

GREEN HORIZONS

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Growing Tomorrow's Future Today

Fall 2006

Now is the Time to Order Your Forest Tree Seedlings

Hank Stelzer, Extension Forester

Most forest landowners, particularly our newer brethren, think about planting trees in the spring. But, just like planning your summer garden in the dead of winter, fall is the time to place your seedling order to ensure you will have the species you want to plant this coming spring.

Which trees grow well in my area?

More than 160 tree species call Missouri home. Regardless of where a tree is planted, provenance (the original geographic source of seed) is of paramount importance in selecting plant material for a given planting site. Trees survive and grow best when planted under conditions similar to those where they occur naturally.



Charlie and Ellen Lebold's Tree Farm, northwest Missouri, is a good demonstration of the importance of selecting the right location for seedlings. On the right is a superior walnut selection from outside Missouri; on the left are two trees grown from seed Ellen collected locally and planted.

A good example can be found on Charlie and Ellen Lebold's Tree Farm in northwest Missouri near the town of Lawson. Charlie has three words for me every time I see him, "Location, Location, Location!" (see Charlie, I DO listen). The walnut tree on the right is a superior selection from Indiana. The seedling was planted in 1992. But, the two walnuts immediately to the left of the Indiana selection were grown from seed Ellen collected on the farm and planted in 1992! As they say, a picture is worth 1,000 words. (cont. pg 2)

Marketing Marginal Timberland

Hank Stelzer, Extension Forester

They say that experience is the best teacher, and having experienced conducting my first timber sale at the MU Wurdack Farm, I wholeheartedly agree.

Nestled along the Meramec River in the Ozark hills of Crawford County, the 1,200-acre farm emphasizes research that integrates forage, livestock, forestry and wildlife practices. At least that is what the farm's mission is today. But, for many years the 800-acre forest component went unnoticed and unmanaged.

One of my first assignments upon becoming the State Forestry Extension Specialist in 2002 was to develop a working forest at Wurdack. The first order of business was to conduct a comprehensive forest inventory (cont. pg 3)

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Order Forest Tree Seedlings Now (cont from page 1)

Soils and climate create four broad tree-growing areas in the state that should be considered when selecting species. However, within each major area many varying sites must be considered individually for species selection.

Missouri tree-growing areas

The Ozark area has the greatest diversity of tree and shrub species in Missouri and can be used to grow trees for wildlife and commercial forest products. But, the soils are often thin and rocky with varying fertility levels. Desirable species typically found on the better sites include scarlet, northern red, Shumard, black, and white oak. Shagbark hickory, white ash, blackgum, river birch, eastern redcedar and shortleaf pine are other common species. In the eastern Ozarks, cherrybark oak, sweetgum and tulip poplar are common. Shrub species include flowering dogwood, aromatic sumac, hazelnut, redbud, ninebark, wild plum and deciduous holly. Site preparation in old fields often can be done by mowing or burning before planting.



Missouri tree growing areas.

The River-Border area is found along the Missouri and Mississippi Rivers and their tributaries. Many good sites exist for the production of high-quality hardwood species. Tree and shrub plantings can slow flood waters and protect valuable farmland from damaging floods, erosion and sand deposits. Soils are deep, fertile, river deposits. Typically on the lower ground, common species include cottonwood, silver maple, hackberry, sycamore and green ash. On higher ground: pecan, pin oak, black walnut, swamp white oak, northern red oak, and persimmon are among the dominant species.

It is essential to prepare the sites properly (**cont. pg 6**)

Mark Your Calendar!

Missouri Woodland Steward:

October 24, 26, 31 and Nov 2. Mountain Grove. For more information, contact Ted Probert, (417) 741-6134; or email probertt@missouri.edu

Central Region Woodland Stewardship Conference:

November 17-18, 2006 - Lied Conference Center on the Arbor Day Farm, Nebraska City, Neb. For more information and a registration form, contact Hank Stelzer, (573) 882-4444; or email stelzerh@missouri.edu

Missouri Woodland Steward:

December 5, 7, 12, and 14. Jackson. For more information, contact Gerald Bryan, (573) 243-3581; or email bryang@missouri.edu

Early Alert! Missouri Woodland Steward Conference (formerly the Missouri Tree Farm Conference):

February 23-24, 2007 - Stoney Creek Inn, Columbia, Mo. For more information and a registration form, contact Hank Stelzer, (573) 882-4444; or email stelzerh@missouri.edu



The fall meeting of the Missouri Nut Growers Association (MNGA) was held Sept. 15-16 at Ittner Nut and Tree Farm, Noel, Mo., owned by Dwight and Barb Ittner. An overview of the tree farm and tour of the nut plantings were featured, and nut tree specialists and local researchers offered commentary to the tour.

