# GREEN HORIZONS

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## Thousand Cankers Disease: A Red Alert for Walnut

**Skip Morglia, NRCS, and David Boyt, Missouri Walnut Council**

The American chestnut tree is gone, we've lost most of our urban elm and many of our forest butternut trees, ash is now in rapid decline, and we stand to lose our black walnut trees. Just two years ago researchers discovered that a sudden decline in black walnut *(Juglans nigra)* in Colorado was due to a combination of the Walnut Twig Beetle and a previously unknown fungus, which infested the trees by hundreds of thousands, causing cankers and cutting off the flow of nutrients. With a mortality rate near 100 percent, what is the prognosis if the disease moves into black walnut's native range? According to Whitney Cranshaw, professor of bioagriculture science and pest management at the University of Colorado, "based on the patterns seen in the West, such a colonization could very possibly develop into an uncontrollable outbreak. This may ultimately have the potential to destroy black walnut in its native range.

*Walnut twig beetle. (Pencil added to show scale.) Their small size makes diagnosis extremely difficult. The relationship between the beetle and the fungus associated with them is still not understood.*

"It is critically important that fresh cut logs from walnut harvested in the western states never be allowed to move outside the area where thousand cankers currently is present. Movement of a single log with live beetles can be the initial source of an outbreak that could ultimately devastate black walnut in uninfested areas. Woodworkers, lumber yards, tree removal services and firewood distributors are among the key groups that need to be provided information on this new disease."

The beetles are tiny – about 1/16 of an inch – smaller than a grain of rice. In late April and **(cont. pg. 6)**

## Vegetative Environmental Buffers: New Technology Benefitting Livestock Farmers

**Dusty Walter, MU Center for Agroforestry**

The use and management of vegetation to benefit farming activities has come a long way, and as our knowledge increases so does our ability to apply vegetation to meet diverse goals associated with today's farming practices. These are exciting times in the field of agroforestry.

Until approximately 10 years ago the term Vegetative Environmental Buffer (VEB) did not exist. Up to that point, the science of integrating trees with farming to impact air movement was purely considered windbreak technology (farmstead windbreaks, field windbreaks, shelterbelts). However, with specific considerations to issues of our time, new and unique design efforts have built **(cont. pg. 4)**

**In this issue:**

# Preserving the Family Forest: Transferring the Flag

**David Watson, Certified Financial Planner**

We all know the conversation – we hear it frequently. It goes something like this: "Times are different… Kids do not appreciate the same things my generation does… Technology has changed what we do with our free time… We are all too busy…" The reality is, there is some truth in these observations. Times and families are faced with a very different world. The pace of life does seem quicker these days. Those differences can make it a challenge for a woodland owner to transfer the legacy they have crafted in their woodland or tree farm. Transferring the legal title to the property is relatively easy. Transferring the love of the land and the commitment to good stewardship is more difficult.

I would like to borrow a naval analogy to make my point; naval commanders go through a process of "transferring the flag" from their ship to another ship in the fleet when they are unable to continue to lead the fleet. The physical act of actually transferring the flag is relatively simple, and is akin to transferring legal title of a forestland property. The real work lies in the years of preparation that goes into preparing the next generation of commanders. To prepare future "commanders," a navy must do three things:

- *Locate potential future leaders who enjoy and appreciate the sea, and want to work on/around it;*
- *Provide the basic training and education to give them the tools/knowledge to succeed;*
- *Instill a sense of vision and commitment to a larger purpose that will guide these future leaders through challenges and difficulties. No one knows what the future holds. So it is important to give the future leaders a solid philosophical foundation, and a sense of history regarding how and why past leaders did certain things.*

Preparing future forestland heirs is a similar process. Without preparation, it will be virtually impossible to retain a complex asset like timberland in the family over multiple generations. The issues of operating costs, taxes, forest management, invasive species, TSI activities, government programs, diseases, pests, can create a web of obstacles that can drown the family legacy. However, with planning there can be a bright future for our family-owned woodlands. Here are a few steps to help families select and prepare future "commanders" for transferring the flag.

