GREEN HORIZONS

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Heritage Woods: A New Forestry Landowner Recognition Program

Justine Gartner, Missouri Department of Conservation

It is important to promote land stewardship by recognizing landowners who are doing a good job of caring for the natural resource on their land. For decades the American Tree Farm® program has served that function for forest landowners. The familiar green and white diamond sign has identified a landowner who is taking good care of their land and the forest on it.

In 2008, the American Tree Farm System® was recognized by the Programme for the Endorsement of Forest Certification schemes (PEFC) as a sustainable forest management certification scheme. By becoming a forest certification system Tree Farm is able to provide a significant benefit to its member landowners. They are able to conclusively demonstrate that they are managing their forest sustainably. This benefit is important as it is usually required for participation in environmental services markets such as those for carbon and water, but it has come at a cost. Comprehensive, high-quality forest management plans are required, and landowners are required to actually implement their plan. Random third-party audits are conducted in each state every five years to ensure the integrity of the system. Not all landowners are prepared for this level of commitment, and some have begun to drop out of Tree Farm. Also, the increasing trend toward smaller ownerships does not lend itself well to the type of traditional forest management Tree Farm is designed for. Tree Farm's movement beyond being a landowner recognition program has left a gap in the Missouri Department of Agriculture's (MDC) ability to recognize landowners who are managing their land well.

Missouri Heritage Woods is a new program designed by MDC to fill the gap between the rigorous Tree Farm requirements on one hand and the minimal requirements of the Missouri Forestkeepers Network at the other end of **(cont. pg. 7)**

Preserving the Family Forest: Create a Market for Your Timberland

David Watson, Certified Financial Planner

As families work through the process of succession planning for their forestland properties, they encounter the uniqueness of their particular family situation, and the inter-personal dynamics that make their families who they are. These unique characteristics can sometimes become obstacles to the smooth and sustainable transition of forestland ownership that is the ultimate goal. Some timberland families may find themselves in a situation that does not allow the family to simply transfer (via gift, titling or will) the property to an heir. Any one of several factors could be present: **(cont. pg. 8)**

In this issue:

Wood Tech 101

Bob Massengale, Consulting Forester, Retired

Radial or tangential? Hardwood or softwood? Springwood or summerwood? Ring porous or diffuse porous? Let's demystify some of the terms that foresters and wood scientists use to describe wood.

Wood Sections

Wood is an organic material composed of cells. These cells are elongated, hollow and generally oriented either up and down the tree length, or from the center of the tree out to the bark. Because of these orientations, woods are best studied in one or more planes, and, depending upon which plane a log is sawn, can yield greatly different patterns in the lumber.

The most common plane wood scientists use to tell different tree species apart is the cross-section, or view of the stump or trunk as the tree is cut *(Figure 1)*. This is also how the growth or annual rings are most easily seen.

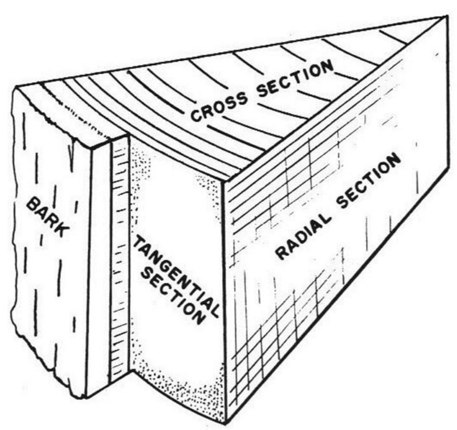


Fig 1. Woods are studied from the cross-section, the radial section, or the tangential section of a tree.

The radial plane, or the view from the center of the tree out to the bark may also be helpful. The ray tissue is apparent on this plane. Ray tissue is responsible for moving water, nutrients and other substances laterally in the tree (as opposed to xylem and phloem tissue that moves materials up and down the tree). Rays may be wide or narrow and provide a distinctive fleck in some woods.

While less useful in identifying a wood, the tangential plane exhibits the grain of the wood, as it is the view parallel to the growth rings in the tree.