For more information about MNGA, contact Jerry Van Sambeek, at jvansambeek@fs.fed.us; or by phone at (573) 875-5341, ext. 233.

Marketing Marginal Timberland (cont. from page 1)



We checked the logger's references to make sure he followed best management practices.

to see where we stood. Once that was completed, we developed a management plan that would place 360 acres along the southern edge of the farm under active management for the purpose of funding forest improvement practices on the remaining acreage.

Half of the designated area was harvested in 1996 on a competitive lump sum sale for 2,600 mixed hardwood trees containing an estimated volume of 305,000 board feet (International Scale). The successful bid generated \$52,595 for the farm that helped fund the new educational building. However, during the harvest it became clear that the quality of the timber was good at best -- and in many cases, marginal -- as evidenced by the numerous butt logs that were hollow and left in the woods.

Then to further erode timber quality, oak decline moved in. This complex of insects and diseases really loves over-mature, stressed trees growing on thin and infertile soil. The Wurdack woods were guilty on all counts!

So, when it came my turn to conduct a timber sale, I got nervous. From the forest inventory I knew I was dealing with a marginal commercial timber resource. Further, since this was my first commercial sale upon returning to Missouri, I was unfamiliar with the timber markets in the region. So, I did what any responsible forest landowner should do in my situation... hire a professional forester.

The consulting forester marked and tallied all the harvestable trees according to the management plan. The sale inventory contained 1,418 trees predominantly in the 14"-24" diameter class. The volume breakdown by species was: 56,500 bd ft of black oak; 7,000 bd ft of red oak; 106,250 bd ft of white oak; 45,500 bd ft of post oak and 7,500 bd ft of hickory and misc species.

Despite advertising the sale twice in regional papers and sending out bid solicitations to over 30 loggers, only three individuals came out to inspect the timber. On the day of the bid opening we had only one bid!

Despite having only one bid, that was better than back in 1999 when no bids were received for the same timber. At least that is what we thought until we opened the bid. We were shocked; more like stunned. The bid on our estimated volume was a little more than \$0.05 per bd ft. That was about one-half to one-third what we thought the timber should bring.

Our first reaction was to reject it! After all, we stated in the bid solicitation our right "to reject any and all bids". All that wood had to be worth more than pennies on the dollar.

But fortunately, reality set in. Our unmanaged woods had all the signs of neglect: dead and dying red oaks everywhere, hollow centers on the white oaks (as evidenced by the hollow butt logs in the previous harvest (**cont. pg 7**))



Approximately 25% of the marked timber was non-merchantable due to past fire damage, oak decline and general neglect.

The Missouri Forestkeepers Network: Celebrating 10 Years!

by Nancy von Brecht, Executive Director, Forest ReLeaf of Missouri



The Missouri Forestkeepers Network is celebrating its 10th anniversary. The program was launched in 1996, attracting 731 charter members that first year. Today, the Network has grown to serve more than 1,700 members throughout much of the state.

Forestkeepers is coordinated by Forest ReLeaf of Missouri and the Missouri Department of Conservation. The initial goals of forestry education and statewide outreach still hold true today. The mission of the program is, "to develop a network of informed citizens working to conserve, sustain and enhance Missouri's urban and rural forest resources through volunteerism, advocacy, and management."

The program helps forest landowners, educators, students, parks and recreation professionals, scout troops and other interested individuals monitor forest health and learn about our trees and forests. Many Forestkeepers are initially attracted to the program because of the opportunity to get outside and work with Missouri's natural resources. Tree observations continue to be a staple activity in the program, but today members are doing much more than just forest health monitoring. Activities range from tree planting and timber stand improvement, to teaching others the value of trees. Through these activities, members logged a remarkable 19,656 volunteer hours in communities across the state in 2006.

It is easy to join the Missouri Forestkeepers Network and membership is free. The program is open to any interested individual, family or group. Once enrolled, you determine your level of involvement and how much time you want to invest in the program.