## Have Fun

Create opportunities for families (especially the children) to have fun on the property. It is easy to spend all of the available time working and doing projects. These have to be done. However, if the only connection kids (and adults, too) have with a forestland, or farm, is back-breaking work, there may not be much desire to retain the property. If, however, there are pleasant memories, and fun experiences, it will go a long, long way to cementing the love of the land into their lives. Take the time to schedule activities such as:

- *Fishing*
- *Hunting/shooting*
- *Tadpole/frog catching*
- *Bird study*
- *Plant identification*
- *Hiking/camping*
- *Swimming*

Obviously, these activities need to be age-appropriate. Care must be taken to make sure that it is a pleasant experience for all. (For example, planning fishing trips when you know the fish are likely to bite and the weather is tolerable will help to keep new anglers interested.)

Once the heirs discover the marvels of the natural world contained on your family property, the work projects take a new meaning and pleasure.

## Hold Periodic Family Meetings

After family members discover the "fun" side of woodland ownership, they also need to get their arms around all that goes into good stewardship of these natural assets. Periodic family meetings that inform family members about the work that has been done, the decisions being made and what may occur in the future are critical to getting heirs involved on a deeper level. Potential topics could include:

- *Results of forest inventories*
- *Timber Stand Improvement projects*
- *Harvest plans*
- *Work projects*
- *Invasive species updates*
- *Disease or pest concerns*
- *Succession plans*
- *Future family outings on the property (fun events)*

These meetings should be organized and efficient. Ideally, they should not be combined with other family events (if possible) like holidays or parties. They need to be focused on the business and planning side of forestland ownership.

**(cont. pg. 10)**



# Missouri's Family Forests Highlighted at the National Summit of Rural America Held in Hillsboro

**Hank Stelzer, MU Forestry Extension**
**(Adapted from American Forest Foundation press release and article from the Missouri Tree Farm Program)**

On June 3, Tom Martin, President and CEO of the American Forest Foundation (which sponsors the national Tree Farm Program), joined USDA Secretary Tom Vilsack and other officials from the U.S. Agriculture Department at the invitation-only National Summit of Rural America: A Dialogue for Renewing the Promise in Hillsboro, Mo.

"Secretary Vilsack set out a vision for forest policy that focuses on an "all-lands" approach, including private forests. The Summit demonstrated his ongoing commitment to bring together diverse stakeholders to promote the conservation and restoration of America's forests and identify win-win solutions to revitalize rural economies," Martin said.

"Missouri has nearly 12 million acres of privately-owned forests, accounting for 85 percent of the state's forest cover. Missouri is a prime example of how small family forest owners can play a central role in rebuilding and revitalizing rural economies," Martin said. "From forest product jobs to recreation and tourism, forests are the lifeblood of rural economies," noted Martin. In Missouri, the forest product and supporting industries account for more than 67,000 jobs. The USDA Forest Service ranked Missouri third in the country, based on the economic impacts of forestry.

USDA's leadership in promoting forest conservation, rural recreation and private lands conservation comes at a time when private forest owners are facing significant challenges. "Families want to hold on to their land but are struggling with a loss of markets, the burden of estate taxes and the threats of climate change and invasive species," noted Martin.

Mark E. Nussbaum, the 2009 Missouri State Tree Farmer of the Year, provided a letter to Martin to give to Secretary Vilsack. Nussbaum operates a family Tree Farm that has been in his family for more than 70 years. Located in Cape Girardeau County, his 480-acre property has been a certified Tree Farm for 11 years. Nussbaum practices "Crop Tree Management," yielding him a return of $72 acre when the average Missouri forest landowner yields $13 acre.

In his letter, Nussbaum noted that most of Missouri suffers from overstocked forests and that biomass-to-energy projects are an opportunity for forest owners.

"If we can produce electricity with sustainably grown wood while thinning our forests to a healthy condition, we can win both ways," Nussbaum wrote.

"My Tree Farm is a business, but it's more than that. There are few businesses in this country that provide wildlife habitat, clean water and scenic views." But Nussbaum worries about inter-generational **(cont. pg. 4)**

***Top:*** *Mark Nussbaum's daughter, Lizzie, with logs harvested from their sustainably managed tree farm. For Nussbaum, land management is a family affair; he passes his passion along to the next generation.* ***Middle:*** *Mark's son, Matthew Nussbaum (foreground), planting walnut trees with his cousin John Hildebrandt in April 2010.* ***Bottom:*** *Mark Nussbaum gives a presentation of his land management at the Missouri Tree Farm Program's 30th annual conference, where he was recognized as Tree Farmer of the Year. His objectives include timber production, recreation and wildlife habitat.*

## VEBs (cont. from front page)

living biofilters that are today focused on enhancing air quality. In the future, the move from classic windbreak technologies, which primarily employ trees and shrubs, to the VEB design technology, which incorporates fan deflectors, grasses, trees and shrubs, will be seen as a breakthrough which improves air quality, removes atmospheric carbon, filters water from the site, and alleviates social stigmas that are, at times, issues associated with animal agriculture. The MU Center for Agroforestry is working with intensive livestock agriculture in Missouri to enhance the application of VEB technologies so that farms and communities may exist in harmony.

