GREEN HORIZONS

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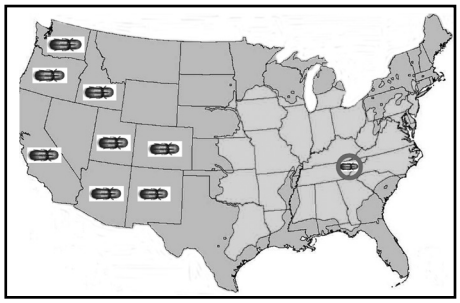
Thousand Cankers Disease Threat Level Increases with Find in Tennessee

Hank Stelzer, MU Forestry Extension

In the last issue of GH we talked about a serious new pest, Thousand Cankers Disease (TCD), threatening eastern black walnut planted as ornamental trees in the western United States. And we hoped it would stay out West… at least for awhile. Unfortunately, this past August, foresters found both the walnut twig beetle and the fungus responsible for TCD in a Knoxville, Tenn., suburb. Since the initial find, the disease has been found in four counties around the greater Knoxville area.



The lighter shaded portion of the country in this graphic notes walnut's native range.

Here's the kicker. Based on the time it takes from the initial attack to when the tree shows any visible symptoms, our tiny little "friend" probably made its way east some eight to 10 years ago!

Of all the eastern states comprising black walnut's natural range, Missouri has the largest number of walnut trees growing in forest conditions; more than 55 million trees. That is double the number found growing the next two closest states of Kentucky and Ohio. According to Missouri Department of Conservation estimates, the disease could cost the state more than $850 million over a 20-year period due to losses in the wood products industry and nut production as well as costs associated with the removal and replacement of urban trees.

The Missouri Department of Agriculture (as well as departments of agriculture in Indiana, Kansas, Michigan, Nebraska, North Carolina and Oklahoma) has enacted a statewide quarantine that bans the import of **(cont. pg. 10)**

Conversion of Older Orchards by Grafting to Improved Cultivars

Michelle Hall, The Center for Agroforestry, University of Missouri

Andy Thomas, research assistant professor, MU Southwest Center, and collaborator with The Center for Agroforestry, is working to determine the feasibility, practicality and profitability of converting a mature ungrafted seedling-derived black walnut orchard to a grafted, productive orchard of improved nut-producing cultivars.

Thomas said researchers believe this technique, often called "top-working," may "rescue" non-productive seedling-based orchards and convert them into productive orchards. Wild black walnuts, on average, have 7 to 10 percent kernel; improved cultivars typically yield about 25 to 30 percent and consistently bear much heavier crops loads. **(cont. pg. 9)**

In this issue:

Hardwood Management and Wildlife: They Can be Compatible

Hank Stelzer, MU Forestry Extension

A stump covered with nutshells is evidence that a forest is more than growing trees. And while many landowners concentrate wildlife habitat management on open areas or fields, here are a couple of simple practices that create habitat for both game and non-game wildlife in hardwood stands.

Mast Production

Hard mast refers to nuts of hickory, pecan, walnut and oak. This food source is readily eaten by several wildlife species like deer, turkey, squirrels and black bear. But, in some cases, the trees may not produce nuts on a consistent basis. You can improve this by focusing some timber management on identifying those tree species that have the capability to produce large mast crops.

For the oaks, scout your woods for a couple of years because acorns are an erratic crop. Oaks tend to be cyclic; having good and poor production years, and bad years due to late frosts that kill the flowers. Populations of squirrels and acorn-eating insects vary from year to year, thereby obscuring acorn production.

At the same time, evaluate the trees for their potential as a future timber tree. Oftentimes you will find both qualities in the same tree because good mast-producing trees are found in the main canopy of the forest and have fairly well-developed crowns. The same large crown capable of producing nuts is also capable of producing more wood compared to a smaller-crowned tree.

Releasing hard mast-producing trees will not only produce more nuts and acorns, but also more wood.

During this evaluation phase, it is always good to have a mixture of both red and white oak species. Wildlife prefer the sweeter tasting white oak acorns over red oak acorns, but red oak produce acorns on a more consistent basis.

Let's not forget the other hard mast-producing species. If they reside in your woodland, leave some hickory, pecan and walnut to provide variety. After you have identified these good trees, make sure they have plenty of room to grow. One of the best methods of giving them room to grow is by using a crown touching release, or removal of all the trees, on all sides, that are touching the crown or competing with the crown of the mast-producing tree.

Soft mast refers to the fleshy fruits and berries of species like black cherry, dogwood, serviceberry, hackberry, persimmon and black gum. Most times, these species are isolated occurrences in the forest. Unless they are competing with the better hard mast trees you previously identified, they can be left to add even more variety.