Membership benefits include:

- Kit with introductory information, suggested activities, field guide, membership certificate, Forestkeepers pin, and sticker
- The Missouri Forestkeepers Monitor, a quarterly newsletter featuring best management practices for trees and forests, membership news, and many other tips and resources
- Invitations to workshops and special events across the state

- Online access to a wealth of information and opportunities at www.forestkeepers.org
- A choice of an array of great Forestkeepers incentives as a "thank you" for activity reporting
- The satisfaction of knowing that you are part of a state-wide effort helping to conserve and enhance Missouri's forest resources **GH**

A black and white graphic for a "Become a Forest Keeper" advertisement. It features a stylized tree with a bird in flight to its right. Below the graphic, the text reads "BECOME A FORESTKEEPER. It's nature's call to help." followed by a paragraph about the benefits of trees and the Missouri Forestkeepers Network. At the bottom, it says "Become a Forest Keeper. It's nature's call to help. JOIN FOR FREE AT WWW.FORESTKEEPERS.ORG OR BY CALLING 1-888-9-FOREST." and includes the Missouri Forestkeepers Network logo.

BECOME A FORESTKEEPER.
It's nature's call to help.

Missouri trees provide us with shade, habitat for wildlife, economic and health benefits, and natural beauty. To continue enjoying the many benefits that trees give us, we need to learn more about this critical asset and promote its health. The Missouri Forestkeepers Network can provide you with free resources and incentives to care for our community trees, while ensuring healthy forests for the future.

Become a Forest Keeper. It's nature's call to help.
JOIN FOR FREE AT WWW.FORESTKEEPERS.ORG
OR BY CALLING 1-888-9-FOREST.

Landowner Spotlight – Healthy Forests and the Tumbling Creek Cavesnail

by Hank Stelzer, Extension Forester

In southeast Taney County, near the town of Protem, lays the Tumbling Creek Cave Ecosystem and the home of Tom Aley. Tom is a unique individual. Not because he gave up his lucrative day job as a hydrogeological consultant in California back in 1965 to buy a nondescript cave in the middle of the Ozarks. But, because his tenacious vision is helping landowners and professionals alike gain a better understanding into the delicate balance of karst ecosystems. Karst is a special type of landscape that is formed by the dissolution of soluble rocks, including limestone and dolomite. Karst regions contain aquifers that are capable of providing large supplies of water.

In the United States, 20% of the land surface is karst and 40% of the groundwater used for drinking comes from karst aquifers. Natural features of the landscape such as sinkholes, losing streams, caves, and springs are typical of karst regions.

The Tumbling Creek Cave Ecosystem offers a diverse complex of woodlands, glades and underground cave communities. The aboveground plant communities provide habitats for a variety of wildlife including species of conservation concern such as Bachman’s sparrows, painted buntings, eastern collared lizards and gray bats. The rarest species, however, live underground.

Tumbling Creek Cave is home to at least 110 animals, making it the most biologically diverse cave system west of the Mississippi River known to date. The cave stream contains the planet’s only known population of the federally endangered Tumbling Creek cavesnail (*Antrobia culveri*). These cavesnails measure about one tenth of an inch in length, with a white body and pale yellow shell. The species lives beneath rocks in portions of the stream where there is usually little or no silt, and feeds on microscopic organisms in the creek. The cavesnail population was once estimated at 15,000, but today less than 1% remains. Biologists believe the cavesnail’s drastic downturn may be due to deteriorating water quality in Tumbling Creek.

Water that feeds into Tumbling Creek Cave can be adversely affected due to increased erosion caused by the removal of streamside vegetation and livestock overgrazing on steep slopes within

the recharge area. Other potential sources of pollution include the drainage of barnyard and feedlot wastes and the discharge of treated sewage into sinkholes. Accidental chemical spills and dumping trash into sinkholes also threaten Tumbling Creek’s water quality. The resulting turbidity, sedimentation and pollution of these various actions may harm the cavesnails directly, or may somehow allow other cave stream animals to “out compete” the snails.

Because the cavesnail inhabits Tumbling Creek, the species is an excellent barometer of water quality within the cave’s recharge area. Actions that protect the cavesnail from extinction will conserve the cave, its other inhabitants, and local water quality.

Aley owns the 2,560 acres of land containing the entrance to Tumbling Creek Cave and its known system of passageways. But, the land area that contributes water to the cave (the recharge area) covers an additional five square miles for a total area of 5,760 acres. Since about two-thirds of the recharge area is privately owned, encouraging compatible private land management is critical to maintain the cave’s health.