Speaking of grain, different grain patterns in lumber results from how a log is cut. If the log is cut radially to the rings, then "quarter-sawn" lumber is produced. If the log is cut tangentially to the rings, the resulting boards are referred to as being "plain-sawn." Usually, both types of boards are produced from a single log. However, if the goal is to attain the highest yield of quarter-sawn material from a particular log, then the milling cost goes up (as well as the price per board) because more time is spent positioning the log to ensure the maximum number of radial cuts.

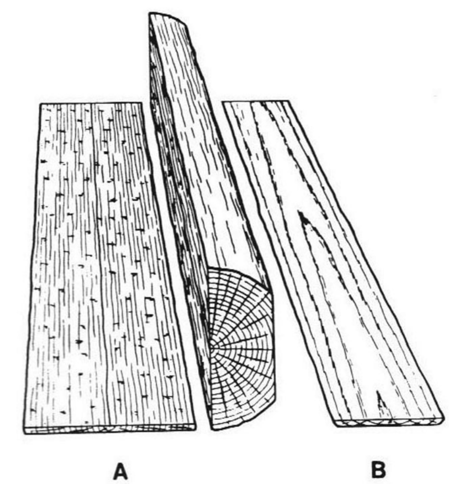


Fig 2. Lumber can be cut from a log in two distinct ways: radially to the rings, producing "quarter-sawn" lumber (A); and tangentially to the annual rings, producing "plain-swan" lumber (B).

Hardwoods and Softwoods

Everyone has heard the terms "hardwood" and "softwood." Botanically, the hardwoods are Angiosperms, or the species classified as broadleaved trees. Softwoods are Gymnosperms; the species classified as conifers, which are usually cone-bearing trees. It is important to remember, however, that the term hardwood or softwood is not a reliable guide to the hardness of the wood itself. Hardwoods, with a few exceptions, lose their leaves in the fall or during the winter. Softwoods generally have needle-like leaves that remain on the tree throughout the year. There are only four softwoods native to Missouri: shortleaf pine, eastern redcedar, baldcypress, and ashe juniper.

Springwood and Summerwood

All trees that grow in Missouri exhibit annual or growth rings; some rings are more distinct than others. Cells and growth rings are most clearly seen on the cross-section of the wood if clean cut with a sharp knife or sanded with a medium grit piece of sandpaper.

(cont. pg. 3)

Wood Tech 101 (cont. from page 2)

Annual growth rings are generally divided into springwood (early wood) and summerwood (late wood). It may not be readily apparent where one ends and the other begins. Springwood consists of the larger cells produced first in the spring, while summerwood (the later and smaller cells) follows until the tree becomes dormant in the fall. In some species, there appears to be color differences between springwood and summerwood. This is because the transition from springwood to summerwood is abrupt.

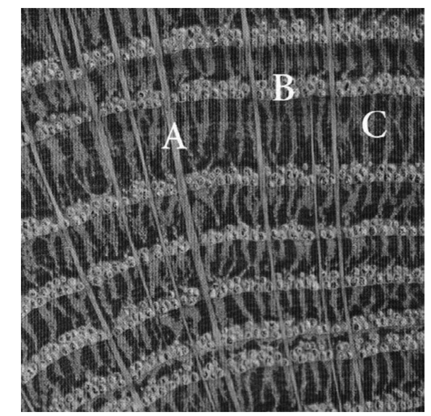


Fig 3. This cross-section of white oak clearly shows the linear wood rays (A), the large springwood pores (B), and the finer summerwood pores (C). Annual rings, formed by the springwood pores, are clearly shown.

Ring vs. Diffuse Porous

The last wood characteristic we will discuss is pores. Hardwoods have them and softwoods do not. Pores are the large cells in hardwoods which transport water and dissolved materials. Often the pores will be quite large in the springwood and decrease either abruptly or gradually in size into the summerwood.

The abrupt transition from large thin-walled in the springwood to smaller thick-walled cells in the summerwood is often clearly seen, and this feature defines the wood as being "ring porous." Oak is a good example of a ring porous wood.

On the other hand, if the large pores are dispersed evenly throughout both the springwood and summerwood, the wood is then called "diffuse porous," even though you may clearly see the annual rings. A good example of a diffuse porous species is maple.