With many of the intensive livestock farms odor is often a concern. Odor often originates from animal barns and the air used to ventilate and cool those barns. As with many water quality issues, the traditions of the past are not applicable today. Past sayings, such as "dilution is the solution to pollution," are unacceptable, whether referring to water quality or air quality issues. It is not appropriate to export a problem, or try to cover it. However, with appropriate design, VEB technologies are made to capture and process odor-causing elements on the site where they originate.

Many odors are transported by very small dust particles which air currents carry. When we pass air through vegetation, the air slows. This, in turn, causes dust particulates to drop from the air currents. So, beyond filtering odor from the air, how does the VEB work as a living biofilter? There are two important components of the leaf surface area useful in breaking down odor-causing VOCs (volatile organic compounds): the waxy surface cuticle and the stomatal openings. Stomatal openings allow chemicals to enter the leaf in their gaseous form, or, when wetted, in a soluble/dissolved form. The waxy leaf surface area (cuticle) has shown an affinity for nitrogen-based chemicals. The leaf surface area is where odor-causing VOCs are removed and digested by microbial populations. There is a whole world of microbial communities, including bacteria, living on leaf surfaces. As we design VEBs, this is a good reason to always include conifers whose leaf surface area remains intact throughout the year. In the future, scientists will measure and publish on both above ground (phyllosphere) and below ground (rhizosphere) components of the VEB. Their workings, both above ground and below ground, will be viewed as significant contributors to the stewardship of air, water, and soil resources exercised by producers.

Through the combined effect of filtering, slowing air movement and breaking down VOC components on-site, VEB technologies have been shown to reduce odor from livestock operations. The effectiveness of VEBs also can be enhanced by using air deflectors to direct air into the vegetation. Air carrying the odor must pass through the vegetation. VEBs also offer the potential for energy savings and the long-term storage of carbon in plant tissues. While applying and promoting VEB adoption, the MU Center for Agroforestry continues to participate in research that will further help farms achieve and maintain high environmental integrity. From small to large producers, we support Missouri agriculture and environmental stewardship. **GH**

## National Summit of Rural America (cont. from page 3)

taxes preventing his children from holding on to the land. "Our society emphasizes sustainability. But if we have government policies that require our children to sell our farm to developers in order to pay taxes, is that sustainable?" asked Nussbaum.

David Watson, a private forestland owner and financial advisor in Missouri (and contributor to GH) also provided a letter to the Secretary, noting that "the inter-generational transfers" of family forestland is a significant threat to the well-being of families, the forest products industry and our nation." USDA can play a role, Watson suggested, in "advocating for reduced transfer costs (i.e. estate taxes), and in promoting sound succession planning practices." **GH**

*For complete transcripts of Mark's and David's letters to Secretary Vilsack, please visit the MU Forestry Extension Web site: www.snr.missouri.edu/forestry/extension*



## UMCA to pursue elderberry market, build online degree

### *Funding to help study, build elderberry market*

The University of Missouri Center for Agroforestry has been awarded a grant from the North Central Region Sustainable Agriculture Research and Education (NCSARE), "Developing Successful Marketing Strategies for Elderberry Growers and Value-Added Processors: A Model for Specialty Crop Development in the U.S. Midwest."

The grant will use an integrated approach to contribute to the creation and development of an elderberry regional industry as a model for specialty crop development in the Midwest U.S., said project director and UMCA associate director, Mike Gold.

The project will increase knowledge about the elderberry market in the region. An elderberry financial decision tool will be developed to support producer decision making for on-farm and associated enterprise opportunities. A comprehensive outreach program will disseminate results of this project.

Only 9 percent of the initial pre-proposal submissions were ultimately funded by NCSARE.

"All funding is very competitive these days," Gold said. "We are excited to have received this award and are ready to move ahead with our elderberry project to carry the industry forward."