To help “pay the bills” and further his outreach efforts, Tom founded the Ozark Underground Laboratory (OUL) which provides groundwater tracing and other hydrogeological services throughout North America. The OUL has been in continuous full-time operation since 1973 and has designed and either conducted, or assisted with, over 4,000 groundwater traces in the United States (cont. pg 9)



Within the recharge area, Aley discusses the ecological challenges relating to sinkholes (left) and losing streams (right), and the need for maintaining healthy forests to protect these sensitive areas.

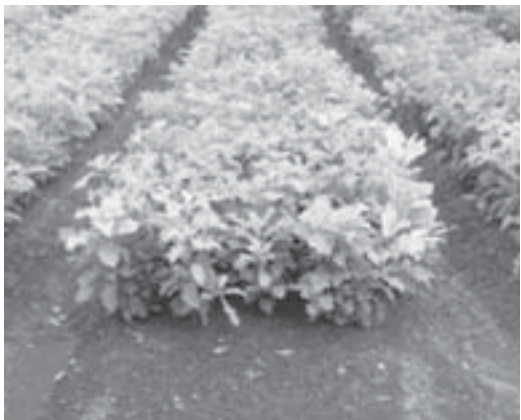
Order Forest Tree Seedlings (cont. from page 2)

before planting, especially in the bottomlands. Follow planting with regular weed control using mowing, disking, or chemicals, until trees are at least 4 to 6 feet tall. Survival and growth will be severely limited by competition from heavy weed growth.

The Southeast Lowlands area includes the flat lowlands with deep river deposited soil and Crowleys Ridge, a very hilly area of deep rich soils. Nearly all of this area was once forested. Lowlands species include baldcypress, hackberry, cottonwood, silver maple, sycamore, pin oak, willow oak, overcup oak, sweetgum, and green ash. On the higher ground: tulip poplar, white ash, American beech, and a variety of hickory species are common. Site preparation and weed control are similar to the River-Border area.

Lastly, the soils and climate conditions of **Northern and Western Prairie** areas are not as favorable to tree growth as the rest of Missouri. Site and species selection are very important, and after-planting care needs special emphasis. Common species in the uplands include bur, white, swamp white, shumard, black and northern red oaks, also Kentucky coffeetree, basswood, white and green ash, and black walnut. Sycamore, pecan, pin oak, green ash, silver maple, shellbark hickory,

hackberry and cottonwood are common lowlands species. There are many opportunities for flood protection plantings along streams and rivers in the areas. Wildlife food and cover plantings are moderately successful and much needed. **GH**



Bareroot seedlings are grown in nursery beds. RPM® seedlings are grown in containers.

Where can I purchase trees?

I am aware of three nurseries in Missouri that grow forest tree seedlings:

The Missouri Department of Conservation's George O. White Nursery in Licking
(573-674-3229, www.mdc.mo.gov/forest/nursery/)

Ripley County Farms in Doniphan
(573-996-3449, www.ripleycountyfarms.com)

Forrest Keeling Nursery in Elsberry
(800-356-2401, www.fknursery.com)

The White Nursery and Ripley County Farms produce bareroot seedlings while Forrest Keeling produces RPM® (containerized) seedlings. As is the usual case, there are advantages and disadvantages to both types of seedlings. RPM® seedlings are larger than bareroot seedlings; but, they are more expensive. Therefore, they are usually reserved for prime areas like bottomland plantations that will receive a considerable amount of after-planting care. But, properly planted, quality bareroot seedlings that receive good weed control during the first 2-3 years in the field produce excellent forest stands.

To search for other growers within the state, check out the **Missouri Department of Agriculture's online directory** at www.mda.mo.gov/Pest/ngrowers.html.

Landowners living close to the state line also have the option of purchasing their seedlings from neighboring states. **Here is the contact information for state-run forest tree nurseries:**

Arkansas

Arkansas Forestry Commission
(501) 296-1940
<http://www.forestry.state.ar.us/seedlingsales.html>

Illinois

Mason State Nursery, Topeka (309) 535-2185
Union State Nursery, Jonesboro (614) 438-6781

Iowa

Iowa DNR-Forestry
(800) 865-2477
<http://www.iowadnr.com/forestry/nursery.html>

Kansas

Kansas does not operate its own bareroot nursery, but purchases seedlings from various federal, state and private nurseries for re-sale to landowners. Container-grown seedlings offered through the Kansas Conservation Tree Planting Program are grown in greenhouses near Manhattan, KS.