Understanding these basic wood technology terms should add to your pleasure and appreciation in using and enjoying the trees in your woodland. **GH**

Reducing Your Risk: Four Ways to Protect Your Forestland from Wildfire

Hank Stelzer, MU Forestry Extension

Damages from wildland fires can be devastating to your forests and wildlife. A single wildfire during the wrong set of conditions can wipe out years of investment in your trees. Here are five ways you can become proactive in wildfire protection:

1. Install Firebreaks. Construct and maintain firebreaks around the perimeter of your forest to help keep fire from entering your property. Interior firebreaks help contain wildfire in isolated areas and aid in suppression efforts. Firebreaks also allow for easier access to inspect your property while providing trails for recreation.

2. Mitigate Along the Edge. Reduce hazardous accumulations of 'flashy' fuels along roadways and property entrances where arson fires are most readily ignited. Flashy fuels are grasses that easily dry out and scrubby vegetation. Removing these types of fuels not only disrupts what firefighters call the 'fuel ladder' (keeping the fire on the ground), it also adds to the aesthetics of your property.

3. Limit Access. Install gates or similar barriers to limit unwanted access to your property. Post your telephone number should someone need to contact you. This also helps minimize trespassing and protects your land from arson, dumping, poaching, timber theft and vandalism.

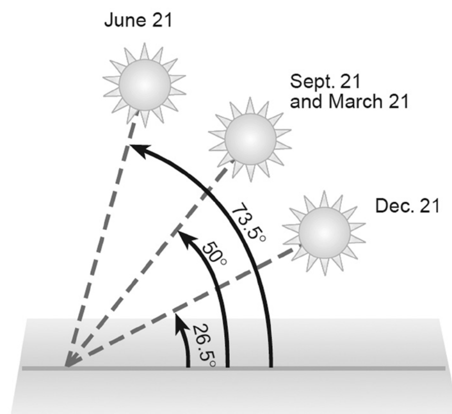
4. Partner with Others. Become part of your community's wildfire protection efforts. Get involved with your local volunteer fire department and the Missouri Department of Conservation's efforts to plan for wildfire protection.

In the spring issue of Green Horizons, we will discuss 50 ways to make your woodland home firewise. **GH**

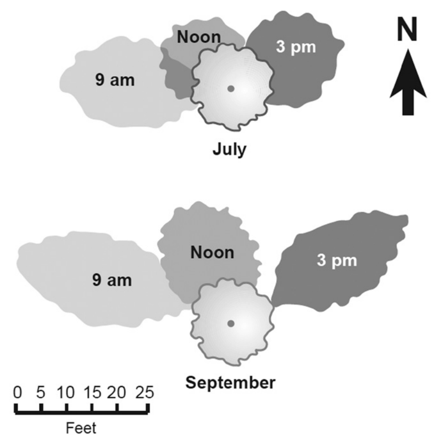
Landscaping for Energy Conservation

Chris Starbuck, MU Division of Plant Sciences

The U.S. Department of Energy estimates that trees and shrubs that are well selected, well placed and well planted can reduce the energy required to heat and cool a home by up to 25 percent. This may result in a $100-$250 savings in heating and cooling costs for the average household and investment in a well designed landscape usually pays for itself within eight years. These energy savings result from evaporative cooling by leaves, reduction of solar gain by summer shading and from reduction in winter heat loss due to lower wind velocity. Although the principles involved in landscaping for energy efficiency are simple, selection and placement of trees and shrubs can make a big difference in the effectiveness of the planting.



The angle of the sun during all seasons influences shade patterns for positioning trees.



Shade pattern of a 20-foot tree during the summer.

While each situation is unique, the best approach for shading a home is to plant large, spreading shade trees to the west and southwest of the building. Trees should be tall enough to cast a shadow across the roof, siding and windows on the west and south of the house in the afternoon. Since the sun June through September is 15 to 40 degrees south of directly overhead, trees planted off the southwest corner will shade the south side of the house in the afternoon.

