



Kansas Canopy

Spring 2002
Issue #2

Newsletter of the Kansas Forest Service

Stewards of Woodlands and Windbreaks



Forest Stewardship starts with a visit by your District Forester.

Thoreau talks about tramping 8 or 10 miles to keep an appointment with his favorite tree. Kansas has its own brand of woodland stewards who are willing to go the extra mile to care for their trees. It is the goal of the Kansas Forest Service to make sure these people have the necessary tools to manage their woodlands and windbreaks.

The Forest Stewardship Program helps to accomplish this goal by providing free professional forestry services to Kansas landowners who wish to plant trees and manage their woodlands. The following services are delivered by eight district foresters located throughout the state.

- **Reconnaissance** – On-site visits to collect information and make recommendations on forest management, forest health and tree planting.
- **Forest Management Plans** – Based on the management objectives of the landowner, 5 year plans offer suggestions about tree planting, timber stand improvement, timber harvest and protection of forest resources.
- **Practice Plans** – Detailed information on how to implement specific forestry

practices such as tree planting, timber stand improvement or timber harvest.

- **Cost-Share Assistance** – The Forestry Incentives Program (FIP) currently has \$17,000 available to landowners located east of highway 81 to plant trees or thin timber. Talk to your local District Forester for details or call our state office at 785-532-3310.
- **Insect, Disease and Forest Health** – Diagnosis and control recommendations for insect, disease and forest health problems in woodlands and conservation tree plantings.
- **Education** – Educational workshops to promote proper forest management, tree planting and forest health. Each year the entire staff hosts a Fall Field Day to showcase landowners who have done an exceptional job managing their forest resource. This year the Fall Field Day is scheduled for October 23.
- **Publications** – Publications on forest management, tree planting and forest health are available at no cost. These publications may be accessed at the Kansas Forest Service Web site.
- **Timber Harvest** – Foresters estimate board foot volumes of standing timber, provide timber sale contracts, bid solicitation forms and a list of timber buyers. KFS does not represent landowners during the negotiation and execution of the contract. On-site board foot volume estimation is only offered to landowners who are interested in managing their timber for future generations.
- **Timber Stand Improvement** – Marking trees for removal while keeping the best quality trees.

Bob Atchison, Rural Forestry Coordinator, coordinates all rural forestry activities for the Kansas Forest Service.

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Comments from the State Forester

How is that tree in Kansas doing?



A rare and little known photograph from the Kansas State Forest?

Sometimes, a forester in Kansas gets no respect. Over the past 26 years, I have heard most all the jokes about foresters and forests in Kansas. When attending out-of-state meetings with my colleagues, I seem to receive more than my fair share of abuse. How is your Tree? Who's taking care of it while you're gone? What does a forester do in Kansas, anyway? I just smile and shake my head, knowing that **we do have forests in Kansas** and acre for acre they are some of the best, most productive forest lands in the country.

Believe it or not, Kansas has more than 1.5 million acres of natural forest land in the state and that does not include another 480,000 acres of wooded strips and windbreaks that do not meet forest land specifications. Not bad for a flat, treeless state. Altogether, forest land accounts for roughly 3 percent of the state's total land area. Not much you say. Well it's more than states like Nebraska, North Dakota, Nevada, Delaware, and Rhode Island. And yet, Kansas takes the wrap for not having any trees.

Gathering information about our forest lands is an important task. Monitoring forest condition provides a basis for assisting private landowners in managing their forest lands and helps the forest industry keep abreast of the available wood resource that affects their overall operations.

A statewide inventory of forest land was conducted by the USDA Forest Service in 1994. Field plots were visited and the trees and other vegetation within the plots were measured and recorded. The data told us that our forest lands increased by more than 183,000 acres between 1981 and 1994; a trend that has continued since the first recorded forest inventory in 1936 where only 1.2 million acres were recorded. Subsequent inventories showed nearly 1.4 million acres in 1965 and more than 1.4 million in 1981. When European settlers came to what is now Kansas, there were estimated to be 4.5 million acres of forest land.

In 2001, the Kansas Forest Service began cooperating with the USDA Forest Service on gathering field plot data. It is the beginning of annual inventories that will be conducted on a 5 year cycle; evaluating 20 percent of the total number of plots each year. Field plots will be revisited every 5 years and a report of the condition of our forest lands will be published in 5 year intervals.

Since 94 percent of the forest land is in private ownership, foresters contact landowners where plots are located and request permission to enter the property and record the forest data. The plot locations and information gathered remains confidential. The data is only used in statewide summaries.

The Kansas Forest Service is keeping watch over the state's forest land. We will keep you informed of it's size and condition. The next time someone makes a comment about forest land or the lack thereof, you can say that we may not have a lot, but what we have is of critical value to all Kansans in the form of recreation, wildlife habitat, water quality, aesthetics and wood production.