Poison-ivy, Virginia creeper and wild grape can also be valuable soft mast producers if they are not interfering with your prime timber trees. Relegate these species to edges where the forest meets the field and amongst trees with no timber value. This is because these vines seek maximum sunlight and will climb up in the tree canopy, severely reduce tree growth, deform the tree's crown, and, in most cases, eventually kill the tree.

Wildlife Openings

Openings created through timber harvesting will provide dense shrub and small tree habitat for 10 to 15 years before the dominant species close up the overhead canopy and most of the shrubs and small trees are gone. During the initial phase of regeneration there will be a significant amount of browse for deer. If they exist in your area, ruffed grouse and American woodcock will use this habitat for brood rearing and feeding. Non-game species, like indigo buntings, will find this a favorite hangout.

For wildlife management, these openings should be small: one-quarter to one or one and one-half acres. All merchantable trees should be harvested. Valuable species should be allowed to resprout and regenerate high-quality stems; do not apply any herbicide to the cut stump. **(cont. pg. 10)**

Improved Water Quality in Pastures Through the Use of Agroforestry and Grass Buffers

Ranjith Udawatta and Michelle Hall, The Center for Agroforestry, University of Missouri

Three decades after the implementation of the Clean Water Act of the 1970s, nonpoint source pollution – pollutants such as sediments, nutrients or pesticides that originate upslope of a stream, lake or pond – is a major challenge for protecting and restoring water quality.

The U.S. Environmental Protection Agency noted the most common pollutants to rivers and streams from livestock grazing include pathogens, siltation, organic enrichment and nutrients. Poor grazing management practices not only increase contamination of surface and ground waters but also reduce farm income. Control of nonpoint source pollution from grazing is important to improve water quality.

Previous studies suggest nutrient loss can be reduced and production can be improved through proper management of grazing animals and pastures. Adoption of alternative practices that improve soil and water quality and farm income are essential for the sustainability of small family livestock operations. Agroforestry practices have been recognized as a measure to address many issues related to water quality. However, studies examining buffer effects on the quality of water from grazed pastures are limited.

Ranjith Udawatta, Harold E. Garrett and Robert Kallenbach, three researchers with The Center for Agroforestry at the University of Missouri, set out to study just that, beginning in 2001. Six treatment areas, two with agroforestry buffers, two with grass buffers, and two control treatments, were used to test the hypothesis that agroforestry and grass buffers can be used to effectively reduce nonpoint source pollution from pastured watersheds. Vegetation in grass buffer and pasture areas include red clover and lespedeza planted into fescue in agroforestry buffers. Composite water samples were analyzed for sediment and total nitrogen after each runoff event to compare treatment differences.

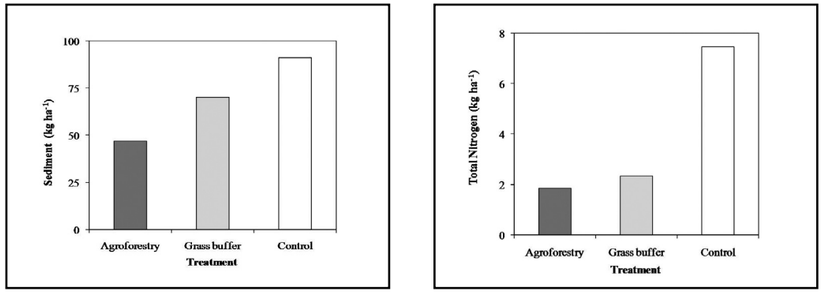
The annual discharge of water per area differed greatly among treatments and years. On average, buffer treatments produced only 30 percent and 59 percent of the runoff of the control treatment in 2004 and 2008, respectively. In years with a very small number of runoff events, the difference between the buffer and control treatments was small and differences were not significant. The control treatment produced significantly more runoff during 2004 than during any other study year, a year with 115 percent precipitation of the long-term mean.

Soil loss was significantly affected by treatments. The grazed treatment with agroforestry buffers lost only 51 percent of the sediment compared to the control treatment. The unbuffered control treatment lost 36 percent more soil than the average for the agroforestry and grass buffer treatments. Results of this study demonstrate that buffers with trees may be more effective than grass alone, probably due to improved soil properties and greater resistance to surface flow.

Total nitrogen loss was significantly affected by treatments. The control treatment lost 4 and 3.2 times more total nitrogen than the agroforestry and grass buffer treatments, respectively.

In summary, grazed watersheds with agroforestry and grass buffers had significantly lower runoff volumes, sediment and total nitrogen losses than the control.