Marketing Marginal Timber Land (cont. from page 3)

on the adjacent tract), and the generally slow growth rates due to too many trees on the landscape. Neglected woods on poor sites in this part of the Ozarks are a real marketing challenge.

So, rather than view it as a busted timber sale, we chose to view it as a timber stand improvement that instead of costing us money to carry out actually generated some income. You know, the glass being half-full point of view.

My next step was to contact the logger with the winning (and only) bid. He could sense the dread in my voice of having the all or nothing option. But, he did what I was about to ask him and that greatly increased my comfort level. He gave me references. Each reference confirmed he was a skilled and reputable logger. With that, we agreed to the terms of a contract.

To date, 152,000 bd ft of timber (International Scale) has been harvested and it is estimated that the harvest is 90% complete. So, we anticipate a final harvest of 167,000 bd ft. That is about 75% of our original volume estimate. But, upon looking over the large number of hollow butt logs at the landings, I would say we are definitely in the ballpark of the original inventory.

As for quality, it is breaking out pretty much as the logger suspected it would: 114,500 bd ft in blocking and pallets; 16,000 bd ft in ties; 9,700 bd ft in white oak staves; and 11,500 bd ft in grade lumber.

In summary, marketing marginal timber is a difficult task; one that might not meet original expectations. But, even in situations like this you need a professional forester to help you know what you have to sell in the first place and to give you sound advice when emotions run high. Finally, whether you have one bidder or ten, you can and should ask for references to ensure a quality harvest that you can live with. **GH**



Approximately 75% of the merchantable timber went into low-grade blocking and pallet material.

Tax Talk: Basics, Basics

Larry Godsey, Economist, MU Center for Agroforestry

One of the most important things a person can do when they acquire timberland is establish a basis for all assets on the property. Those assets include the land, the timber and the buildings or fixtures that are attached to the land. Depending on how the land is acquired, the basis of the property can either be based on the fair market value at the time of acquisition (if inherited), the purchase price (if purchased), the donor's basis (if received as a gift), or the adjusted basis of the exchanged property (if exchanged). However, there are many exceptions and additions to these rules.

The purpose of this article is not to discuss all the "ins-and-outs" of calculating basis, but to emphasize the importance of properly establishing a basis for the timber portion of property when it is acquired. One of the most common mistakes that a landowner makes when they acquire property is failing to properly establish a basis for the timber asset on the property. This mistake often goes unnoticed until a timber sale is conducted and the landowner is faced with a large capital gain with no offsetting costs.

A simple solution to this problem requires contacting a professional forester to conduct a timber appraisal at the time of acquisition. A good timber appraisal will identify the size, class, species, and current value per board foot, as well as, the estimated growth rate and location of the merchantable trees. Pre-merchantable trees (trees too small to be sold as pulpwood or other cut products) should be identified by number of acres, species mix, location, and estimated value per acre. By obtaining this information, the landowner can calculate "depletion units". These depletion units can then be used to offset the income received in the future from timber harvests.

Good record keeping is also essential in reducing the tax burden when timber is sold. Records of costs incurred as a result of managing the timber can be added to the basis of the timber, thus increasing the depletion unit. Keeping records can be as simple as making journal notes of management activities or noting on checks and checking account registers describing money spent on forest activities.

Several guides have been written that discuss the value of calculating depletion units and the tax savings that can be achieved by this simple step:

1. Haney, Harry L. Jr., William L. Hoover, William C. Siegel and John L. Greene. 2001. Forest Landowners' Guide to the Federal Income Tax. U.S. Department of Agriculture Forest Service, Agriculture Handbook #718.
2. Dwyer, John and Shelby Jones. 2002. Determining timber cost basis. MU Agricultural Guide, Forestry, G5055. MU Extension: University of Missouri-Columbia. 2 pgs.
3. Dwyer, John and Larry Godsey. 2002. Controlling your timber sale tax. Missouri Conservationist. Vol. 63, No. 11, November 2002. <http://www.mdc.mo.gov/conmag/2002/11/20.htm>.

The Bid Box

Here are two recent sales that once again demonstrate the value a professional forester brings to the landowner.