However, it is best to avoid planting large trees closer than about 30 feet from the house. Also, be certain not to plant trees taller than 20 feet within 35 feet of a power line. Always plant deciduous shade trees, especially on the south side of the house, since they will drop their leaves, allowing for solar gain by window on the south and west sides.

In situations where there is limited space on the west side of the house, it may be possible to select an upright or "columnar" tree. Very upright cultivars of maple, European hornbeam and hybrid oak can be planted in a row or group to provide shade. In some cases, a trellis covered with vines can do an excellent job of shading where space is tight.

Again, make certain that the plants chosen will lose their leaves in winter. Some trees, like pin oak, are notorious for hanging on to their brown leaves all winter.

According to the laws of physics, shading the outdoor air conditioning compressor unit should increase its efficiency. In fact, tests have shown 3-10 percent gains in efficiency are possible, but only if plants do not interfere with air flow. Foliage that is too close to the sides of the unit will make the fan work harder. Blocking airflow out of the top of the unit will direct hot air back toward the intake, reducing efficiency.

Trees and shrubs can be very effective at reducing the wind velocity near the home, leading to significant savings in heating costs. However, just as with shade plantings, tree and shrub selection and placement can have a big influence on windbreak effectiveness. Windbreaks planted to the north and west of the home are most effective, since this is the direction from which the prevailing wind comes in winter.

The objective of a planting a windbreak is not to "block" the wind, but to re-direct it away from the building. The most effective windbreak is one using several rows of evergreen and deciduous trees and shrubs of different heights. Where space is limited, one or two (staggered) rows of evergreen tree will reduce wind velocity considerably. When using this approach, do not place the windbreak closer than 75 feet from the house. Otherwise, the evergreens may reduce solar gain to the house from the winter sun.

Of course, trees will have no effect on energy usage if they don't grow. A pin oak planted in a soil with a pH above 7.0 will never shade your roof. A group of white pines planted in a poorly drained low spot will never develop into an effective windbreak. Look around your neighborhood and see what kinds of trees are growing the best. **(cont. pg. 10)**

Columbia FFA Forestry Team Wins National Competition

Hank Stelzer, MU Forestry Extension

Back in April of this year, the four-member Columbia FFA team of Noble Carpenter, Brandon Gerardy, Courtney Johnson and John Marshall took first-place at the Missouri FFA state forestry contest. For an encore, they traveled to Indianapolis in October and won the national competition!

Noble Carpenter, left, and Brandon Gerardy spent the early fall months preparing for the National FFA Forestry competition.

"They started practicing three times a week in January for a minimum of two hours at a time," agriculture teacher and coach Larry Henneke said.

The team had to develop a variety of forestry management skills that could be tested, such as identifying different trees, measuring timber, orienteering with a compass, pacing distances, reading maps and identifying insects and tree diseases.

"We went in with the feeling that we had a really good chance," team member Courtney Johnson said.

But preparing for nationals was no easy task, especially after team member Noble Carpenter relocated to attend College of the Ozarks, making it difficult to schedule practices.

The team showed its dedication, though, as the remaining members continued practices twice a week and Henneke sent Noble tests and information that allowed him to practice on his own. They even gave up time on their weekends to practice group activities when Noble was in town.

Their hard work paid off. Aside from being named national champs, Henneke said, there are numerous benefits for students on the forestry team, such as acquiring "on-the-feet kind of skills."

For Courtney, a senior at Rock Bridge High School, joining the team became a life-changing experience. She admitted she had no previous experience with forestry, although she's always enjoyed nature and spending time outside. As she and the team practiced for numerous competitions, it soon became a passion for her, and now she intends to major in forest management in college.

"Before this I wanted to be a marine biologist, and I was looking at colleges down in Florida," Courtney said. "Now that's completely changed."

Each of the students on the winning team received a $1,000 college scholarship from FFA. Both Courtney and Brandon have applied and have been accepted to the forestry program at the University of Missouri. GH

Redcedar Conference Proceedings Now Online

More than 170 people from five states attended the Redcedar Workshop, Aug. 9-11, 2007, in Springfield, Mo. Sessions included managing natural cedar stands, utilizing every part of the tree, and marketing those products on the world stage.