Ray Aslin, State Forester, oversees all operations of the Kansas Forest Service.

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Tree Profile



Sycamore

Platanus occidentalis

Native To: Maine to Iowa, Texas to Florida

Mature Height: 70 to 90 feet

Spread: 60 to 70 feet

Form: Pyramidal when young becoming rounded with age; dense and generally symmetrical; coarse textured

Growth Rate: Rapid; long lived

Foliage: Alternate; simple; palmately 3 to 5 lobed; coarsely toothed; medium green turning showy yellow fall color

Flowers: Deep red; not showy; appearing April to May

Fruit: Dangling from long, stringy stems, 1 inch thick ball shaped aggregates of feathery achenes. Abundant; dry and soft when mature; persistent; may cause significant litter in some years.

Bark and Stems: Showy with exfoliating bark; mostly smooth with mottled appearance; grayish green turning cream colored with maturity. Should be grown with a single-leader.

Site Requirements: Grows best in full sun and tolerates a wide range of soil textures and drainage conditions. Performs best in wet to average soils with good groundwater supply. Tolerant of soil compaction with moderate tolerance to salt and drought; pH tolerant range of 6.6 to 8.0.

Hardiness Zone: 4 to 9; grown state wide.

Insect and Disease Problems: Susceptible to leaf spots, aphids, Sycamore plant bug, scales, borers and bacterial leaf scorch. Anthracnose is the most serious problem as it affects leaf and stem development resulting in dieback and eventual "witches broom" development.

Limitations: Requires a very large area for full growth form. Should not be planted near overhead utilities. Branches droop as tree grows and may require pruning to maintain vehicle and pedestrian clearance in the urban setting. Large leaves, fruits and natural branch drop make this a fairly messy tree.

Suggested Applications: Excellent tree for most urban applications where a large tree is desired. Tolerant to many urban extremes

and does well as street, park or shade tree. In its natural / forest setting a mature sycamore makes a good den and roost tree. Sycamore is also a good selection for riparian plantings due to its extensive root system and high tolerance to flooding.

Cultivars: None available commercially.

State Champion: Found in Wabaunsee County this tree, nominated in 1977, has a circumference of 19 feet 1 inch, height of 94 feet, crown spread of 101 feet for a total of 348 points. For more details on the Champion Tree Program visit our web site at www.kansasforests.org.

Comments: Also known as American Planetree or Buttonwood this tree is not especially well suited for many residential landscapes due to its dense shade and messy habit. Commonly referred to as "lacewood" in the lumber industry the wood is used in butcher blocks, woodenware, furniture and interior finish. Of interest and recommendation to those wishing to plant Sycamore is the London Planetree (*Platanus acerifolia*). Widely available commercially, this tree is a cross between *P. orientalis* and *P. occidentalis* and is more tolerant of anthracnose. Varying degrees of insect and disease resistance are offered through available London Planetree cultivars such as "Bloodgood", "Liberty", "Yarwood" and "Columbia".

References:

Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses by Michael A. Dirr, Stipes Publishing, Champaign, IL.

Trees, Shrubs, and Woody Vines in Kansas by H.A. Stephens, University Press of Kansas, Lawrence, KS.

Trees for Urban and Suburban Landscapes by Edward F. Gilman, Delmar Publishers, Albany, NY.

Eric Berg, Community Forestry Coordinator, coordinates all urban and community forestry activities for the Kansas Forest Service.



4th Generation Lindahl Farm

**Doug and
Marlene
planted 1,600
trees in a 4.5
acre riparian
planting with
the Stewardship
Incentives
Program**



Doug and Marlene Lindahl view their property.

Doug and Marlene Lindahl have a long history of working with the Kansas Forest Service. They have been working to improve their forest land, water quality and wildlife habitat on their property.

Doug is the fourth generation to own the farm. In 1858-59, Lars Jaderborg left his position as a Fort Riley Blacksmith. He homesteaded an 800-acre farm in east central Dickinson County. In 1873, Lars built the family home. Doug grew up in this home and has completely refurbished it to its glory. Lars' daughter, Julia, married Emil Lindahl and inherited the farm. Emil passed the farm to his son Carl.

The property had Swenson creek and the Smokey Hill River flowing through it. Over the years, the Smokey Hill River changed course and left a cutoff oxbow lake on the property. Doug remembers stories of his grandmother catching fish from the oxbow lake. The oxbow has now silted in and is a low forested area on the farm.

In 1975, after Carl had retired from farming, he planted two fields to black walnut plantations. He felt these two areas were no longer viable for farming. One plantation is 1 acre and other is 3 acres. Both are along Swenson creek. The trees were spaced 15 feet apart in and between the rows. Hand hoeing the weeds from these plantations kept Carl busy. Even though he did this back breaking, but rewarding work, he still had time to harvest a few trees from the native woodland and utilize them for various projects. Carl passed the farm to his children. Doug and Marlene Lindahl now own 320 acres of the original farm with siblings having the rest.