Schuyler County

- 160 acres
- 1,214 trees
- 171,760 bd. ft. (Doyle Scale)
- Mixed oak
- Consulting forester anticipated bids in the \$18 – 20,000 range
- **5 bids received**
 - o \$8,200
 - o \$13,200
 - o \$15,200
 - o \$17,255
 - o \$29,000
- **Return: \$181 per acre**

Adair County

- 90 acres
- 780 trees
- 119,000 bd. ft. (Doyle Scale)
- Predominantly white and red oak; some potential for veneer
- Consulting forester anticipated bids in the \$24 – 26,000 range
- **4 bids received**
 - o \$16,100
 - o \$17,000
 - o \$18,300
 - o \$31,000
- **Return: \$344 per acre**

Remember: You cannot know if you are receiving a fair price if you don't know what you are selling!

Agroforestry Field Tour Held in Mississippi River Hills

“Agroforestry is about rural America and trying to help the family farm. It's impossible in today's environment and economy for the family farm to compete with what's going on in the corporate farm. What we are trying to do at the Center for Agroforestry is to find niche opportunities for the family farmer.” - Gene Garrett, Director, University of Missouri Center for Agroforestry

As an effort to educate land and forest owners about the value of agroforestry, University of Missouri Extension hosted an agroforestry workshop in Perry County, Mo., on Aug. 24, 2006. Inspiration for the workshop was based upon the opportunities for niche agricultural products the five practices of agroforestry can provide – products including pecans, black walnuts, chestnuts, pumpkins and gourds, decorative woody florals, specialty wood products, and gourmet mushrooms. Timber management and livestock production in a silvopasture practice were also addressed.

Kathryn Keeley, agronomy specialist, University of Missouri Extension, coordinated the event and offers the following report of the day's topics and the program's goals.

In spring of 2006, the University of Missouri Extension released the Missouri based Woodland Stewardship Shortcourse. This course was designed to give participants an overview of managing woodland for timber harvests and wildlife benefits. I held this course in Ste. Genevieve and found that it was well received.

The next logical step after this course was to take forest manage-

ment one step further and encourage landowners to investigate the possibilities of incorporating agriculture production into a woodland setting. It is imperative to the economics of small farms that every acre is utilized to its fullest potential. There are many areas in the Mississippi River Hills area (Jefferson, St. Francois, Ste. Genevieve, Perry, Cape Girardeau and Scott Counties) that may not be conducive to traditional crop farming, or even livestock grazing, because of topography or soil type. Forested areas are a ripe resource for area landowners.

MU Extension, in partnership with the MU Center for Agroforestry and Missouri Department of Conservation, facilitated an agroforestry field day to educate landowners of some potential woodland opportunities on August 24 at Kammler Tree Farm in Perry County.

Rick Kammler is a long time forester and landowner who began experimenting with agroforestry techniques more than 20 years ago. Kammler began his address to the field day crowd by stating: “I hope you learn from my mistakes.” His presentation included a summary of his experiences with row spacing, grafting, nut cultivars, harvesting and trials with pumpkins grown underneath tree rows. He discussed what ground cover grew best for him and showed examples of trees that had been pruned correctly – as well as some pruned incorrectly.

Supplementing Kammler's first-hand experience with agroforestry, Dr. Rich Martin and Michael Edmunds of Martin Tree Farm, Cape Girardeau, Mo., presented information on marketing nuts. A black walnut plantation was started on the farm 15 years ago. Edmunds said Martin Tree Farm (**cont. pg 10**)

Landowner Spotlight (cont. from pg. 5)

and Canada, in addition to a modest number of traces in Australia, Barbados, Indonesia, New Zealand, and Peru.

Tom also strongly believes that endangered species are actually **assets** that can have direct monetary payback as well as the indirect benefits of furthering outreach efforts.

With Aley's guidance and the cooperation of local, state and federal government, the little cavesnail helped the Mark Twain Elementary School in Protem replace their aging water treatment lagoon that was leaking raw sewage into the cave's recharge area. Without the cavesnail, the first federal grant (that was used to leverage eight different funding sources) would not have been funded and the school would have been forced to pick up the \$90,000 tab. That is a big bite out of a small school's budget and probably would have forced closing the school.

I actually met Tom a few years ago when he joined the Missouri Consulting Foresters' Association. But, it wasn't until recently when he hosted the Association's fall meeting that I really got to know him and appreciate his knowledge of forest hydrology; both above and below ground.

For more information on the Ozark Underground Laboratory and the Tumbling Creek Cave Ecosystem, visit www.ozarkundergroundlab.com/. **GH**



Inside the cave, Tom Aley displays the Ozark Underground Laboratory's cavesnail restoration experiment and rehabilitation hotel.