If you weren't one of those 170 people, or just want to revisit the topic, the proceedings of that conference are now online at The Center for Agroforestry's Web site.

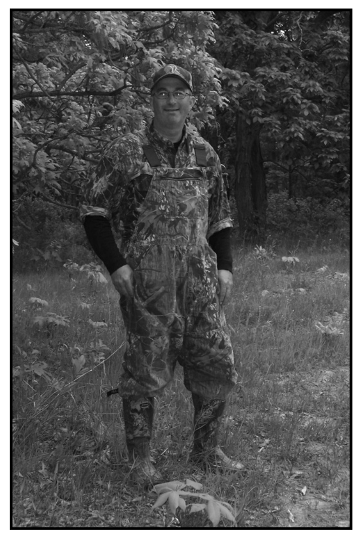
Go to http://www.centerforagroforestry.org, click on Conference Proceedings (under Publications) and then select "Redcedar: Challenge or Opportunity."

Enjoy our new and improved Web site while you're there! GH

Dave Murphy is Missouri's 2010 Tree Farmer of the Year

Brian Schweiss, Missouri Tree Farm Committee

Dave Murphy is the 2010 Tree Farmer of the Year. The 376-acre, Clark County farm has 240 acres of woodlands and has been in the family for several generations. But, as with most family forest landowners, forest management was not a high priority. That changed a few years back when, through a long series of negotiations and transactions with extended family members, Murphy and his wife became sole owners of the family farm.



Above: Timber stand improvement (TSI) not only improves the quality of the timber, but wildlife habitat… which means more successful hunts. ***Right:*** *Dave Murphy, 2010 Missouri Tree Farmer of the Year.*

Murphy always knew his woodlands were an untapped resource. Now he was in a position to do something about it. Fencing cattle out of the woods began reversing the adverse effects the livestock had on soil compaction, root exposure and erosion. Hiring professional consulting foresters to inventory his forest resource and develop a written management plan came next. This allowed for timber stand improvement to be done in areas needing attention, and harvesting trees that were ready to be harvested.

These simple acts have brought the Murphys two very significant advantages. First, as an investment, their farm is now worth considerably more than before they began their efforts, and its value is secure. Second, there are a lot more deer, turkey, mice, rabbits, squirrels, bobcats, coyotes and bats than before they began.

Being Executive Director for the Conservation Federation of Missouri, Murphy is in an excellent position to promote good land stewardship and does so every chance he gets. In his vocation, he visits with legislators on a daily basis and regularly provides opportunities for them to visit his Northeast Missouri farm where they are exposed to his passion for forest and wildlife management. Through the Federation's bi-monthly magazine, Missouri Wildlife, more than 90,000 readers had the opportunity to read a six-part series describing, from a landowner's perspective, his journey to becoming a Tree Farmer. That series of articles, Forest from the Trees, is now available through the Missouri State Tree Farm Committee and its partner organizations.

You are invited to see the many practices implemented on his Clark County farm at the annual Tree Farm Conference, May 21, 2011. Landowners, hunters and families will be sure to find informative presentations and tour topics to help improve their forests and enjoy their property. Conference agenda and registration details will be in the spring issue of GH. **GH**

Tree Farm on Display at Farmfest The Missouri Tree Farm Display was set up at the Ozarks Farmfest this year in Springfield. Farmfest is held at the Ozark Empire Fairgrounds each fall during the first weekend of October and attracts more than 40,000 landowners during the three-day event. Volunteers Clayton Lee and Frances Main discussed the Tree Farm program with several landowners who passed through the exhibit

space. A lot of good questions were asked and answered about not only the Tree Farm program, but also about forest management and trees in general. For many who stopped by the booth, it was their first introduction to the Missouri Tree Farm program. **GH**

Mel Hancock Reaches Silver Anniversary as a Tree Farmer

Francis Main, Missouri Tree Farm Committee

Though he is more widely known for holding political office, Mel Hancock has also been active in the Tree Farm program for a good portion of his life. Hancock was recognized this year by the American Tree Farm System for his 25 years as a Tree Farmer. He received a framed Silver Tree Farm certificate and a new Tree Farm sign with a silver background to display for achieving this mark in the program.