Doug and Marlene have been active stewards of their farm. They have native woodland, crop fields, pasture, and maintained Carls' plantations.

In 1988, Barry New, District Forester, visited Doug and Marlene. Barry suggested pruning the black walnut to at least 8.5 feet, and marked six bur oak trees for Doug to harvest and use in the restoration of the family home. Doug never used the oaks, but did prune the plantations.

In 1993, Bob Atchison, District Forester (now Rural Forestry Coordinator), visited Doug and prepared a Forest Stewardship plan. Based on that plan, Doug and Marlene planted 1,600 trees in a 4.5 acre riparian planting with the Stewardship Incentives Program. The tree species consisted of bur oak, black walnut and red oak. Weed barrier fabric was used to control weed competition in the rows. Deer damage has been a problem on some portions of the planting, especially the bur oak. Eight years after the planting, these oaks have established strong root systems, are quickly growing out of damage size by deer. One low area has flooded often enough to kill the trees planted in that area. In the last year, Doug has hand planted green ash in the area as replacements.

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Doug Lindahl: 4th generation landowner.

Wildfire Tools — Improving the Arsenal

What's the first image that comes to mind when you think of a fire department responding to an emergency? A gleaming red truck, complete with bells and whistles, flashing red lights, ladders on the side and hose on top, and maybe even a dalmatian. But what if the fire is in a location inaccessible to vehicles? Firefighters then resort to a different kind of equipment. Hand tools allow a group of firefighters to attack a fire without the benefit of large suppression equipment. It can be much harder work, but used properly and in the right setting, hand tools are a vital part of many wildland fire suppression efforts.

Wildfire hand tools come in a variety of shapes, sizes and uses. One very useful hand tool is the backpack fire pump. This type of tool has been around since the early 1900s. An early producer of the backpack pump was D.B. Smith & Company, Utica, New York. Their design, known as the Smith Indian Fire Pump, is still produced today in roughly the same form as when it was first introduced. A very simple but effective idea, the backpack fire pump, sometimes referred to as a bladder bag or back can, consists of a 5 gallon metal, vinyl or plastic tank carried like a backpack, and a hose with a "trombone" pump connected to it. Water is discharged by extending the "trombone" and forcefully returning it to the starting position — much like a child's squirt gun. This "super soaker," however, can shoot a stream of water as far as 25 feet, has at least two different water patterns and can take water to places no 4x4 would dream of. For most effective use, 2 to 5 firefighters in a line, each with a backpack pump and another hand tool such as a shovel or hoe, work together to cool and extinguish a line of wildland fire.

Over the years, many different variations on the theme have been tried and many are currently available. Recently, KFS discovered a local variation of the tool while passing through Centropolis, Kansas, a small town in northern Franklin County. Fire Chief Gene Gilliland owns and operates the local tire shop and outdoor equipment store. With a little ingenuity and some spare parts, Chief Gilliland created a very interesting hybrid backpack fire pump. His creation consists of two well recognized tools — a backpack pressure sprayer and a leaf blower — brought

together for fire suppression use. Leaf blowers are used for fire suppression mainly in the southeastern U.S. where leaf litter is the primary fuel. Since leaf litter is reasonably light, leaf blowers work to clear an area of available fuel and starve the fire. This innovation takes that theory one step further by adding water to the mix. The combination essentially creates a mist or a stream of high humidity air by plumbing the discharge of the pressure sprayer into the discharge of the leaf blower. And since quick connect couplings are used throughout, the two pieces of equipment can also be used independently of each other as they were originally intended.

Chief Gilliland reports that one possible drawback is the size of the system. It can be a workout to operate and not everyone can use it well. Two firefighters are a must. The second firefighter backs up the operator with a hand tool and takes over the job if the operator gets fatigued. Firefighters may be somewhat reluctant to use it at first, since they are taught from day one that introducing air into a fire makes it burn more intensely. But given the right conditions — difficult access, low fuel loading, and low to moderate flame length and intensity — the Chief reports that his creation does a very good job of controlling a fire while freeing up larger resources for other areas of attack.

Chief Gilliland mentioned that the parts needed to make the conversion are available at most hardware stores. The photos show most of the pieces needed, but if you're interested in building one and need a hand, call KFS for Chief Gilliland's contact information.

Casey McCoy, Rural Fire Coordinator, coordinates all rural fire activities for the Kansas Forest Service.



The system uses two well recognized hand tools — a gas powered leaf blower and a back pack pressure pump.



A quick connect coupling makes changing from attachment to the blower to the normal spray wand an easy job.



Modifications to the leaf blower were minimal.