(cont. pg. 5)



Sediment and total nitrogen losses on agroforestry buffer, grass buffer and control treatments of grazed pasture study at the Horticulture and Agroforestry Research Center, New Franklin, Mo.

Reducing Your Risk

Hank Stelzer, MU Forestry Extension

This is a new series in Green Horizons aimed at reducing common risks faced by woodland owners as they manage their property. One of the first risks that comes to mind are legal risks and Keith Argow, President of the National Woodland Owners Association, has some very sound advice.

Most woodland owners believe that any liabilities arising from a lawsuit by someone injured while on their property are covered by their homeowner's insurance policy. It's a nice thought, but the truth is a lot of homeowner's insurance does not cover your woodlands at all.

Landowners have long recognized the need for insurance to protect their home and property. And farm insurance generally covered more common risks to woodlands and fields. But, as people have moved off farms and the farms have reverted to woodlands, both the insurance coverage and risks have gradually changed.

A recent survey of members of the National Woodland Owners Association revealed that most were unsure of the extent of their insurance and whether their woodlands were fully covered. If you are not sure, you need to contact your insurance agent… today! You may discover that instead of a "yes" or "no," the answer might be "it depends." That should be a red flag.

All states have insurance laws, but they vary by state. Plus, details of insurance policies vary by company. About 25 years ago, at the urging of state fish and wildlife agencies, legislatures enacted laws intended to limit the liability of landowners who allow free public hunting, fishing and recreation on their private land. Missouri enacted such a law back in 1983. But, that protection does not apply if you charge a fee.

Common Misconceptions about Landowner Liability

- My homeowner's policy covers my woodlands. *Maybe, maybe not.*
- A personal catastrophe policy will cover my woodlands. *Verify that.*
- I have my woodland in a limited liability corporation (LLC). *An LLC is still liable for any award up to the value of the land, timber and assets involved.*
- Liability lawsuits are rare in my experience. *Don't be the first to get one!*
- If I own land in other states, I am still covered. *Probably not.*

How do I Protect My Woodlands from 'Known Hazards'?

- Cover, cable or chain gates with white PVC pipe. Flagging tape may not be enough. ATV riders using your land with or without your permission are a real liability.
- Post warnings above steep walls or cliffs.
- Remove hazard, leaning or large trees with dead limbs.
- Cover old wells.
- Warn of deep water in ponds, especially if man-made.
- Level unstable log piles.
- Post or drain streamside areas. Be careful not to violate wetland protection laws in the process.
- Cut and remove exposed roots. Roots have been alleged to have been hazards known to the landowner.

The enactment of landowner liability limitation laws persuaded many landowners to open their lands, some with the belief that they are "exempt" from liability. The truth is their liability may be limited, but they are never exempt.

The landowner liability laws in every state do not apply if a case for "willful neglect" can be made. Experienced liability attorneys allege "willful neglect" on the part of the landowner to successfully skirt the liability limitation laws. If they are successful in persuading the jury, or a judge, that you knew in advance of a danger on your land and did nothing, you can be held accountable for the injuries, lost work, human stress or even death of the plaintiff.

Since vacant land and hunter liability insurance came on the market 20 years ago, many people have purchased it. The policies generally do not cover buildings.

So, you are now aware and have purchased the necessary insurance. Should you be served with a summons to court, your first call is to your insurance carrier. You do not have to find an attorney on your own and worry if he or she is experienced in liability litigation. **(cont. pg. 5)**

Reducing Your Risk (cont. from page 4)

Remember, the plaintiff's attorney is likely very experienced and may be taking the case without charge in return for a share of the award.

But, what if you are now aware and do not call your insurance carrier to find out where you stand? Do you really want to roll the dice? GH

Where to Start... *There are several insurance groups that offer liability coverage to forest and woodland owners. Here are two agencies that advertise regularly within the forestry community. These are only suggestions to get you started and their appearance in Green Horizons in no way should be construed as an endorsement of their products.*

National Woodland Owners Association, www.woodland-owners.org, 800-476-8733

Davis-Garvin Agency, Inc., www.davisgarvin.com, 800-845-3163

Missouri Trespassing Laws

Hank Stelzer, MU Forestry Extension

Two trespassing laws have been on the books for a number of years; the third one is relatively new.

Trespass in the 1st degree is often referred to as "the purple paint law." It basically says that if your property is adequately posted with signs or purple paint, then anyone entering your property without your consent is trespassing. Trespass in the 1st degree is a Class B Misdemeanor violation.