So, what can you do as a landowner to protect your drinking water in Karst Country?

Follow these Best Management Practices (BMPs):

- Minimize soil erosion and nutrient-laden runoff to karst features
- Maintain forest buffers of 100 feet along both sides of streams and around sinkholes
- Make sure that your septic system or lagoon is not discharging raw sewage
- Do not use sinkholes for "natural" dumps
- Cap abandoned wells

NRCS Announces Sign-Up Deadlines for Three Programs

By Bob Ball, NRCS State Resource Conservationist

Sign-ups for three Natural Resources Conservation Service (NRCS) incentive programs are currently underway. Missouri landowners interested in participating in the Environmental Quality Incentives Program (EQIP) or the Wildlife Habitat Incentives Program (WHIP) should apply by November 17 to be eligible for the next round of funding. Applications for participating in the Wetlands Reserve Program (WRP) should be submitted by December 1.

EQIP promotes agricultural production and environmental quality by helping farmers and ranchers install structural conservation practices and to implement management systems that promote conservation.

WHIP enhances habitat on eligible land for upland and wetland wildlife, threatened and endangered species, and other types of wildlife identified as rare or declining species. Many types of land, including grassland, woodland, wetlands, stream and riparian areas, agricultural land and non-agricultural land may be eligible for WHIP funds. In both EQIP and WHIP, the landowner can receive both financial and technical assistance to help implement qualified practices.

WRP offers landowners the opportunity to protect, restore and enhance wetlands on their properties. In addition to receiving technical and financial support to help with their wetland restoration efforts, landowners also receive cash payments in exchange for agreeing to maintain the new or restored wetlands.

To sign up for or get more information about these and other NRCS programs, contact the NRCS office serving your county. Look in the phone book under "U.S. Government, Department of Agriculture," or access this website: <http://offices.usda.gov>. You can also get information about NRCS programs online at www.mo.nrcs.usda.gov/programs.

Mississippi Hills Agroforestry Tour (cont. from pg 8)



selects cultivars for high quality nut production. This superb nut meat quality gleaned through selected trees has helped

them achieve prices higher than market value for their nuts.

Another aspect of success Martin discussed was the assistance of the Conservation Reserve Program (CRP), which helped the farm financially while the trees matured to production age.

The goal of the Agroforestry Field Tour was to introduce landowners to alternative ideas for woodland areas that help achieve short and long-term income. MU Center for Agroforestry Technology Transfer Specialist, Dusty Walter directed participants to resources available for several aspects of agroforestry production.

“Agroforestry doesn’t have to be nut production, and can include aspects such as timber production and woodland medicinals, like ginseng. As another option, cattle can be grazed between tree rows and reap economic benefits from doing so,” said Walter.

Coupled with the experience of landowners who have pioneered the field of agroforestry in the Southeast region, and the research expertise of the Center for Agroforestry, participants discovered some of the challenges and the benefits that can arise in agroforestry production.

It is always great for landowners to learn on the farm, with people experienced in the business. Through the conversations and interaction at field tours, we hope to help land and forest owners use the success of their peers to catapult their own ventures, as well as learn from their mistakes.

Kathryn Keeley can be reached at: 573-883-3548 or email Keeleyk@missouri.edu For more information on the Center for Agroforestry’s research, publications and technology transfer programs, visit www.centerforagroforestry.org. GH



2006 Pecan Crop Forecast

Despite a hot, dry summer, Kansas and Missouri should harvest a combined 3.8 million pound pecan crop this fall. The nut size in many areas will be below average because of an extended dry period in July, but area wide rainfall in August will mean excellent nut fill and good kernel quality. In contrast, KS and MO harvested 5.8 million pounds in 2005 and 3.2 million in 2004.

Northern pecan growers noted a larger than normal water stage drop in early August. Nut drop during the water stage is caused by both drought stress and stinkbug feeding. This year, nut drop was especially severe for upland pecans that lack sufficient water supplies. Throughout the pecan industry, stinkbug damage seems to be an increasing problem and one that many growers are finding almost as troublesome as pecan weevil.

On a national scale, this year’s pecan crop is forecast to be well below average—170 to 190 million pounds. The 2006 crop will be very similar in size to the national crop harvested in 2004 (186 million pounds). With very little crop carry-over from the 2005 crop on hand, pecan shellers are expected to pay prices very similar to the prices they paid for the 2004 crop. In 2004, native pecans averaged over \$1.60/lb in KS and MO. At these high prices, growers will find that orchards with only a moderate crop load will be very profitable.

