

# GREEN HORIZONS

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## Emerald Ash Borers... 'They're Heeere!'

Hank Stelzer, MU Forestry Extension  
(adapted from AP article published 9/3/08)

Upon learning of the arrival of the emerald ash borer in the Show-Me State, I couldn't help but be reminded of the classic scene in *Poltergeist I* where the little girl sheepishly spoke those words above.



*The U.S. Army Corps of Engineers' Greenville Campground is located in Wayne County. This is the only Missouri county where the movement of ash wood products and all hardwood firewood is regulated.*

Seven emerald ash borers were found in July in traps at Greenville Recreation Area in southeast Missouri's Wayne County.

The small, metallic green beetle is native to Asia. Its larvae burrow into the bark of ash trees, causing trees to starve and die.

The beetle was first found in Michigan in 2002, and has reached at least seven other states, killing tens of millions of trees along the way. Missouri is the farthest south and west of the known infestation.

It is highly unlikely that we will be able to eradicate the infestation. Other states have spent millions of dollars to no avail. Slowing the spread is what we're trying to do now.

Doug LeDoux, pest survey coordinator for the Missouri Department of Agriculture, agreed that eradication is unlikely, in part because property owners may not recognize the symptoms for years after a tree is under attack. "The beetles hit the tree from the top down and it's very difficult to see the damage the first couple of years," he said.

While ash trees only make up about 3 percent of Missouri's forests, they compose on average 14 percent of trees in cities and towns across the state. And in some municipalities that makeup can be more than 30 percent. (cont. pg. 9)

## Forest from the Trees: Timber Stand Improvement

Dave Murphy, Conservation Federation of Missouri

In October 2007, our farm became certified in the Missouri Tree Farm program. This year, in Missouri Wildlife, we will run a series of articles recounting why and how this came about. Others have suggested several times that details of this living history may prove useful to some folks and interesting to many more. This is the third installment of the series.

We had settled upon the objective of a productive, healthy and sustainable forest and developed a detailed management plan for each of the 23 stands in our forest based upon carefully gathered inventory data and the advice of skilled professional foresters. With our forest boundaries secured and cattle excluded, we were ready to bring the plan to life.

(cont. pg. 10)

### In this issue:

EAB: 'They're Heeere!'	1
Forest from the Trees: TSI	1
Carbon Corner	2
Forest Certification	3
The Forgotten Woods	4
Agroforestry Conference	5
Larry Young: Logger of the Year	5
Preserving the Family Forest	6
Good Fences Make Good Neighbors	7
Forest Biomass Field Day	8
'Forest Gas'	8
Bid Box	11
Calendar of Events	12

# The Carbon Corner

Hank Stelzer, MU Forestry Extension

During The Carbon Corner's summer vacation, I took some time to step back and talk with people... a lot of people... who know a thing or two about the U.S. carbon market and forestry offsets in particular. I have spoken with folk from the California Air Resources Board (CARB) and the California Climate Action Registry (CCAR), the Northeast Regional Greenhouse Gas Initiative (RGGI); members of the CCX Forestry Committee; and technical experts with the major aggregators with registered and verified forestry offset projects.

Beginning with this issue I will share with you what I have learned, particularly related to what is known as managed forest offsets.

I'll start with Delta Institute because this group was the first aggregator to work with the Chicago Climate Exchange (CCX) in developing the managed forest offset option. In future installments, I will share news and information on other aggregators, the CCX, regional carbon initiatives around the country, and any policies that might emerge from Washington, D.C.

The Delta Institute ([www.deltacarbon.org](http://www.deltacarbon.org)) is a nonprofit organization formed in 1998 to develop and test fresh ideas for bringing about sustainable communities. A key goal of Delta is to integrate environmental protection and economic development. Delta developed the managed forest protocols and program framework in late 2006/early 2007, enrolled landowners, and inventoried/ modeled the acreage by June 2007. The CCX formally approved their program as an offset project in August 2007, three months before the CCX released protocols in Dec 2007.

From the outset, Delta has developed managed forest offset pools consisting of many landowners, as opposed to developing a managed forest offset project for a single entity. Forecon's wholly owned subsidiary, Ecomarket Solutions LLC, is an example of the latter and we will explore that project in another issue.

As is true for all aggregators, Delta is approved to aggregate credits in multiple states. Within their managed forest program, they have projects (enrolled lands) from Michigan, Illinois, Indiana, Wisconsin, Minnesota, Arkansas, Louisiana, and Texas.

