early in the season prior to potential infection events, may prove useful in reducing the damage later in the season. Cultivars with resistance to the disease should be used if replanting in orchards known to have a history of anthracnose. Results from controlled laboratory studies show that 'Moneymaker', 'Moore', 'Pawnee', 'Success', 'Western', 'Schley' and 'Wichita' are susceptible to anthracnose.

Diagnostic Services

For those needing assistance in the identification of anthracnose, a diseased plant sample can be submitted to the Plant Disease and Insect Diagnostic Laboratory (PDIDL). The sample should include a twig with several symptomatic leaves or fruits attached. The sample should be placed within a sealed plastic bag with no water added, and express mailed to the PDIDL. Be sure to include a **completed** sample form with your sample. Sample forms can be found at <http://www.ento.okstate.edu/pddl/pdidl-form.pdf>. Any pertinent digital pictures should be sent to jen.olson@okstate.edu. For assistance in retrieving sample forms or sending samples, contact your local Oklahoma State University Cooperative Extension Office.

REFERENCES

- Latham, A.J., Bowen, K.L., and Campbell, H.L. 1995. Occurrence of *Glomerella cingulata* in pecan nut shucks and its association with fungal leaf scorch. *Plant Dis.* 79:182-185.
- Sinclair, W.A., and Lyon, H.H. 2005. *Diseases of trees and shrubs.* Cornell University Press, Ithaca, NY. p. 226.
- Stevenson, K.L. 2002. Anthracnose. Pages 52-53 in: *The compendium of nut crop diseases in temperate zones.* B.L. Teviotdale, T.J. Michailides, and J.W. Pscheidt, eds. American Phytopathological Society Press, St. Paul, MN.

PECAN GRAFTWOOD SOURCES - 2009
 Eric Stafne, Fruit and Pecan Extension Specialist
 Becky Carroll, Senior Agriculturist
 Oklahoma State University

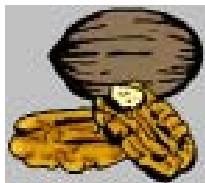
Hort 5

Name and Address	Pecan Varieties														Walnut																
	Caddo	Cheyenne	Choctaw	Creek	Dooley	Giles	Graking	Greenriver	Houma	Kanza	Kiowa	Lakota	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.
PecanQuest - Rice 333 Braden School Rd. Ponca City, OK 74604 Phone: 580-765-7049 wrtos@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.
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 This list is for educational purposes only.

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

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