In addition to Gold, key players in the grant include Ina Cernusca, UMCA marketing specialist; Francisco Aguilar, assistant professor of forest economics, MU Forestry Department; Larry Godsey, UMCA economist; Elizabeth Barham, rural sociologist, University of Arkansas Agricultural Economics Department; John Brewer, president and co-founder of Wyldewood Cellars Winery; Terry Durham, organic farmer, Eridu Farm, Hartsburg, Mo.; Andrew L. Thomas, research assistant professor in horticulture, MU Southwest Research and Education Center; Patrick L. Byers, MU Extension, horticulture specialist; Julie Rhoads, UMCA event planner; Michelle Hall, UMCA senior information specialist; and Park Bay, agricultural lender and Vice President of Business Development, First National Bank & Trust (now Landmark Bank), Columbia, Mo. **GH**

### *Center receives grant for online courses*

Agroforestry has steadily been gaining attention among landowners and natural resource professionals for its environmental and economic benefits. With this increase, the need for trained professionals in agroforestry has been expanding.

That's where the University of Missouri Center for Agroforestry comes in. The Center has received funding from the University of Missouri System to develop eight courses, creating an Interdisciplinary Online Graduate Program in Agroforestry.

The program will consist of a graduate certificate (12 credits) and master's degree (30 credits). An existing agroforestry course will be converted to an online course. Three additional courses in the biophysical and socio-economic dimensions of agroforestry will be developed, as will four elective courses in soils, watershed management, natural resource policy and biometrics.

"Professionals across the U.S. and overseas are looking for courses, graduate degree or certificate programs in agroforestry," said Shibu Jose, UMCA director. "Nearly 1,500 Peace Corps volunteers, for example, work abroad every year on agroforestry-related projects. This program could provide them with an opportunity to pursue a degree or certificate in agroforestry while working abroad. We are not aware of any similar program in agroforestry elsewhere in the country."

Admission to the new graduate certificate and degree program will begin in fall 2010.

UMCA and MU faculty involved with the project, in addition to Jose, include Francisco Aguilar, Larry Godsey, Michael Gold, Jason Hubbart, David Larsen, Randy Miles, Peter Motavalli and Ranjith Udawatta.

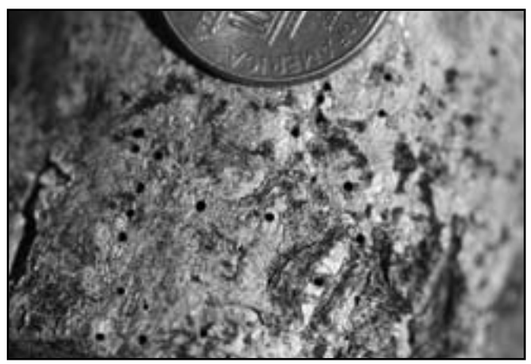
"We hope to increase enrollment of graduate students in courses related to agroforestry," said Shibu Jose, UMCA director. "The ultimate outcome of this project will be 'society-ready graduates' who are capable of making positive changes in the agriculture, natural resources and environmental sectors in the U.S. and around the world." **GH**

## Thousand Cankers (cont. from front page)

early May, they fly to walnut twigs and tunnel under bark where they mate and lay eggs. The larvae tunnel through the tree and chew their way out as adults. Researchers have found as many as 20,000 beetles in a four-foot section of a small walnut log! By themselves, the beetles cause only minor damage to the walnut trees. The fungus they bring with them infects the tunnels, killing the cambium layer of the tree and cutting off the food supply. The tree literally starves to death. The dead cambium forms cankers, which gives the disease its name. The fungus is so deadly to black walnut trees, that it has been named *Geosmithia morbida*.

The first physical symptom of the disease is a tiny entry hole in the outer bark of a branch or twig. Unfortunately, both the beetle and the entry wound are too small to be detected without a magnifying lens. After the first year of infection, some of the foliage in the upper branches turns yellow at the tips and thins out. By the time these symptoms appear, the disease has progressed to the point where the tree cannot be saved. As the disease progresses, larger branches die. The tree dies within three years of the first visible symptoms. Once infected, there is no effective treatment. Mortality rate is nearly 100 percent.

There are no known means of controlling the spread of the disease. Application of insecticides and fungicides do not appear to be effective. Further frustrating attempts is the fact that an outbreak would not likely be detected for several years after the initial infestation, giving the beetle and fungus plenty of time to settle in and spread to other trees. This means that a quarantine or destruction of infected trees would likely be ineffective.