Installation of a valve in the discharge tube lets the operator control the amount of water introduced into the air stream.

District Highlight: Northeast # 1 – Elspeth Pevear

Working with people has become my favorite part of the job.



Volunteers stake a newly planted tree in Tonganoxie.

Raised in Montana I spent my childhood roaming the forests behind our house and fell in love with it. My mother was a great traveler and I spent most of the winters of my childhood in other countries. We traveled all over Asia, Europe and some parts of Africa. My favorite country was Nepal, probably because its great mountains and silent beauty reminded me of home. When summer came we would return to Montana and I would head out the back door and into the forest.

I graduated from the University of Montana with a degree in Forest Resource Management. Shortly after graduation I was lucky enough to be offered a job in Kansas and soon moved to Topeka, with my office residing in Valley Falls. Although I knew a great deal about coniferous (evergreen) forests I knew almost nothing about hardwood woodlands. I spent the first year learning from Dave Bruton whom I replaced as forester in the northeastern district. It was a challenge to learn a type of forestry that I had never known before. In addition, one of the reasons I had gone into forestry was to be alone in the woods and I was a little nervous about working with people.

As it turned out working with people has become my favorite part of the job. One of the first projects that I inherited was the tornado recovery project in Tonganoxie.

I had to work closely with the tree board as they began the process of cleaning up, removing dead and dying trees, determining what new species to plant and where, and finding the funds to do so. It was during this process that I learned how important tree boards can be for a community. Through their tenacity the Tonganoxie Tree Board found the funds to remove many injured, broken and dead trees and replant saplings in their place, leaving their legacy in the community.

When I am not working with communities, I am helping landowners and farmers plant trees. As an outsider, one of the bigger problems that I have seen in my district is soil erosion around creeks and other waterways. The addition of buffer strips can greatly reduce this problem by holding the soil and banks in place. Historically the vast majority of the timber in Kansas grew along the banks and flood plains of waterways. Of course this is often the most productive ground so over time farmers have removed the timber and converted it into cropland. What many people don't understand is that not only does this increase erosion problems, but that they can often times make as much or more from cost-share programs by replanting this land back into timber. This past fall I have been working with Gary Rader, the District Conservationist from Leavenworth county, with several direct seeding projects. These are CRP buffers that are being planted using seeds rather than planting seedlings. I am unsure of the success of this approach and will not know for at least a year, but I very much like the idea of creating natural random stands rather than planting seedlings into perfect rows.

At the moment, the Tree City USA poster contest is underway. This is a poster contest, open to 5th graders, centered on a tree theme.



Volunteers that planted trees in Tonganoxie.



Eric Berg

Volunteers plant a tree in Tonganoxie.

Right:
Volunteers
mulching
a newly
planted tree



Eric Berg

This year's theme is "Trees are Terrific... inside and out!" Last year's State winner came from my district. I am hoping that another child will rise to the challenge this year. This is a wonderful way to get children involved in natural resources. I work with children at every opportunity. I talk to them in classes, camps and offer walks in the woods or parks. The children of today will be tomorrow's stewards. I believe it was the Haudenosaunee tribe that said "In every deliberation we must consider the impact on the seventh generation."

Lindahl farm continued from page 4

In 1998, Doug agreed to host a Riparian Forestry Workshop. More than 100 people attended the workshop, where they learned about riparian forests and how they relate to water quality, soil erosion, and wildlife; tree planting; livestock management around riparian areas; and timber and black walnut management including pruning, tree distribution, quality, and measurement. Woodmizer provided a sawmill demonstration.

In 1999, Doug planted some CRP grass on the east edge of the southern portion of the property and two single row windbreaks. One along the east property

line and the other in a field to help control soil erosion and add to the wildlife habitat.

One of the surprises of moving to Kansas was confronting a bias against trees. I come from a place where trees are such an important part of the ecosystem and economy that they are almost revered. Many landowners in Kansas see them as a weed or a problem or simply as something useless that takes up perfectly good land. If I do anything while I am in Kansas I hope that I can pass on my own passion for woodlands and teach people the importance and value of trees.

Of course trees are the focus of my work but it is the connection of all things that fascinates and amazes me so much. I see nature as a spiders web, if you tweak one strand the entire web feels the ripple. This is my approach to forestry as well. Trees are just one part of the whole picture and to be an effective steward of the land one must take everything into effect. When I walk through a woodland I don't just see the trees I also see the grasses, shrubs, wildlife and water. I get a lot of land owners that want instant trees. They have just built a house or have decided to plant a windbreak and don't understand that trees take a long time to grow. One of the things I try to impress on people is that when you plant a tree you are leaving a legacy for future generations.

Elsbeth Pevear, District Forester, provides direct technical assistance to Kansans in eight northeastern Kansas counties for the Kansas Forest Service.