When a landowner enrolls his managed forest with Delta, the contract is directly between the landowner and Delta.



The landowner can work with any professional forester they want to prepare the management plan and conduct the forest inventory. Unlike the aggregator and verifier fees that are deducted from the carbon credit payment, the professional forester's fee is usually an up-front cost paid at the time the service is performed.

Delta's first managed forest pool was formed in 2007 and involved private forest landowners in Michigan. It started here because the Michigan Department of Natural Resources gave Delta a grant that, among other things, provided landowners technical assistance funds for the required upfront forest inventory fees. Landowners repay the funds through the annual sale of the carbon credits.

This first pool consisted of 34 properties totaling 48,665 acres. Delta registered 173,000 metric tons of carbon with the CCX Forestry Committee, of which 138,300 tons were verified for sale. Remember that the CCX holds back 20 percent of a project as an insurance policy. If the project remains intact at the end of the contract period, then this reserve will be available for sale.

Landowners are typically paid once the entire pool of credits is sold, using the average sales price for that pool. To date 69,300 tons of the pool has been sold and they have a verbal agreement from a large CCX member to purchase the remaining 69,000 metric tons. Assuming this latter sale is finalized, landowners should receive checks by the end of October.

Actually, 26 of the 34 participants will receive money in the form of a check. This is because their managed forests are large enough that they have generated sufficient income to pay off the technical assistance fund, Delta's aggregator fee, and carbon verifier's fee. The remaining eight landowners were not able to cover their costs through the sale of credits. Two of the eight landowners were in carbon deficit, and had no credits to sale. The remaining six landowners did not cover their inventory costs, primarily because their lands were less than 50 acres.

Remember that in this first pool, Michigan DNR covered the up-front inventory cost. This may or may not happen again for Michigan landowners in other managed forest pools and landowners in other states will need to see if their state forestry agency is (will) offering similar assistance monies. (cont. pg. 7)

# Missouri Forest Certification Update

Hank Stelzer, MU Forestry Extension

It started with Pioneer Forest and Value Missouri (GH, Vol. 9, No. 1). Now, not a week goes by where someone doesn't call either my office or the folks with the Missouri Forest Products Association looking for 'certified' sources of wood for the manufacture of their product; be it lumber for houses or bird houses (as Dave Barry would say, "I'm not making this up!"). In Missouri, due to the decentralized nature of the forest products industry, it has been difficult to match supply with demand. But, things are beginning to change.

In addition to FSC (Forest Stewardship Council) forest management certification of Pioneer Forest, Clearwater Forest Consultants, LLC ([www.clearwaterforestconsultants.com](http://www.clearwaterforestconsultants.com)) located in Piedmont, Mo., has received their FSC accredited resource manager certification. This was the first opportunity that family forest landowners had to access these emerging "green markets." Another opportunity is now available through the American Tree Farm system ([www.treefarmssystem.org](http://www.treefarmssystem.org)) as ATF has been formally recognized and endorsed by the Programme for the Endorsement of Forest Certification schemes (PEFC).

## So, what does all this mean for Missouri forest landowners?

There is no single certification program that is "best" for all landowners (see box). FSC and ATF's PEFC certification vary in participant requirements, process and cost. But, they (as well as other programs) attempt to produce sustainable forests. "Attempt" is a good qualifier here because the ultimate responsibility for sustainable forest management rests with the forest landowner.

Clearwater Forest Consultants also is considering seeking what is called IMG (Independently Managed Group)

### **Which certification is best for you as a family forest landowner? Consider these points when deciding:**

- Certification costs
- Suitability of your management practices with the certification program standards
- Availability of certified managers and auditors in your area
- Current/projected demand for certified forest products bearing the label of the program you are considering

certification through ATF. This would allow a landowner who chooses not to be a Tree Farmer, or be FSC certified, to have his or her forest managed as part of a larger group that would be PEFC certified.

Currently, landowners in other parts of the country have not received any significant premium for their certified wood. But, as our lead-in suggests, the demand is growing rapidly, so who knows what tomorrow will bring regarding premium pricing.

One thing is certain, however, and that is forest landowners who participate in either of these two programs do have access to another rapidly developing market... the carbon market. This is because one key requirement to register your forest in the managed forest offset program is that it be certified as a sustainably managed forest.