Hancock, who was Missouri's Representative from the state's 7th congressional district from 1989 to 1997, planted 28 acres of his 55-acre farm to walnut trees in April of 1977. His planting changed an old alfalfa field into a forest with a great potential to bring increased revenue from his farm. Although Hancock says he "did it for the fun of it," he also recommends all young people with land put at least 5 to 10 acres into trees (especially walnut trees) as an investment in their future. ***Editor's Note:*** *Individuals should weigh the risk of planting black walnut trees as a future investment in light of the Thousand Cankers Disease (see the most recent issues of GH for information on this threat).*

The planting was originally done under the supervision of Jim Jones of Hammons Products and the Missouri Department of Conservation, and has served as a research and

experimental area for Hammons over the years. Because of his dedication to managing his trees, Hancock decided to participate in the voluntary recognition program called the American Tree Farm System. To be a Tree Farmer, the landowner must agree to an inspection every five years by a professional forester to certify that the forest is being managed sustainably.

Being able to talk about his trees to others and showing them to visitors has been one of the high points of being a Tree Farmer that has kept Hancock interested in the program. He has even had a delegation from China come to look at his Greene County trees.

So, congratulations to Mel Hancock on reaching his Silver Anniversary as a member of the American Tree Farm System. **GH**

Heritage Woods (cont. from front page)

the commitment spectrum. The program will become part of the Missouri Forestkeepers Network and be jointly administered by MDC and Forest ReLeaf of Missouri. The program is designed to recognize landowners that take outstanding care of their woods and strive to assure healthy and continuing growth.

To be eligible to participate in Heritage Woods a landowner must have three contiguous acres of woods. To become recognized as a member of the program landowners must complete five activities, from a minimum of two categories, during the past three years. Categories include: actively caring for wildlife, actively caring for trees, planting trees, woods management, stream restoration, advocacy, and annually completing a Forestkeepers tree observation form. There are many potential activities in each category. Membership in the program lasts for a period of three years, after which reapplication is required.

Benefits of becoming a Heritage Woods member include:

- *Heritage Woods Missouri metal sign to post on the property;*
- *Certificate recognizing the landowner's property as a Heritage Woods;*
- *Membership in Missouri Forestkeepers Network;*
- *Opportunities to attend technical and educational workshops;*
- *Resource information regarding caring for woods and wildlife.*

For more information about Heritage Woods or to submit your application please visit the Missouri Forestkeepers Network web site at: http://www.forestkeepers.org/ **GH**

Create a Market for Your Timberland (cont. from front page)

- *There may not be a child who is interested in the forestland;*
- *Heirs may not possess the resources to properly manage the property;*
- *The current owners (or surviving spouse) may need the income (or capital from sale of the property) to fund retirement or healthcare needs;*
- *There may be concern about an unexpected death or disability in the future to the owner/manager.*

In these situations, the current owners should be thinking about structuring a sale to a pre-determined party, in advance of the actual sale date. The "buying" party could be a family member, a friend, or a neighbor. In any event, it is a planned, negotiated transfer, at a pre-determined price and time (or set of circumstances). This process is referred to as a "buy-sell" agreement.

Buy-sell agreements are relatively common tools in the succession planning process for privately-held businesses. They do not get as much attention in the forestland succession arena, due to the fact that many families want to pass the farm down to family members, rather than sell it. However, if a sale is necessary (for whatever reason), and the family wants to control who will ultimately own it, a buy-sell agreement is in order. A typical buy-sell agreement contains the following elements:

- *Identity of the seller*
- *Identity of the buyer*
- *Description of the property in question*
- *Description of the future circumstances in which a sale would be "triggered." Generally, these fall into three categories:*
  - o *Lifetime sales (i.e. – at a certain age of the owner)*
  - o *Sale at death of the owner*
  - o *Sale at the disability, or incapacity, of the owner*
- *Specified sale price, or the formula/process by which the actual price will be determined*