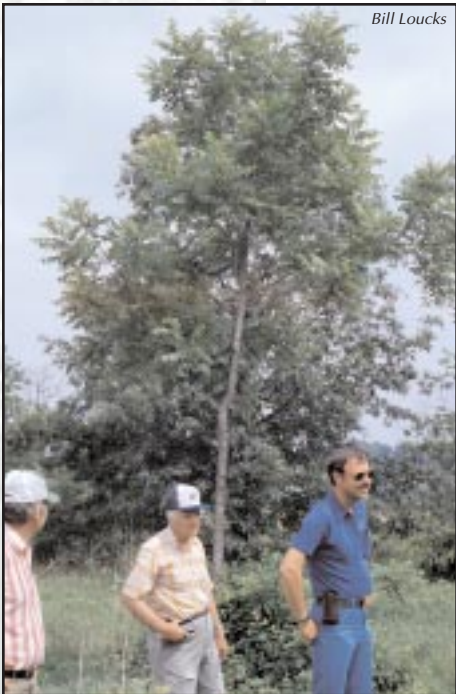
Doug has purchased his own Woodmizer sawmill and uses it for farm projects. As time allows, Doug looks forward to using the sawmill for other projects.

Jon Skinner, Forestry Technology Coordinator, manages computer and new technologies for the Kansas Forest Service.



When I walk through a woodland I don't just see the trees. I also see the grasses, shrubs, wildlife, and water.

Conservation Plants Need “Babying”



Bill Loucks

Spring is nearly at hand, which means KFS foresters are shipping tree and shrub seedlings to Kansans for planting as conservation practices.

There is still time to order seedlings for planting this spring. A good selection of species is available. The Conservation District, Extension Office, your KFS District Forester or Kansas Department of Wildlife and Parks biologists can give you advice on planting design and care, as well as ordering low-cost, Kansas-hardy species.

Shipments will begin Monday, March 11. They will be shipped directly to the purchasers address.

- **Bare-root plants** — Remember these plants will be especially sensitive to storage stress. Moisten the seedlings and their packing medium. Then reseal the storage container and store them where temperatures are just above freezing and make sure they don't dry out. If the delay may just be a few days, an unheated cellar or basement can be a convenient storage area, but for longer storage temperature should be 33 to 35 degrees F.
- **Container-grown plants** — Because these plants will be actively growing, they'll probably need water every other day. If you'll be holding them for more than a week, they'll also need fertilizer once a week. Typically 1 tablespoon of 12-12-12 or similar low-analysis fertilizer per gallon of water will provide adequate nutrients. Don't use too rich a fertilizer — excessive nitrogen will kill sensitive roots. While they wait, keep the plants outdoors in a site that is out of the wind and provides light shade.

Whether planting immediately or after a delay, bare-root seedlings are especially sensitive to exposure during planting. If they dry out as they wait their turn during planting, they can die. So, get ready to plant by taking seedlings out of their packing material and wrapping them in wet burlap. Or, try carrying them in a bucket half-filled with water.

Remove the seedlings from this moisture source only when they're about to go into the ground. We are often asked whether seedlings should be soaked in water prior to planting. Research suggests that soaking in water is detrimental. Place them in water only as long as it takes to plant a bundle of 50 plants.

As you plant, spread roots to their natural position with no twisting or folding. Firm the soil to remove air pockets and promote root-soil contact. Make sure the soil line on each seedlings's main stem or trunk is at or just barely below soil level.

Container-grown seedlings are grown in a medium that contains peat moss. If exposed to the air after planting, the growing medium can act like a wick, drawing moisture from the roots. So, make sure about an inch of soil covers the peat moss.

If the plants tend to lay down in the wind, they will survive better and develop more rapidly if they are staked upright. Leaning

continued on page 11

Chuck Wright and his four-year-old black walnut.

There is still time to order seedlings for planting this spring.

Look over your plants as soon as they arrive.

Their handling after you receive them can play a big part in how well the plants survive and thrive. Look over your plants as soon as they arrive. Check for shipping damage. See if your shipment correctly matches your order. Report problems immediately, so we can correct them promptly.

Container-grown seedlings should be removed from the box and stood upright as soon as they are delivered. These plants are on the point of initiating shoot growth. The new growth will develop vertically — that is at a right angle to the stem, if they are lying flat in the box.

Naturally, most seedlings do best if planted without delay. Bare-root pines, for example, are very sensitive to storage stress.

Exceptions to the “plant soonest” rule include bur oak, green ash, hackberry, honeylocust, redbud and cotoneaster. These species often can benefit from what's called “sweating.” Cover the top and root with moist burlap, hay or something similar and keep the seedlings at 60 to 70 degrees and moist until the buds swell. Generally, they'll be ready to pop into growth in about 1 week. They should be planted soon after the buds swell.