As events unfold, we will work to keep our GH readers in-the-know. **GH**

**We must also recognize two other key players in the certification scheme; the loggers and saw/pulpmills. They must handle wood from certified forests in a rigorous 'chain of custody' to ensure the green label is maintained to the end customer. To the best of GH's knowledge, there are four forest product companies in Missouri that have FSC chain of custody certification:**

- Mercantile Lumber Company, Van Buren
- NewPage Corporation, Advance
- Ron Harper Logging, Summersville
- Smith Flooring, Mtn. View

These companies are to be applauded for the time and resources they have contributed to meeting FSC standards!

# The Forgotten Woods

Harlan Palm, Missouri Walnut Council

Thousands of farmers in Missouri own tens of thousands of acres of woods along creeks. The vast majority of these tracts are now unmanaged and forgotten. But, there is generally something in those woods that justifies attention. Black walnut trees generally thrive on these deep alluvial soils and can become a valuable crop, especially if their growth and sales are managed.

These forgotten parcels of land have resulted from two changes in farming practices.

Decades ago, the small irregular fields along the creeks were intensely farmed because these areas had some of the most productive soils for row crops that were planted with 2, 4, and 6-row equipment. Today, the large operators use 16, 24, or 32-row planters (up to 80 feet wide) that can not physically or economically operate in these small fields. These little fields have been idled and forgotten.

Secondly, as small general farms have been consolidated into large operations, many no longer have livestock at all or the livestock have been excluded from the creek areas.

The neglected parcels have transformed into a mixture of invasive weeds and brush that insidiously becomes a tangled mess of vines growing on a mixture of hardwood species. It's a shame because there are generally only a few nice walnut stems that develop without some help. With just a little care during the formative period of the succession, the density and quality of the walnut growing on these ideal soils can be much greater and be financially rewarding.

A pocket tree identification guide and a little management can directly affect both the amount and quality of high-value walnut, oak and cherry that might be growing in your forgotten woods. Once you have identified your high-value trees, the next step is to encourage their growth.

Like weeding your garden to promote the growth of your best vegetable plants, you will want to remove trees that are competing with your high-value crop trees. If the trees you are removing are small (less than five inches in diameter

as measured at your waist) simply cut them off with a small chainsaw. To prevent sprouting, treat the outer ring of the cut surface with a labelled herbicide. No need to bend over; just cut them off at waist height. This way you won't twist an ankle or puncture a truck tire. Within a few years the treated

tree will rot off at the base.

Larger trees can be 'girdled' with that same small chainsaw. Your goal is to cut a continuous ring about one inch deep into the wood all the way around the tree trunk. Make sure that the ends of the cut connect or you may not kill the tree. As with the smaller trees, treat the girdle by applying a few squirts of a herbicide in the cut to prevent sprouting. The dead tree will safely come down a limb at a time, so that when the main trunk falls it will not damage any crop trees.

Lastly, kill grape vines! While they might have a place in some locations of your woods for wildlife food and cover, they have NO place growing in the canopy of your crop tree. Uncontrolled vines will kill your crop tree by shading out its leaves, create "sails" that can catch wind or, worse, ice, and once it does die prevent it from falling safely to the ground. **GH**

*More than 150 people gathered to hear this topic at this year's National Walnut Council meeting. If you are interested in learning more about managing black walnut and other fine hardwoods, visit the National Walnut Council's Web site [www.walnutcouncil.org](http://www.walnutcouncil.org) or contact Harlan Palm with the Missouri Chapter at [palmh@missouri.edu](mailto:palmh@missouri.edu) or (573) 882-1402.*

1956



*Several large, naturally growing walnut trees that have been 'found' in the lower left-hand woods today were no doubt some of the very same trees that can be seen as scattered trees growing in the pasture back in 1956.*

2006





# North America's Largest Agroforestry Conference to be Held in Columbia, Mo., May 31-June 3, 2009

Michelle Hall, University of Missouri Center for Agroforestry

Interested in learning more about agroforestry? Mark your calendars for early summer 2009 as the University of Missouri Center for Agroforestry (UMCA) will host the North American Agroforestry Conference May 31-June 3.



The theme for this 11th biennial conference is "Agroforestry Comes of Age: Putting Science into Practice." At the event, special emphasis will be placed on practical examples of agroforestry practices and on technology transfer to producers.

"Landowners will hear from other landowners, in addition to agroforestry researchers, at this conference," said Mike Gold, associate director, UMCA. "Only a curiosity about agroforestry is required of attendees."