At this time, there are no known cases of the disease east of Colorado. To infect trees in the main part of the black walnut range, it would have to cross the Great Plains.

***Top:*** *Map showing areas of known canker infestation (dark), and the native range of black walnut (light). So far, it appears the disease has only affected areas where walnut has been planted outside its native range, but the nearly 100 percent mortality and rapid spread make it critical not to allow the beetle and fungus into the native range.* ***Above left:*** *The walnut twig beetles eat through the cambium layer of the stem and branches, blocking the flow of nutrients – in essence, the tree starves to death.* ***Above:*** *Walnut tree dying of the Thousand Canker Disease. In the initial observed stages, the branch tips die back. By the time this occurs, there is little to no chance the tree will survive.* ***Left:*** *Dead walnut twig showing the exit holes of the mature walnut twig beetle. A single 4-foot block of walnut was found to contain more than 20,000 beetles.*

The beetle and fungus could hitchhike across on a logging truck, hidden under the bark of a log or of a slab of walnut sold to an unsuspecting customer or moved into new areas by campers taking firewood with them. **(cont. pg. 7)**



## Thousand Cankers (cont. from page 6)

There are steps you can take to help stop the spread of this disease to black walnut's native range. Prevent untreated wood cut in infected areas – Colorado and areas west – from moving east. Do not sell or transport walnut logs, slabs or firewood (any walnut with bark attached) from areas of known or suspected infestation into unaffected areas. If you live in an unaffected area, verify the sources of any walnut logs or slabs before buying them. As people salvage dead or dying walnut, it may be tempting to purchase it. As long as the wood is kiln dried, or consists only of heartwood (with NO bark), it poses no threat. It has been found that the beetle survives in walnut chips, so movement of walnut mulch into unaffected areas must also be avoided.

The U.S. Department of Agriculture does not consider the TCD to be an exotic disease, and therefore left it up to the states to deal with. The best line of defense is information. You can help by letting buyers and sellers know that walnut logs or lumber containing bark should not be shipped east from infested areas. If you have walnut trees, contact your state's department of agriculture or your state forestry agency for assistance with diagnosing any tree problem.

So, why is this important? Walnut trees and their nuts play a vital role in the ecology of many of our forests. Many livelihoods depend on walnut trees – woodworkers, loggers, log buyers, sawmillers, the edible nut industry, furniture makers, carvers, and makers of many specialty walnut products. Harlan Palm, president of the Missouri Walnut Council, estimates that the loss of walnut trees in Missouri alone would amount to roughly a half billion dollars, and would wreak financial havoc on thousands of individuals. Serious tree farmers have been tending walnut plantations for decades to provide retirement income or to leave something of value for their grandchildren. It's hard to describe how emotionally devastating this would be for them.

Spread the word – not the disease. **GH**

***Photo credits:*** *Disease and black walnut range maps adapted from U.S. Dept. of Agriculture maps. Other photos courtesy of Whitney Cranshaw, Colorado State University.*

*This is an edited version of an article that appeared in the March 2010 issue of Sawmill & Woodlot Management magazine.*

## Late Summer a Good Time to Control Invasive Plants

**Hank Stelzer, MU Forestry Extension**

Usually, the most effective and cost efficient method for controlling invasive plants, such as amur honeysuckle, is by foliar application of herbicides directly to the leaves of the plant. And the best time of year for foliar applications is late summer into early fall, when plants are moving energy stored in their stems and leaves down into their roots.

Here are some quick tips to remember when applying herbicides.

First, READ THE LABEL! Make sure that the herbicide you are considering is not only labeled to control the invasive plant in question, but that it is also labeled for the site it will be applied.

Second, buy only what you need and use it all. Some herbicides are expensive and will lose their effectiveness if stored for long periods of time and exposed to extreme heat and cold.

Third, air temperature can be a factor. Herbicides are most effective in temperatures above 60 F (not a problem in late summer, but could be a factor if you were to get an early frost). If possible, avoid hot days when the temperature is above 90 F. Some herbicides will dissipate into the air before they are absorbed by the plant. Incorporating a spreader/sticker into the tank mix will help ensure the herbicide is taken up by the plant quickly.

Fourth, do not apply herbicides if rain is forecast within 24 hours. You will be wasting your time and money. Again, add a spreader/sticker to the tank to ensure rapid uptake.