When immediate planting isn't possible for other tree and shrub species, consider the following:

Community Forestry Training & 2002 Tree City USA Recognition Day, April 9–10, 2002

Holiday Inn Holidome, Manhattan, Kansas

Community Forestry Training — Tuesday, April 9, 2002

Open to the general public and communities at large. 4 concurrent sessions will be offered to choose from:

Trees and the Law:

You will gain an understanding of statutory and common-law principles, review law as it relates to trees, liability issues and more. This session featuring Victor Merullo, senior law partner at Merullo, Reister & Swinford Co., L.P.A. located in Columbus, Ohio, and author of *Arboriculture and the Law*, will provide an introduction to basic legal concepts, followed by an examination of the important issues regarding trees and the law. Mr. Merullo is considered a leading expert in the law of trees and we are extremely fortunate to have him. This session is designed to provide a background for understanding the issues surrounding trees, people and the law. This is an excellent opportunity for tree board members, city foresters, mayors, city attorneys and administrators.

Innovations in Tree Care:

There have been vast changes in equipment, technology and safety protocols over the last 15 years in arboriculture. J. David Mattox, Kansas Certified Arborist and City Forester for the

City of Manhattan, will address these changes in a comprehensive indoor/outdoor workshop. He will introduce new tools and technologies and improved existing services. As we enter the 21st Century, we can look forward to even more opportunities as information is increasingly shared worldwide and adopted into the green industry.

Tree Design and Selection

Greg Davis and Ken Schroeder, Professors of Woody Ornamentals from Kansas State, Department of Horticulture, Forestry, and Recreational Resources, will discuss basic plant design and tree selection concepts. Emphasis will be placed on designing for small urban spaces and selection of tree and plant species that tolerate the extremes of the urban environment.

Nuts and Bolts of Tree Care

This workshop provided by Kansas Forest Service staff will cover proper tree selection, planting tips and techniques, principles of tree pruning, and a basic overview of tree insects and diseases. This is the perfect class for the new person on your Tree Board with enthusiasm, but who needs to brush-up on their skills

All concurrent sessions will involve indoor lecture presentations followed by outdoor demonstrations and application with hands on learning opportunities.

- Free Continental Breakfast and Lunch
- Door Prizes, Drawings and Fun Competitions

Mark Your Calendar and Watch Your Mail

Tree City USA communities will be receiving registration and program information in early March. If you have any questions please do not hesitate to give us a call.

Sponsored by:

*Kansas Forest Service
U.S. Forest Service
National Arbor Day Foundation*

Eric Berg, *Community Forestry Coordinator, coordinates all urban and community forestry activities for the Kansas Forest Service.*



TREE CITY USA.

Tree City Recognition Day — Wednesday, April 10, 2002

Attendance limited to 2001 Tree City USA community members

Activities include:

- 2001 State Foresters Award and Recognition from the Kansas Forest Service
- Recognition of State Arbor Day Poster Contest winner
- Receive your 2001 Tree City USA Award and Recognition
- Community Forestry Informational Booths, Projects and Tables
- Free Technical Information, Publications and Handouts

Planting a tree even 1 to 2 inches too deep can greatly reduce the growth rate.

Steps to Planting a Tree

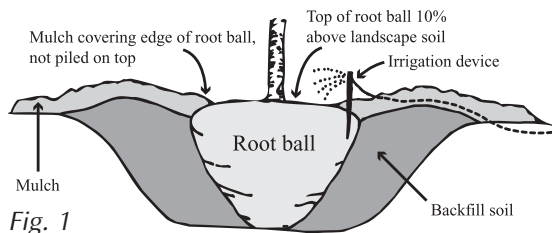
Dr. Ed Gilman, Professor of Environmental Horticulture, University of Florida, spoke at the Kansas Arborist Advanced Training course held recently in Manhattan. The following information is an adaptation of his recent presentation along with material from Dr. Gilman's Web site from the University of Florida (<http://hort.ifas.ufl.edu/woody/planting/>).

Match the tree to the site

Consider above and below ground utilities, soil fertility, soil pH, exposure to sun and wind, drainage, space constraint for mature trees. If the tree does not have the above and below ground room to mature plant elsewhere.

Dig a shallow planting hole as wide as possible

Shallow is better than deep! Most people plant trees too deep, especially if they are using mechanical means (auger) to dig holes. A hole three times the width of the root ball is often recommended but about



one-and-one-half the diameter is more common. Roots can become deformed by the edge of the hole in compacted or clayey soils if it is too small. The depth of the hole should be less than the height of the root ball, especially in compacted or wet soil (figure 1). If the hole was inadvertently dug too deep, add soil and compact it with your foot; or better yet dig a new planting hole, space and planning permitting. Breaking up compacted soil in a large area (out to the dripline of the tree) around the tree provides the newly emerging roots room to expand into loose soil. If possible loosen this area of soil with a rototiller, shovel or other tools. This will hasten root growth translating into quicker establishment.