The conference will include oral and poster presentations addressing current and emerging knowledge on temperate agroforestry practices as well as presentations related to the socioeconomic, political and environmental aspects of agroforestry. Target participants include landowners, land managers and consultants, entrepreneurs, scientists, students, natural resource and forestry professionals, extension specialists, government officials, environmental consultants and policy makers.

Activities will include plenary and concurrent presentation sessions, a welcome reception and banquet, a poster session, field trips and time for discussion that focus on the successes, opportunities and constraints of agroforestry.

(cont. pg. 10)

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## Larry Young: Missouri's 2008 Logger of the Year

John Tuttle, Missouri Department of Conservation

The Missouri Department of Conservation (MDC) has announced the winner of the 2008 State Logger of the Year Award: Larry Young. The announcement was made at the Missouri Forest Products Association's annual summer meeting.

Larry's operation is a two-man crew with himself and David Minich. Resource Forester Mike Norris's nomination description included many positive accolades of Larry. "Best Management Practices are followed and completed on all of Larry's sales. He optimizes log landings and skid trail locations to conduct the job in the most efficient manner possible. Larry was instrumental in the success of the development of oak pine woodland structure on the Rocky Creek CA restoration project. His careful style of logging, in heavily over-stocked stands of pine and mixed oak poles, left the woodland with a minimal amount of residual damage. His excellent utilization of all material and careful consideration for aesthetics make this crew one of the best in the Ozarks. For a private landowner that is looking for a quality logging job, Larry is the first logger I suggest to conduct the sale. He is easy to work with and always has a positive attitude."



From left to right: Stihl chainsaw program sponsor from Crader Distributing; Lisa Allen, MDC State Forester; David Minich, log cutter for Larry Young; Larry Young, winner; John Tuttle, MDC Wood Utilization Supervisor.

Through this award MDC recognizes loggers that use Best Management Practices (BMPs), have good working relationships with landowners and foresters, demonstrate safe work performance, and have completed the Professional Timber Harvester Program.

Crader Distributing Company, the exclusive distributor of STIHL Outdoor Power Equipment in Missouri, Kansas, Nebraska and Southern Illinois is sponsoring the Logger Award program. STIHL has donated to each Regional Logger Award recipient a Protective Kit valued at \$479 as well as a new STIHL chain saw to the State Logger of the Year award recipient.

### The 2008 Regional Logger Award recipients:

Greg and Joe Brinkley, Southeast

Shannon Jarvis, St. Louis

Jim Nelson, Southwest

Danny Chaney, Ozark co-winner

Lawrence Young, Ozark co-winner. GH

# Preserving the Family Forest: Should You Consider a Trust?

David Watson and Kirk Fine, Financial Planners and Missouri Tree Farmers

Over the last several years, we have received quite a few phone calls from timberland owners from around the state who are interested in doing succession planning. One of the most frequently asked questions involves the use of “trusts.” What are they? How do they work? Are they appropriate for my family? This column will address these questions in more detail.

There may be no area in succession planning that generates as many questions, or more confusion, than trusts. At the same time, there may not be a more versatile tool for timberland families to address the complexities of managing and distributing unique assets such as forestland and farmland. Families who are committed to keeping these important assets in the family’s control, are well advised to explore trusts with their advisers. Here is why.

A trust is a legal entity in which the legal ownership is separated from the beneficial ownership of the property. (Beneficial ownership refers to the right to use the property, or benefit from the property in some manner.) Specifically, a trustee(s) owns and manages the property for the benefit of the beneficiaries. The person(s) who creates the trust is called the grantor or settlor or trustor.

The trust document spells out the terms and conditions of the trust, such as:

- Who the grantors are
- Who the beneficiaries are
- Who the trustees are
- What is the purpose of the trust
- How the assets will be managed
- When and how the assets (principal or corpus) will be distributed
- How the income will be distributed
- Who will serve as successor trustees, if needed
- How trustees can be replaced

Once property is placed into a trust, it is the responsibility of the trustee to administer the property according to the trust document specifications. These trust directions can be general or very specific, depending upon the wishes of the grantor. The trust document creates legally enforceable rights for the beneficiaries, and the trustee is considered to own the property in a fiduciary capacity, for the benefit of these beneficiaries.

Trusts can be created while the grantor is alive (“living trusts” or “inter vivos trusts”), or they can be created by will, at death (testamentary trusts). They can be revocable (changeable), or irrevocable (non-changeable). They can help to reduce taxes, or not. They can distribute income or retain it for future use. They can treat beneficiaries equally, or treat them differently. Trustees can be given very broad discretionary powers, or more limited powers. The key word is flexibility. Trusts can be written to accomplish a wide variety of desires, or to meet specific family situations.