Trespass in the 2nd degree is more general. You are in violation if you enter unlawfully upon real property owned by another. It is classified as an infraction. With these two laws, anyone trespassing for any activity is in violation and subject to penalties, which are usually fines.

The new kid on the block is State Statute 578.520 titled, private land, permission needed to fish, hunt, or trap and penalty violation. It states no person shall fish, hunt or trap upon or retrieve wildlife from any private land that is not owned or in the possession of such person without permission from the owner or lessee of such land. This new statute is a Class B misdemeanor, but unlike Trespass in the 1st degree, the land does not have to be posted. Further, violators will not only be subject to the penalty of a Class B misdemeanor, but they may also may lose any license issued by the Missouri Department of Conservation to fish, hunt or trap for at least one year from the date of conviction. GH

Improved Water Quality (cont. from page 3)

It is anticipated as trees grow and roots occupy more soil volume, the reduction of nitrogen in runoff will continue to increase on the agroforestry watershed. This study suggests that greater emphasis should be placed on management strategies that minimize runoff and nonpoint source pollution losses. Upland buffers, as a protective measure, can clearly help reduce soil erosion and nutrient losses from pastured land and thereby protect water quality. GH

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Complete results of this study can be found in the journal Agroforestry Systems: DOI: 10.1007/s10457-010-9288-9

Preserving the Family Forest: Dealing with Uninterested Heirs

David Watson, Certified Financial Planner

There are problems common to most Missouri forests – invasive species, pests, poor past timber management practices, low timber prices, etc. Likewise, in the world of forestland succession planning, there are also common problems. One that affects most forestland families is how to treat heirs who are not interested in the use and management of the property. In this day and age, it is typical that families have children (or other heirs) that pursue different and varied paths in life. It is not uncommon to have some children that love and cherish the property, and some that are rather indifferent. These children in the later group:

- *May not place as much value on the property as you do;*
- *May not enjoy recreating on the property (hiking, camping, hunting, fishing, working, etc.);*
- *May not have the skill or knowledge to maintain or manage the timberland;*
- *May have financial needs/obstacles that make it difficult for them to own an asset that produces little or no income (or worse, costs money from time to time);*
- *May live far away from the family forestland and cannot participate for reasons of distance.*

In situations such as these, it can be tempting to look past these facts, and try to include all heirs equally in the future of the forestland. This could be a big mistake! Forestland is not an asset that lends itself easily to multiple divisions. For instance, a 300-acre farm split into four separate parcels, to be owned separately by each of four children, could create real challenges to managing the resources properly. It also is difficult to divide equally amongst the family – Who gets the barn? The pond? The tillable fields? The road frontage? etc. In the future, if one of those children sells to a developer, it could fundamentally change the integrity of the entire property forever. Alternatively, simply placing the ownership of the entire piece of real estate into the names of multiple children may create legal issues, management disagreements, and family disputes. It can be very, very difficult for adult children (and their spouses) to function as business partners over an extended period of time. When disputes arise in multi-owner situations, it is possible for a dissident sibling/heir to force a sale/redemption of their interest through the courts. Forced redemptions of even a piece of the timberland could ultimately force the liquidation of the entire property as the heirs struggle to raise the required cash. Obviously, these outcomes thwart the original intent of mom and dad – to preserve the family forest!

A better solution may be to consider concentrating the timberland/farm assets among those children who are truly interested, and have the ability to be good long term stewards. From a management perspective, this may be a much better situation – the entire property can be managed with a single philosophy, can be done on a larger scale (read lower per-acre costs), and with less debate and decision making time. The obvious question is how to treat the other heirs fairly? Here are a couple of common planning techniques used by succession planners:

Asset Matching. Concentrate other family assets into the hands of the "other" heirs. For example, the family home, investment assets, family business (although similar planning concerns are present here as well), life insurance proceeds, etc. This allows the family to match certain types of assets with the most appropriate heirs.

Estate Equalization. Purchase life insurance on one or both parents to provide additional liquid cash at death, to equalize the estate. Often, the value of the timberland passing to one child dwarfs the value of the other assets to be passed to the other heirs. A life insurance policy may provide the additional liquidity to "equalize" the estate. "Second-To-Die" policies, which pay at the second death of two spouses, may be relatively inexpensive and work well in these situations.