Find the root flare

The root flare (trunk flare, root crown) is the abrupt swelling where roots join the trunk. This point should be visible at the top of the root ball. If the trunk flare is not visible, remove soil or media from the top of the ball until it is visible.



Slide the tree carefully into the planting hole

To avoid damage when setting the tree in the hole, lift the tree with straps or rope around the root ball, not by the trunk. Special strapping mechanisms need to be constructed to carefully lift trees out of large containers. A great deal of damage can be done to the root ball if the trees are mishandled during placement in the hole.

Root flare should be slightly above the surface of the surrounding soil

It is better to plant the tree a little high than to plant it too deep. If the tree is a little deep, tip it to one side and slide some soil under it; then tip it back the other way and slide some more soil under the ball. Continue this until it is set at the appropriate depth. Once it is at the appropriate depth, place a small amount of soil around the root ball to stabilize it. Research has demonstrated that soil amendments (fertilizers, organic products etc.) are usually of little or no benefit to tree growth and vigor. The exception to soil amendments is if there is a known nutrient deficiency identified from a soil test or when working with sterile soils, such as might be found in parking island plantings. The soil removed from the hole makes the best backfill.

Straighten the tree in the hole

Before you begin backfilling have someone view the tree from two directions perpendicular to each other to confirm the tree is straight. Fill in with some more backfill soil to secure the tree in the upright position. Once you add large amounts of backfill, it is difficult to reposition the tree.

Backfill with original soil

Slice a shovel down into the backfill all around the tree. Attempt to break up clayey soil clumps as much as possible. Do not step firmly on the backfill soil because this could compact it and restrict root growth, especially in clayey soil. Fill the hole

around the root ball with soil. When the hole is filled with soil the root ball should remain 2 to 3 inches above the backfill soil. Slice the shovel back and fourth into the backfill to settle the soil. Add 10 to 20 gallons of water to the root ball and backfill. Fill in any holes or depressions with additional backfill soil. Do not firmly pack backfill soil in an attempt to eliminate air pockets because this could cause too much soil compaction. The water infiltrating the backfill soil will eliminate the large air pockets. The presence of small air pockets could even be of benefit because they could allow more air to reach the roots.

Remove synthetic materials

Remove all synthetic materials from around the trunk and root ball. String, rope, synthetic burlap, strapping, and other materials that will not decompose in the soil must be removed at planting.

Apply mulch

Cover the sides of the root ball with mulch and apply mulch to at least an 8 foot diameter circle around the tree. Construct a berm out of mulch at the edge of the root ball only if the tree will be watered with a hose, bucket, or other high volume means. Constructing a berm in all other situations will not provide more water to the root system. Do not construct a berm from soil since this soil could end up over the root ball several months later. Water the mulch well after it is spread.

Stake the tree

Staking the tree may be necessary to hold the root ball firm in the soil. The general purpose of staking is to stabilize the root ball not to keep the trunk from bending from the wind. If the root ball moves in the wind, emerging roots could break and trees will establish slowly.

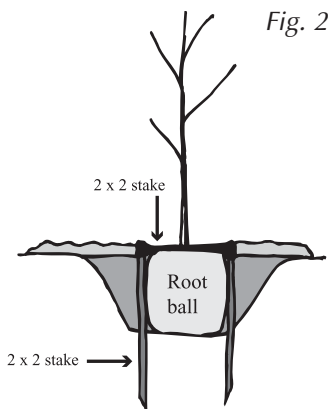
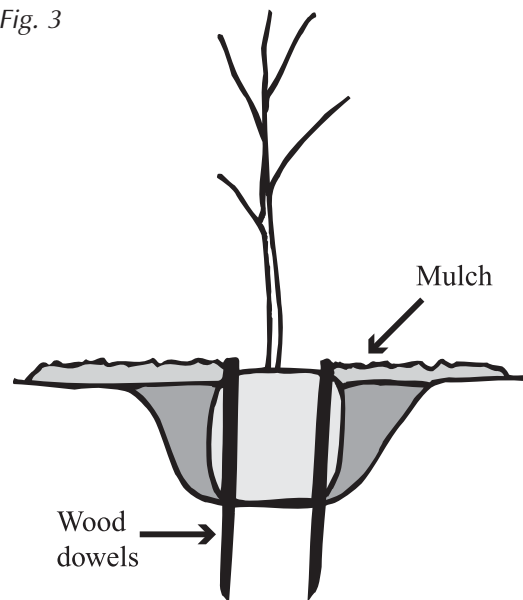