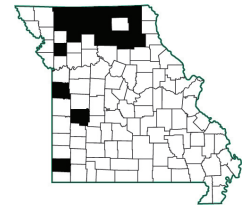
Many attorneys and financial advisers suggest revocable living trusts be used in conjunction with wills. This popular planning technique holds appeal for many family forestland owners, for the following reasons:

- The grantors can also serve as trustees, if desired
- It provides for the continuous management of the assets (including real estate) according to the grantors’ instructions in the trust document, if the grantors become incapacitated
- Additional, “tax-saving trusts” can be created at the death of the grantor (sometimes referred to as “marital” and “family” trusts)
- It can provide for the ongoing income needs of a surviving spouse, children, grandchildren and other heirs
- It can help to protect the assets from the creditors of the heirs, from ex-spouses of heirs, or from the spendthrift tendencies of the heirs themselves
- It can incorporate charitable goals after death, as well
- The public probate process can be avoided thereby keeping the affairs of the family private

A trust is not a replacement for poor planning or preparation. A family forestland owner still needs to determine his/her vision and goals, to carefully evaluate the capabilities and commitment of heirs, and to explore all available options with the advisory team. However, trusts can provide an incredible opportunity to control the management/ownership of the family forest long after the current owners are unable to do so.

# Good Fences Make Good Neighbors

## Part 2: Missouri's Optional Fence Law Counties



Hank Stelzer, MU Forestry Extension

In Part 1 of this series, we covered Missouri's "general" fence law. As of May 2008, 18 counties have opted into the "optional county fencing statute" (Chapter 272.210 of the state's fencing statute). These counties are Bates, Clinton, Daviess, Gentry, Grundy, Harrison, Knox, Linn, Macon, Mercer, Newton, Putnam, Schuyler, Scotland, Shelby, Sullivan, St. Clair and Worth.

So, what are the basic differences between the "general" and "optional" fencing statutes?

### Forced Contribution and Maintenance

If either neighboring landowner needs a division fence, the neighbor has to pay for half the cost of the "lawful fence" (different definition in optional counties) and maintain half (Missouri statute 272.235).

### Lawful Fence

A lawful fence is defined basically as one equivalent to a fence of four barbed wires supported by posts not more than 12 feet apart, or 15 feet apart with one stay. If either neighbor wants a more costly fence, then he will have to build it and pay for it (Missouri statute 272.210.1).

### No Right-Hand Rule

The optional county fence statutes make no mention of any right-hand rule. Each neighbor is to build and to maintain "half." Disputes are to be taken to the associate circuit

court, which appoints three fence viewers to report back to the court (Missouri statute 272.240).

### Actual Damages

If your livestock trespass through your portion of the division fence and it was in need of repair, then you may be liable for the actual damages (not double damages) caused to your neighbor's crops or livestock (Missouri statute 272.230).

It is important to note that neighbors are still free to make a fencing agreement that is different from these statutory provisions. Just be sure it is in writing, signed and recorded properly (Missouri statute 272.235). If you do deviate from these statutory provisions it is best to have an attorney draw up a legal document.

More information can be found in MU Guide G810: Missouri Fencing and Boundary Laws. Do not rely upon this series or G810 for legal advice. This information is a general statement of the law. Direct your questions to an attorney to get relevant facts and act on them in your best interest.

*In the next issue of Green Horizons, we will look at liability issues for trespass by livestock through exterior fences and division fences. GH*

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## Carbon Corner (cont. from page 2)

The second pool was open to enrollments from Oct. 31, 2007, through May 1, 2008. They enrolled 33 landowners in eight states; totaling 41,730 acres, with an estimated 206,000 metric tons of carbon credits in the first year. This pool will be verified this winter and submitted to the CCX once verification is complete. Delta expects to have those credits on the market in late spring 2009.

Their third enrollment pool will open this October and close in May 2009, with credits available for sale in early 2010.

***With the successful release of this first managed forest pool by Delta, other aggregators are beginning to open their own managed forest pools. Remember that the income you receive from participating in a managed forest offset project will depend upon:***

- The size of your forest. If your acreage is small, inventory costs will consume a larger portion of your carbon revenue compared to larger landowners.
- The aggregator's fee. Nonprofits such as Delta usually charge less compared to for-profit companies.
- The verifier's fee. This covers the baseline inventory and succeeding annual inventories to verify the actual amount of carbon that your forest sequestered over the previous year.
- The price of carbon when credits in the pool are actually traded on the CCX.