Lastly, apply herbicides in the morning before the wind picks up. Drift is a big issue with foliar applications. Use caution in winds above 5 mph, and stop spraying entirely if winds exceed 10 mph. **GH**

# The Toolbox

**Hank Stelzer, MU Forestry Extension**

Just like home repairs, certain woodland jobs can be accomplished quickly and efficiently if the right tool is used. In this last installment of 'The Toolbox' let's take a look at the hatchet and squirt bottle, chainsaw and herbicides.

## Hatchet and Squirt Bottle

These tools are used in combination to apply herbicides to unwanted trees and are the cheapest and most locally available tools used in forestry. Killing trees that are interfering with the growth of crop trees (crop tree release), killing invasive trees such as autumn-olive, and deadening poorly formed native trees in timber stand improvement (TSI) operations can be done using the hack-and-squirt method. These practices are commonly prescribed in forest management plans prepared by a professional forester. The hatchet is used to make slits into the wood around the tree, and the squirt bottle is used to apply the herbicide into the slit. Contact a professional forester to help you determine the type of herbicide needed and work with you on your technique.

## Chainsaws

Chainsaws are not only for use in logging or cutting firewood. They also are needed to cut downed trees for removal from wood roads, prune branches from trails and roads, and cut vines and brush where necessary. They also can be used for the application of a herbicide using the cut-stump method or for girdling trees for crop tree release or TSI operation. Use a professional forester to help determine when and how girdling should be used in lieu of or in combination with a herbicide. Typically, saws with 12- to 14-inch bars can be used for girdling and light duty. Saws with 18- to 20-inch bars are large enough for cutting up downed trees, logs and firewood. Always buy an extra chain. If you don't know how to maintain the saw and sharpen the chain, find someone locally who does and use that person. Buy a pair of chainsaw-resistant chaps, as well as eye, ear and head protection… and always, always, always use them!! A good purchase is a helmet system with ear protectors and face shield. This protective gear is often available locally at chainsaw distributors.

## Herbicides

Herbicides are commonly used for invasive species control, and effectively and cost efficiently deadening trees in crop tree release and TSI operations. Several of the commonly used herbicides are listed in the adjacent table. Before purchasing and applying these or any herbicide, consult a professional forester.

That covers the basic tools that should be in every woodland owner's toolbox. With these tools and assistance from your professional forester, your woodlot can be a healthy and productive part of your local ecosystem. The only thing left to do is the actual work. In a future series, we will describe some of the basic operations to put these tools to use! **GH**

***Forestry supply companies that mail order all of the tools mentioned in this series include:***

**Forestry Suppliers:** www.forestry-suppliers.com or call 800-647-5368

**Ben Meadows:** www.benmeadows.com or call 800-241-6401

*Common Forestry Herbicides Used in Missouri.*

| Active Ingredient | Brand Names | Common Use |
|---|---|---|
| triclopyr | Garlon 3A, Crossbox (w/2, 4-D)<br>Garlon 4 | hack-and-squirt, cut-stump, foliar basal bark |
| glyphosate | Accord, Roundup | hack-and-squirt, cut stump, foliar |
| picloram | Tordon RTU, Pathway (both w/2, 4-D) | hack-and-squirt, cut-stump |
| imazapyr | Arsenal AC, Chopper | hack-and-squirt, cut-stump, foliar |
| hexazinone | Velpar | cut-stump, soil application |



# The Carbon Corner

The National Wildlife Federation and the Soil and Water Conservation Society will host a one-day workshop, "Carbon Markets - Expanding Opportunities/Valuing Co-benefits," in conjunction with the SWCS annual meeting Wednesday, July 21, at the Hilton at the Ballpark in St. Louis. This event will focus on the opportunities being created by the expected passage of federal legislation creating a mandatory cap-and-trade system for greenhouse gas emissions. Both the morning and afternoon sessions have topics of special interest to forest landowners:

## Morning Session: Group Two - Forestry

- Improved Forest Management Doubles Carbon Sequestration Rates. Peter Becker, Eastern Ozarks Forestry Council
- Forest Carbon Market Success Stories, Partnering Carbon with Conservation Easements…Lessons to Grow On. Matthew Smith, Finite Carbon Corporation
- Agroforestry: Accounting for the Carbon Services from Working Trees. Michele Schoeneberger, USDA Forest Service/NRCS National Agroforestry Center