Fig. 2

Fig. 3



Staking to hold a weak trunk upright should not be necessary on trees with a trunk diameter more than about 1.5 inches. If large trees require staking to prevent the trunk from bending, it probably indicates a lesser quality tree. Smaller trees might require staking until enough trunk strength develops. Trees could establish more quickly and develop a slightly stronger trunk and root system if they are not staked at the time of planting. Several new staking systems are now recommended for smaller trees. In figure 2, one horizontal 2" x 2" is screwed or nailed to two vertical 2" x 2"s that have been placed against the side of the root ball and driven through the planting hole into the native undisturbed soil. A second set is used on the other side if needed for larger trees. In figure 3 two or three wood dowels are driven through the edge of the root ball. These do not have to be removed because they simply rot in place. There is no danger of this system girdling the trunk since nothing is attached to the trunk. Both of these inexpensive alternative systems eliminate the requirement to return to the tree to remove the staking system because they simply decay in a few years.

Eric Berg, Community Forestry Coordinator, coordinates all urban and community forestry activities for the Kansas Forest Service.

The purpose of staking is to hold the ball firmly in the soil... not to keep the tree from blowing in the wind.

Conservation plants continued from page 8

plants use energy in trying to grow upright that is better used in supporting new root and stem growth.

Bare-root and container-grown plants both will benefit from watering

immediately after planting. This will help settle the soil around the roots.

Bill Loucks, Conservation Forester, manages the Conservation Tree Planting Program and related activities for the Kansas Forest Service.

Calendar of Events

(Only events with firm dates are listed)

March 7 – National Arbor Day Poster Contest City Winners Due to District Foresters

March 7–10 – State Capital Area FireFighter Assoc. Regional School – Topeka, KS *Contact: Casey McCoy 785-532-3307 Cmccoy@oznet.ksu.edu*

March 11 – Start shipping CTPP Seedlings as weather permits *Contact: Bill Loucks 785-532-3312 Bloucks@oznet.ksu.edu*

March 15–18 – RED CARD TRAINING: S-130 Firefighter Training & S-190 Introduction to Wildland Fire Behavior – Hutchinson Community College, Hutchinson, KS *Contact: Casey McCoy 785-532-3307 Cmccoy@oznet.ksu.edu or Mark Saylor, HCC Fire 620-662-3366*

April 1–3 – 13th Central Hardwood Forest Conference – Urbana-Champaign, IL *Contact: Bob Atchison 785-532-3310 Ratchiso@oznet.ksu.edu*

April 9 – Community Forestry Training – Manhattan, KS *Contact: Eric Berg 785-532-3308 Eberg@oznet.ksu.edu*

April 10 – Tree City USA Recognition Day – Manhattan, KS *Contact: Eric Berg 785-532-3308 Eberg@oznet.ksu.edu*

April 11–13 – Community & Economic Development Opportunities in Small Tree Utilization – Albuquerque, NM *Contact: Bob Atchison 785-532-3310 Ratchiso@oznet.ksu.edu*

April 23–25 – 7th Annual Forest Utilization Conference and Equipment Exposition – Wagnor, OK *Contact: David Bruton 785-945-6147 Dbruton@oznet.ksu.edu*

April 24–27 – Kansas State Firefighters Assoc. Annual Meeting *Contact: Casey McCoy 785-532-3307 Cmccoy@oznet.ksu.edu*

April 26 – STATE and NATIONAL ARBOR DAY *Contact: Eric Berg 785-532-3308 Eberg@oznet.ksu.edu*

May 5 – Last Day Tree and Shrub Seedling Orders will be Accepted! *Contact: Bill Loucks 785-532-3312 Bloucks@oznet.ksu.edu*

May 15–16 – Kansas Wetlands and Riparian Areas Alliance Annual Meeting *Contact: Bob Atchison 785-532-3310 Ratchiso@oznet.ksu.edu*

May 17–19 – Nebraska State Fire School – Grand Island, NE *Contact: Casey McCoy 785-532-3307 Cmccoy@oznet.ksu.edu*

June 3–9 – Colorado Wildfire Academy – Alamosa, CO *Contact: Casey McCoy 785-532-3307 Cmccoy@oznet.ksu.edu*

June 14 – Kansas Association of Arboreta and Botanical Gardens Conference – Manhattan, KS *Contact: Eric Berg 785-532-3308 Eberg@oznet.ksu.edu*



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Links of Interest:
Kansas Forest Service www.kansasforests.org
K-State Research and Extension www.oznet.ksu.edu
State of Kansas www.accesskansas.org
Kansas Department of Wildlife and Parks www.kdwp.state.ks.us/
Natural Resources Conservation Service-Kansas www.ks.nrcs.usda.gov/
Farm Service Agency-Kansas www.fsa.usda.gov/ks/

Kansas Canopy
Kansas Forest Service
2610 Claflin Road
Manhattan, KS 66502-2798