# MFPA Forest Biomass Study Field Day

Tammy Homfeldt, Missouri Forest Products Association

Back in July, the Missouri Forest Products Association (MFPA) in cooperation with the USFS Mark Twain National Forest, Missouri Department of Conservation and MU Extension held a forest biomass field day west of Poplar Bluff. It was the culmination of a study by Auburn University forest engineers that focused on the development and testing of a cost-effective woody biomass harvesting and transporting system for use in Midwest mixed oak-hickory forests. The two-month study was conducted in selected stands on the Poplar Bluff Ranger District of the Mark Twain National Forest.



A hydraulic shear head capable of accumulating several small-diameter trees is mounted to a small track-ho for maneuverability.



First-generation, small-scale skidder for transporting small-diameter trees to the landing.



Once to the landing, the biomass is chipped and blown into 25-ton chip vans for transport.



A typical, thinned forest stand resulting from this study.

The economic efficiency of woody biomass removal is a topic of great interest that has both market and future forest management implications. This project is a collaborative effort involving academia, government and industry that will provide valuable information to help resource managers understand the potential costs and returns from understory biomass harvesting while maintaining sustainable forest management. The final report will be compiled by the end of the year and reported in the winter issue of GH. **GH**

## Forest Gas

H.T. Gisborne

The continued improvement of internal combustion engines using gas obtained from wood or charcoal is the cause of considerable elation on the part of European foresters, who see in this new development at least a partial solution of the problem of high-priced gasoline and a new market for many of the present waste or low-value products of the forest and sawmill. Two articles, both by foresters, have appeared in the Bulletin de la Societe Centrale Forestiere de Belgique, Vol. 33, No. 9 and Vol. 34, No. 9, describing the success of the manufacturers in using both wood and charcoal as the 'carburant' both for stationary and mobile gas engines.

According to these articles, branchwood, shavings, sawdust, and other waste products can be used to obtain this 'forest gas.' Tests with tractors, touring cars, and busses

are reported as successful, although some improvements are recognized as desirable. The material is used either raw or converted to charcoal, and either serves as the sole fuel or is mixed with gasoline. The apparatus as shown by photographs is not exceptionally bulky. A test with a Titan tractor utilized 100 kilograms (220 pounds) of wood for 10 hours operation. One company is installing motors of this type on 50 canal boats.

The foresters extol the possible benefits of this new development in the practice of forestry. Not only will forestry be able to assist the country by furnishing a much needed fuel at a lower price, but the market for branchwood and the waste products of manufacturing plants is expected to be greatly improved.

*H.T. Gisborne wrote this tidbit for the Journal of Forestry... in 1929!! Seems as though some things never change. Now, as Paul Harvey would say, "you know the rrrrest of the story!"* **GH**



## EAB (cont. from front page)

Thousands in Forest Park in St. Louis are ash and approximately 40 percent of the trees on the grounds of the Gateway Arch are ash.

Communities and homeowners like ash trees because they grow well in city environments, don't create much of a mess, are colorful in the fall, are generally symmetrical and provide nice shade.

MaryAnn Fink, executive director of the Missouri Landscape & Nursery Association, said responsible growers and landscapers have been moving away from using ash trees for a long time. "We knew this was coming," Fink said. "An educated and important thing we do for the environment is make sure we're not adding to the problem."

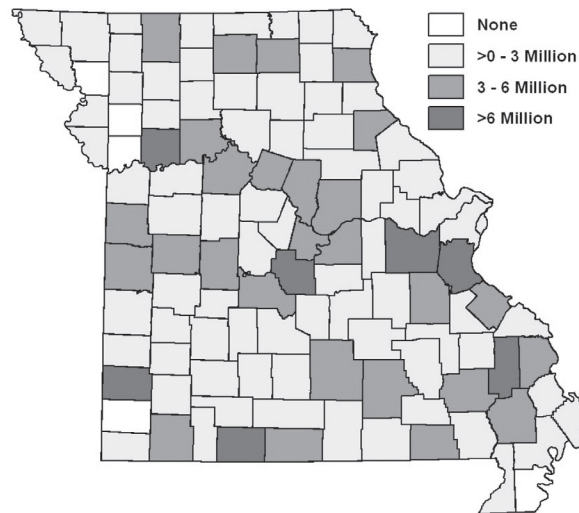
It's going to be traumatic when the ash borer infestations hit urban and suburban areas. Urban foresters are encouraging municipalities to get a survey in place and start to know what they're going to do when it shows up.