## Afternoon Session: Group Four - Tools and Calculators

- Estimating Potential Carbon Sequestration and Marginal Costs for Afforestation of Agricultural Land in the Northeastern U.S. Jonathan Winsten, Winrock International
- EcoMarket Infrastructure: Using a LIDAR Based Approach to Quantify Carbon & Non-carbon Forest Attributes. Chuck Anderson, ImageTree

For more information or to register, call Robin at 515-289-2331 x118. **GH**

## The Bid Box

*(All volumes reported in Doyle Scale)*

Two sales from April tell the tale that quality species bring premium prices. While stumpage prices have fallen victim to the same economic woes besetting other markets the past two years, quality species such as walnut (lumber and veneer) and white oak (staves) have remained relatively strong. It's when the sale includes the 'mixed bag' of mixed hardwoods that bids take a turn south. It all depends on market demand. And who better to know market conditions than a consulting forester! To find a consulting forester near you, visit www.missouriforesters.com

**Boone County**
- 15 acres
- 66 walnut trees
- Estimated volume: 12,796 bd. ft.
- Forester valued the sale at $13,000

Five bids
- o $18,980 (accepted)
- o $15,005
- o $14,600
- o $14,350
- o $12,150

- ***Return: $1,265 per acre***

**Saline County**
- 50 acres
- 75 walnut trees; 228 mixed hardwoods (mainly shingle oak)
- Estimated volumes: black walnut - 12,503 bd. ft.; other hardwoods - 53,360 bd. ft.
- Forester valued the sale at $12,500

Four bids
- o $17,922 (accepted)
- o $15,700
- o $15,438
- o $13,018

- ***Return: $358 per acre***

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

## Invest in Your Best!

High-grading is taking the best and leaving the rest. Diameter limit cuts, sometimes called "selection cuts," can be a form of high-grading. Usually all good trees over 10-12 inches at breast height are cut. This can rob the landowner of value by cutting trees before they have grown to their most profitable size. Larger trees have more volume and the potential to be of higher quality. Allowing them to mature increases profits!

Without any direction from the landowner and their professional forester, it's only natural for most loggers to cut the biggest, tallest and straightest trees. This leaves mostly the poorly formed and less vigorous trees. Your remaining forest is stocked with trees that are unable to take advantage of the new growing space left them by harvesting. Your future growth is invested in your worst trees.

Plus, these are the trees that will produce tomorrow's seedlings and sprouts. This degrades your forest over time. A good analogy would be a livestock producer who sends his best breeding heifers to market. The resulting breeding stock does not produce high quality offspring and the quality of the herd declines over time.

In the average woodland, many of your best, healthiest trees should be left to grow and increase in value while providing wildlife benefits. Over time you will make significantly more money by investing growth in your best trees! **GH**

## Preserving the Family Forest (cont. from page 2)

With a little planning and preparation, these meetings can be great opportunities to share information with future heirs and can allow for questions and answers about what is involved in forest management, and why.

### Draft a "Legacy Letter"

Some families have drafted ethical wills (a non-legal document that conveys desires, values, philosophies and dreams to future generations). Other families have drafted Letters of Instruction that detail instructions to heirs regarding where things are located, what should be done, why affairs are organized the way they are. A Legacy Letter essentially combines the two into one document. While not legally binding on heirs, the Legacy Letter does convey the family values and philosophies affecting the use of all assets, including the heirloom assets, like the woodland. The specifics of "who, what, where and why" can also be included, if appropriate. Legacy Letters can be very effective "capstone" pieces to a succession plan, acting as an extension of the original vision statement. These are not legal documents. Rather, they provide a background of family values and philosophy that connect the various legal pieces. Heirs can refer to the Legacy Letter at the time of transfer (i.e. death or incapacity), and for many years (or generations) to come. Legacy Letters can take many forms – written letter, video, CD or DVD. The media is less important however, than the content. The Legacy Letter should be a thorough, but concise, expression of the owner's hopes and dreams, their passion and their plans. It should summarize the legacy for future generations. **GH**

*D.A. Watson & Company, 17263 Wild Horse Creek Rd., Suite 202, Chesterfield, MO 63005, 636.230.3900, 888.230.3999*

*All investing involves risk including the potential loss of principal. Specifically, investing in timberland is subject to substantial price fluctuations of short periods of time and may be affected by unpredictable property and timber valuations and supplies. The market for timberland is widely unregulated and concentrated investing may lead to higher price volatility and there may not be a secondary market available for this product.*