In short, this is a binding legal agreement that solidifies the details of the business transaction, in advance of the actual transfer. For families who will require an eventual sale of the property, but do not wish to face the uncertainty of future ownership in a public sale or auction, a buy-sell agreement is a viable tool to consider. A properly executed buy-sell agreement assures a fair (negotiated) value to the owner's family, and provides assurance to the buying party that they will receive the property at a future date, under agreeable terms. **(cont. pg. 9)**

Buy-Sell Agreements: Planning Notes

- If done properly, a buy-sell agreement also will provide a credible valuation of the timberland property to the IRS, for estate tax purposes. Transactions involving family members often come under scrutiny by the IRS as potentially "sham transactions" intended to artificially depress the value of the property for estate valuation purposes (read lower taxes). However, the IRS has provided clear guidance that they will accept a correctly executed buy-sell agreement, as a bona fide "arms length" transaction.
- Timberland owners should consult and utilize a qualified attorney to draft the buy-sell agreement. These are binding agreements that are intended to guarantee the transference of significant value to both parties. This needs to be done correctly.
- Often, it makes sense for the buyer to "fund" the agreement with life insurance on the existing owner's life. This creates a great mechanism for a future owner to help guarantee that they will have the necessary funds to fulfill their obligations under the agreement. In the event of the owner's death, the death benefit is immediately available to the buyer. And in the event of a lifetime or disability buy-out, the cash value of the contract could be accessed, as well.
- The agreement could be structured to allow for installment payments over a period of time. This could help the buyer to affordably fund the transaction price by spreading out the obligation over multiple years.
- "Rights of first refusal" can be incorporated into the agreement (or in a separate ancillary agreement, if preferred by the attorney), to protect the future buyer from unexpected purchase offers from third parties, prior to the "trigger" events in the buy-sell agreement. This can help to create assurances of the ultimate outcome, to both parties.

Create a Market for Your Timberland (cont. from page 8)

In effect, this "creates a market" for the timberland years in advance. Given the uncertainties of real estate markets, economic conditions, and changing family dynamics, this can be a real advantage to forestland families. GH

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The Bid Box

(All volumes reported in Doyle Scale)

In this installment of The Bid Box, we again look to Ray County. The forester guessed that the buyers would be mainly interested in the walnut as the oaks were going to be tough to harvest. This sale demonstrates yet another reason for retaining a professional forester. By tying the removal of less than desirable trees to the sale of the walnut, the professional forester ensured that the entire forest benefited in removing individuals that were ready to be harvested. To find a consulting forester near you, visit www.missouriforesters.com

Ray County

- 35 acres
- 45 walnut trees and 54 mixed hardwoods (mostly oak)
- Estimated volume: walnut – 6,674 bd. ft.; other hardwoods – 22,400 bd. ft.
- Forester valued the sale at $10,000

Three bids

- o $9,550 (accepted)
- o $9,325
- o $8,814

- ***Return: $318 per acre***

Do you have a timber sale for The Bid Box? We would love to hear from you!

Wood Energy Updates

Hank Stelzer, MU Forestry Extension

Here's the latest information regarding various proposed or ongoing wood energy projects around the State of Missouri. Note that this is not a complete list as some projects that I am aware of have not been publicly announced.

Columbia, Mo. The University of Missouri Energy Plant's project to replace their outdated biomass boiler with a newer, state-of-the-art unit has begun. At the same time the boiler is being replaced, the facility's entire fuel material handling system is being rebuilt. Construction of both projects should be completed in the spring of 2012. In the meantime, MU Forestry is working closely with MU Energy to develop a procurement program that will ensure wood fiber coming from harvest residues or forest thinnings are originating in forests managed in a sustainable fashion.

Fuels for Schools. Rolla Public Schools has dropped their proposed project for their junior high building. All of the remaining six projects have let out bids for equipment and construction, and all but one project has awarded contracts. As the projects come online next year, GH will visit each school and report back to our readers.