When that is, is anybody's guess. To slow the movement, state and federal officials are cutting down ash trees within a two-mile radius of the site where the first ash borers were found. And last month, the state ordered a quarantine of ash wood, ash products and hardwood firewood from Wayne County. Any ash or firewood coming out of the county must be heat-treated to kill the insects.

While only discovered in July, officials now believe the ash borer has been at the Greenville site for much longer. Survey work conducted by state and federal experts indicates the pest has been there at least five years, maybe longer.

Officials believe the ash borer found its way to the recreation area through firewood brought in by campers. A state-wide campaign is being coordinated among the Missouri Departments of Agriculture, Conservation and Natural Re-

### TOTAL NUMBER ASH TREES PER COUNTY



SOURCE: USDA FOREST SERVICE, FOREST INVENTORY AND ANALYSIS DATA, 1999-2004

*A relative risk map showing the number of ash trees growing in Missouri's 114 counties.*

### EAB Information Links

Here are three helpful Web links to learn more about the emerald ash borer and keep abreast of late-breaking news and information.

- \* [www.emeraldashborer.info](http://www.emeraldashborer.info)
- \* [www.eab.missouri.edu](http://www.eab.missouri.edu) (under construction; available Dec. 1)
- \* MU Forestry Extension EAB Webinar (60 min) <http://umoforestry.na3.acrobat.com/p87216095/>

sources, the USFS Mark Twain National Forest, the US Army Corps of Engineers, and MU Extension encouraging anyone who uses firewood for camping or home use to "buy it locally and use it locally."

The good news is that so far, the ash borer has not been found elsewhere in Missouri. Still, homeowners with ash trees should be vigilant.

Signs of infestation include increased woodpecker activity (they feed on the larvae) and a yellow, thinning crown. The insects leave a D-shaped mark when they exit the bark. But because they tend to start at the top, once the exit holes get low enough to be seen, it's probably too late to save the tree.

A new chemical is being tested and shows promise, but it's expensive. Parasites that could kill the beetles are also being bred, but it isn't clear when they'll be available.

Anyone planting new trees should not plant ash. A good general rule when establishing new landscapes is that no one species should occupy more than 10 percent of the plantings. It's just like the stock market – you want to diversify. **GH**

### Wildlife Guide Now Available!

The University of Missouri Center for Agroforestry guide "Integrating Agroforestry Practices for Wildlife Habitat" (referenced in the Winter 2008 GH issue) is now available. Check this guide out online at <http://www.centerforagroforestry.org/pubs/wildlife.pdf> or order it from the Center by downloading an Order Form at <http://www.centerforagroforestry.org/pubs/orderform.pdf>

## Forest From the Trees (cont. from front page)

Growth of the most desirable trees in all our stands was stifled by overcrowding. Foresters usually refer to this dilemma as overstocking. Some of our stands were overstocked with so many trees of the same species that growth was stunted, sort of like an under-fished pond full of too many sunfish. Other stands had many of the really desirable trees for forest wildlife and timber production either crowded or shaded by invasive trees like tree-of-heaven or invasive plants like multiflora rose. Several of our stands, thanks to a long history of grazing, were overstocked with honeylocust, Osage-orange, prickly-ash and other species the cattle would not eat.

Our first action to meet these and other challenges to our productive, healthy and sustainable forest was a blanket program of timber stand improvement (TSI). For us, TSI meant whatever alterations were required to move the composition of the stand toward our objective. The small trees we wanted to eliminate, less than 3-4 inches in diameter, we usually cut down. The larger trees we wanted eliminated were girdled, by cutting a ring all the way around the trunk which penetrated clear through the bark and about a half-inch into the wood.

Because this process can be labor intensive and because we wanted to treat each tree targeted for elimination only once, we applied herbicide to each stump and to each girdled tree trunk. If we were so fortunate as to have a tree targeted for elimination which might have marketable value, and there were several such trees, they were marked for sale and left standing for the time being.

For us, there just was not enough time available to accomplish 240 acres of TSI ourselves. We chose to hire it done by some excellent young foresters willing to operate chainsaws safely and very effectively and capable of instantly and accurately identifying individual tree species. Our consulting foresters were well schooled in forest management and perfectly capable of making decisions which balanced economic and silvicultural considerations in implementing our plan. They very rapidly delivered exactly what we had in mind. The results of their services have exceeded our expectations in many, many ways.