*Material discussed herewith is meant for general illustration and/or informational purposes only, please note that individual situations can vary. This information is not intended to be a substitute for specific individual tax, legal or investment planning advice. Please consult a qualified professional for legal advice/services.*

*David Watson is a financial advisor specializing in working with rural landowners, sportsmen and conservation-minded families. Securities offered through Royal Alliance Associates, Inc., Member FINRA & SIPC.*

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## The Back Page

### Deadlines for Newsletter Submissions

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| Spring Issue: | March 15 |
| Summer Issue: | June 15 |
| Fall Issue: | September 15 |
| Winter Issue: | December 15 |

***GH Online:*** *Find Green Horizons on the Internet at http://agebb.missouri.edu/agforest/index.htm or http://snr.missouri.edu/forestry/extension/*

### E-mail or Snail Mail?

Would you rather receive Green Horizons electronically? E-mail us at hallmich@missouri.edu or stelzerh@missouri.edu and we will add you to our listserv. Be sure and send your full name and address so we can take you off the snail mail list.

### Agroforestry Research Symposium Video Now Available Online

The full video from the University of Missouri Center for Agroforestry's Inaugural Agroforestry Research Symposium is now available online. To see the presentations, go to http://www.centerforagroforestry.org/events/sym2010.asp

The symposium was held Jan. 6 and featured speakers David Burner, USDA-ARS; Ranjith Udawatta and Stephen Anderson, MU Department of Soil, Environmental and Atmospheric Sciences; and Mike Gold and Larry Godsey, MU Center for Agroforestry. Keynote speaker was Andy Mason, interim director, USDA National Agroforestry Center.

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GREEN HORIZONS

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## Calendar of Events

**July 18-21, 2010: 101st Annual Meeting of the Northern Nut Growers Association, Wooster, Ohio.** Program includes Show and Tell session, technical presentations, field tours and banquet. See details at www.nutgrowing.org or request from icomserve@aol.com

**July 23-24, 2010: Summer Meeting of the Missouri Forest Products Association, Lake Ozark, Mo.** For more information, please contact Tammy Homfeldt at tammy@moforest.org or 573-634-3252.

**July 25-28, 2010: 40th Annual Meeting of the Walnut Council, Grand Rapids, Mich.** For details, contact Liz Jackson at Jackson@purdue.edu or 765-583-3501; Roger Corwin at rogercorwin@comcast.net or 616-452-9188; or go to www.walnutcouncil.org

**Aug. 3, 2010: MU FSRC Field Day, Linneus, Mo.** Crop tree management and portable sawmill demonstration. For more information, contact David Davis at davisdk@missouri.edu or 660-895-5121.

**Sept. 10, 2010: MU Southwest Center Field Day, Mt. Vernon, Mo.** Specialty forest crops and silvopasture. For more information, contact Rich Crawford at crawfordr@missouri.edu or 417-466-2148.

**Sept. 22-25, 2010: 50th Annual Black Walnut Festival, Stockton, Mo.** For more information, contact Debbie Whisler at 816-229-8558 or 816-228-6322; the Stockton Chamber of Commerce at 417-276-5213; Hammons Products Company at 888-4bwnuts; or go to www.stocktonmochamber.com

**Oct. 1, 2010: MU Wurdack Farm, Cook Station, Mo.** Silvopasture and pine restoration. For more information, contact John Poehlmann at poehlmannc@missouri.edu or 573-882-4450.

**Oct. 1-2, 2010: 30th Annual Brunswick Pecan Festival, Brunswick, Mo.** For more information, contact Tammy Taylor at 660-548-3340 or go to www.brunswickmo.com

**Oct. 2, 2010: Missouri Walnut Council Fall Tour, James Ball Tree Farm, Caldwell County, Mo.** The tour will be near Polo, Mo., about 50 miles northeast of Kansas City. See results of timber stand improvement; success and failure of black walnut and various oak species establishment due to soil types; and practice pruning. For more information, contact Harlan Palm, palmh@missouri.edu

**Oct. 8-9, 2010: Doniphan Timberfest, Doniphan, Mo.** Logger competitions, draft horse pull, forestry equipment demonstrations, old tyme forest camp and much more! For more information, contact the Ripley County Chamber of Commerce at 573-996-2212.

**Oct. 16, 2010: Eighth Annual Missouri Chestnut Roast, New Franklin, Mo.** Details can be found at www.centerforagroforestry.org; or contact Julie Rhoads at Rhoadsj@missouri.edu or 573-882-3234.