Kirkwood, Mo. The recession and cheap energy prices have slowed, but not stopped the City of Kirkwood's wood energy project. The facility being built and operated by Fenton-based Innovative Energy will utilize tree limbs and other municipal wood waste, and will produce 5 MW; enough electricity to power roughly 5,000 homes. In 2007, Kirkwood Green (the name of the city's green energy project) signed an agreement with Innovative Energy to purchase all of the electricity the plant will produce for the next 30 years. Reported prices for electricity from Kirkwood Green are in the range of $0.060 to $0.065 per KWH; slightly more than the expected $0.055 to $0.060 per KWH for electricity from the new coal-fired facility in southwest Illinois.

Salem, Mo. On Dec. 6, Salem, Mo., aldermen voted unanimously to cease negotiations and decline all proposals from Sedalia-based ProEnergy Services. The project would have locked-in the city for 20 years at a rate of $0.10 per KWH and a rebate of $0.012 per KWH for a net rate of $0.088 per KWH, plus a fuel adjustment index at the base rate of $25 per green ton delivered to the plant. Salem is moving toward participating with a co-op of rural Missouri towns seeking bids from power companies to purchase power in the future. One bid the co-op is presently entertaining ranges from $0.0644 per KWH in 2013 (the year Salem is losing its current contract with wholesale supplier, Sho-Me Power) to $0.0654 per KWH in 2018.

Perryville, Mo. The Liberty Green LLC wood energy project in Perryville, Mo., appears to be in a holding pattern. Although the Missouri Department of Natural Resources released a construction permit this past summer, construction has not begun. GH

Landscaping for Energy Conservation (cont. from page 4)

In sites with poor soil, species such as eastern redcedar, hackberry and black locust that are often considered low-class trees, may be the most likely to develop into a functional windbreak. GH

For additional suggestions, see the following guide sheets available through the Extension services at MU and Iowa State:

Landscape Plantings for Energy Savings, http://extension.missouri.edu/explorepdf/agguides/hort/g06910.pdf

Tree Placement on Home Grounds, http://extension.missouri.edu/explorepdf/agguides/hort/g06900.pdf

Planning Tree Windbreaks in Missouri, http://extension.missouri.edu/explorepdf/agguides/forestry/g05900.pdf

Farmstead Windbreaks: Planning, http://www.extension.iastate.edu/publications/pm1716.pdf

The Back Page

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Calendar of Events

Feb. 2-4, 2011: Missouri Natural Resources Conference, Tan-Tar-A Resort, Lake of the Ozarks, Mo. This year's conference theme is "The Human Element: People, Politics, and Conservation." For more information or to register, go to www.mnrc.org

March 1-3, 2011: 18th Annual Missouri Community Forestry Conference, Truman State University, Kirksville, Mo. This year's conference will focus on managing urban ecosystems, making it of interest to municipal, commercial and consulting arborists as well as professionals in the field of public works, engineering, landscape architecture and planning. Keynote speaker is Guy Sternberg, co-author of Native Trees for North American Landscapes. For more information and to register, please visit the Missouri Community Forestry Council's Web site at http://www.mocommunitytrees.org/conference2011.html

May 17-19, 2011: 4th Fire in Eastern Oak Forests Conference, University Plaza Hotel, Springfield, Mo. The symposium will emphasize topics relevant to management of oak-dominated forests, woodlands and savannas and will be of great interest to managers, scientists, landowners, consultants and students. For more information, go to http://muconf.missouri.edu/easternfire/index.html

May 20-21, 2011: Missouri Tree Farm Conference, LaPlata, Mo. The conference will showcase the property of the 2010 Missouri Tree Farmer of the Year, Dave Murphy. For more information, go to www.moforest.org

June 10-11, 2011: Missouri Walnut Council Spring Meeting, Cape Girardeau, Mo. Presentations on Thousand Canker Disease, managing walnut trees in plantations and native stands for nut production, cultivar selection for nut production, nut-meat percentage, and quality, and agroforestry implementation. They also will visit the property of 2009 Tree Farmer of the Year, Mark Nussbaum, for direct seeding and tree planting demonstrations, and discussions on management of maturing timber and sales. For more information, contact Harlan Palm (573) 228-0898 or palmh@missouri.edu.

July 31-Aug. 3, 2011: Walnut Council Annual Meeting and Walnut Research Symposium, Middleton, Wis. More information available at http://www.walnutcouncil.org/annualmtg.htm in May 2011.