From a purely economic perspective, TSI cost an average of \$75 per acre for our forest inclusive of all costs for labor and herbicide. Some stands took more time, some took less. Our inventory before TSI suggested that our forest was producing wood at about \$40 - \$50 per acre per year.

The growth rate after TSI to reduce overstocking may be as high as \$140 or more per acre per year for some stands. TSI was implemented on our stands with a plan for re-entry every 10 years. So we invested \$75 per acre one time and can expect to recover that investment many times over when the stand is harvested.

It is my sincere belief that anyone owning any acreage of timber and desiring it to be a productive, healthy and sustainable forest should immediately apply prescribed timber stand improvement. The good news is this makes good economic sense in the long run. The great news is there are several sources of cost share dollars available to help landowners implement TSI. From a purely economic perspective, then, there was absolutely no reason at all for us to put off doing TSI. We needed it right away. If we could afford it, I believe anyone could.

Immediate benefits of TSI? Sunlight, water and nutrients formerly taken in by the eliminated trees are now freed up for all those we left standing. They are growing rapidly. They are producing more food and cover for wildlife. It seems to me that we have even more deer and wild turkeys than we had before TSI and they all are in excellent condition. The floor of our forest has many new oak seedlings, something we have been short of for a very long time.

Each of our treatments has left the forest more productive and healthier than it was before. Now that is sustainable! Next time, our first timber sale. **GH**

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## Agroforestry Conference

(cont. from page 5)

Sponsors, in addition to UMCA, include the Association for Temperate Agroforestry (AFTA), a private, nonprofit international organization that aims to catalyze technical innovation and adoption of agroforestry in the temperate zone through networking, information exchange, public education and policy dialogue and development.

The conference will be held at the Stoney Creek Inn, Columbia, Mo. Please see [www.centerforagroforestry.org](http://www.centerforagroforestry.org) for more information. An online registration form will be available starting Nov. 1. For more information, contact Julie Rhoads, Technology Transfer Events Coordinator, University of Missouri Center for Agroforestry, 573-882-3234 or [RhoadsJ@missouri.edu](mailto:RhoadsJ@missouri.edu) **GH**

# The Back Page

## Deadlines for Newsletter Submissions

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/>

## The Bid Box

(All volumes reported in Doyle Scale)

### Shelby County

- 71 acres
- 1,168 hardwood trees (70 percent white oak)
- Estimated volume: 125,000 bd.ft.
- Forester valued the sale at \$24,825
- 6 bids
  - o \$26,000
  - o \$22,625
  - o \$22,284
  - o \$17,627
  - o \$17,561
  - o \$14,000
- **Return: \$366 per acre**

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

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## UNIVERSITY OF MISSOURI Extension

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## Calendar of Events

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**Nov. 6-8, 2008: 16th National Small Farm Trade Show and Conference, Boone County Fairgrounds, Columbia, Mo.** Go to <http://www.smallfarmtoday.com/tradeshows/default.asp> for more information.

**Nov. 7, 2008: Agroforestry Workshop, Hardin, Ill.** Presented by the University of Missouri Center for Agroforestry. Registration is free but must be made by Oct. 31. Go to <http://www.centerforagroforestry.org/events/workshop.asp> for details.

**Dec. 2, 2008: An Agroforestry Workshop: Reducing energy use and helping control odor, Neosho, Mo.** Presented by the University of Missouri Center for Agroforestry. Registration is free but must be made by Nov. 28. Go to <http://www.centerforagroforestry.org/events/wind.asp> or call 573-884-7991 for details.

**Dec. 5, 2008: Bioenergy Conference, Truman State University, Kirksville, Mo.** View the full conference program and download registration application at <http://bioenergyconference.truman.edu> – registration deadline is Oct. 25. For more information, contact Michael Seipel at [mseipel@truman.edu](mailto:mseipel@truman.edu) or (660) 785-4316.

**April 3-4, 2009: Missouri Woodland Owners' Conference, Stoney Creek Inn, Columbia, Mo.** Early alert. More details to come.

**May 31-June 3, 2009: 11th North American Agroforestry Conference.** See page 5 for details.

**July 19-22, 2009: 100th Anniversary Meeting of the Northern Nut Growers Association, Lafayette, Ind.** See [www.nutgrowing.org](http://www.nutgrowing.org) for details.