- Bill Reid, Kansas State University Pecan Experiment Field

It’s Black Walnut Season ...

Now in its 60th year of processing black walnuts, Hammons Products Company of Stockton, Mo., is certainly the authority on eastern black walnut collection, hulling, cracking and sales. Hammons is the largest facility of its kind in the United States, and processed 36 million pounds of black walnuts last year.

Tom Rutledge, Hammons Products, anticipates a similar yield this year. The company opened black walnut hulling stations on Oct. 2, and is paying .13 a pound (after hulling weight) for wild nuts, and approximately .50 to .60 per pound for nuts from improved cultivars.

Nuts are only accepted in the hulls, and 262 hulling stations are available in 16 states. A listing of hulling stations by state is available from the Hammons web site: <http://black-walnuts.com>.

Excess nuts are stored for processing and sales at a later time. Rutledge said Hammons is still processing from last year’s harvest, and “that’s a good thing.”

Hammons sells black walnuts to wholesalers, grocers and retailers across the United States.

For more information, visit <http://black-walnuts.com>; or call (888) 4-bwnuts.

Fall Color Reports



Missouri is blessed with a great variety of trees, shrubs and vines. Their leaves turn at different times and, as a result, Missourians enjoy a fall color season that may last four to six weeks.

Visit the Missouri Department of Conservation web site for fall color information, scenic driving routes and the current status of forests around the state. www.mdc.mo.gov/

Tree Fact:

(From the Missouri Forest Keepers Monitor, spring 2006)

At the turn of the last century, Missouri was a leading timber-producing state. The peak of Missouri's timber production was in 1909. By 1910, nearly all the pine was cut.

“November is, for many reasons, the month for the axe. It is warm enough to grind an axe without freezing, but cold enough to fell a tree in comfort. The leaves are off the hardwoods, so that one can see just how the branches intertwine, and what growth occurred last summer. Without this clear view of treetops, one cannot be sure of which tree, if any, needs felling for the good of the land.”

I have read many definitions of what is a conservationist, and written not a few myself, but I suspect that the best one is written not with a pen, but with an axe. It is a matter of what a man thinks while chopping, or while deciding what to chop. A conservationist is one who is humbly aware that with each stroke he is writing his signature on the face of his land. Signatures of course differ, whether written with axe or pen, and this is as it should be.”

**- Aldo Leopold,
A Sand County Almanac**

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Calendar of Events

Oct. 24, 26, 31 and Nov 2, 2006: Missouri Woodland Steward – Mountain Grove. For more information, contact Ted Probert, (417) 741-6134; or email probertt@missouri.edu

Nov. 2 – 4, 2006: National Small Farms Trade Show, Columbia Fair Grounds, Columbia. www.smallfarmtoday.com

Nov. 7-9, 2006: Shortleaf Pine Symposium: Restoration and Ecology in the Ozarks, University Plaza Hotel & Convention Center, Springfield, Mo. For more information, visit http://mdc.mo.gov/science/sl_pine/.

Nov. 18, 2006: Central Region Woodland Stewardship Conference; Lied Conference Center on the Arbor Day Farm, Nebraska City, Neb. For more information and a registration form, contact Hank Stelzer, (573) 882-4444 or email stelzerh@missouri.edu

Dec. 5, 7, 12, and 14, 2006: Missouri Woodland Steward – Jackson. For more information, contact Gerald Bryan, (573) 243-3581; or email bryang@missouri.edu

Dec. 10-11, 2006: Missouri Governor's Conference on Agriculture, Tan-Tar-A Resort, Osage Beach, Mo. For more information, visit www.mda.mo.gov.

Jan. 31 – Feb. 2, 2007: Missouri Natural Resource Conference, Tan-Tar-A Resort, Osage Beach, Mo. For more information, visit www.mnrc.org.

Feb. 2-3, 2007: Missouri Nut Growers Annual Winter Meeting and Nut Show, Nevada, Mo. Contact: Barb Ittner, email dwrighti@netins.net; or 417-436-2351.

Feb. 23-24, 2007: Early Alert! Missouri Woodland Steward Conference (formerly the Missouri Tree Farm Conference); Stoney Creek Inn, Columbia, Mo. For more information and a registration form, contact Hank Stelzer, (573) 882-4444 or stelzerh@missouri.edu