Use of a Trust. In some family situations, the intent is to allow all of the heirs to enjoy the property, but also to provide for sound management in the hands of the child who understands timberland issues. In this type of situation, the use of a trust could be considered. Trusts separate the legal ownership of the property (trustee), from the beneficial ownership of the property (beneficiaries). By naming the child with timberland management abilities as the trustee, and naming the other heirs as beneficiaries, the family can better align responsibilities and rights among the heirs. However, this is not without its own challenges. Intra-family disputes can still happen! Beneficiaries who do not see "eye-to-eye" with the trustee can, and will, complain, and can still bring legal actions against the trustee. And, the trustee does then have a legal responsibility to manage the property for the beneficiaries, which can create friction **(cont. pg. 7)**

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 6)

over time ("I do all the work and they just enjoy the property"). In short, trusts may be an effective tool in the right situations.

While there are common problems among forestland families, each family situation is unique. The current owners, along with their succession planning team (attorney, financial advisor, accountant, consulting forester), should consider the specific family circumstances, the owner's goals, and then weigh the various planning techniques that are commonly used in these types of family situations. By investing the time, and analyzing how different strategies may benefit the family, the forestland stands the best chance of being kept intact for future generations. **GH**

David Watson is a financial advisor specializing in working with rural landowners, sportsmen and conservation-minded families. D.A. Watson & Company, 17263 Wild Horse Creek Rd., Suite 202, Chesterfield, MO 63005, 636.230.3900, 888.230.3999

Oops!... We Goofed!

Hank Stelzer, MU Forestry Extension

Folk say that catching my mistakes is akin to shooting fish in a barrel, and last month some of my astute professional foresters had a field day. The barrel was "The Toolbox" and the fish were my recommended methods of applying our commonly used herbicides. So, to set the record straight, the correct recommendations are below. Under the column "Common Use," I have listed the methods in order of use.

The herbicides, Pathway and Tordon RTU, are not effective when applied using the hack-n-squirt method. While vertical movement is good (left), there is no lateral movement (right image showing healthy, living tissue on either side of the hack). This leaves enough living tissue to allow the tree to live.

My most glaring error was recommending to apply picloram with the hack-n-squirt method. The images here, that I took in a study conducted by the Kansas Forest Service, clearly show that applying Pathway or Tordon RTU in this manner does not work. There is no lateral movement of the herbicide and that leaves intact, actively-conducting tissue between the hacks. Here are a couple of other quick reminders when using herbicides:

- The girdle method is best suited for trees larger than 6 inches DBH. Remember to make sure your chainsaw cut completely encircles the trunk and joins where you started. Apply one squirt (1 ml) of the herbicide, using a garden spray bottle, for every 2 inches DBH into the cut.

- In the cut-stump treatment, remember one only needs to apply the chemical to the outer ring of wood including the cambium and inner bark.

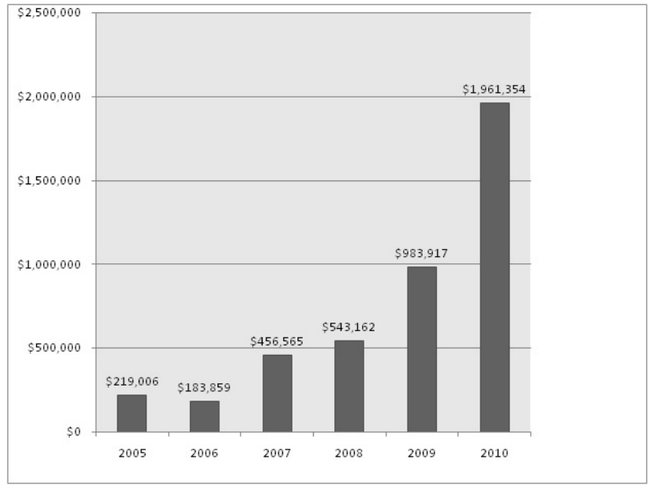
- Foliar applications are best reserved for when one desires mass kills on large swaths of small-stature invasive plants, such as sericea lespedeza, bush honeysuckle or autumn-olive.

- For more information on removing unwanted trees from your woodland, please refer to past issues of Green Horizons (Vol. 10, Nos. 1 and 2), or contact me here at MU. GH

Active Ingredient	Brand Names	Common Use
triclopyr	Garlon 3A Garlon 4	cut-stump, girdle, hack-n-squirt, foliar basal bark, cut-stump
glyphosate	Accord, Roundup	cut-stump, girdle, foliar
picloram	Tordon RTU, Pathway	girdle, cut-stump
imazapyr	Arsenal AC, Chopper	hack-n-squirt, cut-stump
hexazinone	Velpar	soil application

Dramatic Increase in 2010 MO EQIP

Not only did the amount of EQIP (Environmental Quality Incentives Program) dollars available to Missouri forest landowners almost double compared to the previous year, but 100 percent of the applications were funded! The increase has been due to (1) forestry receiving a national focus at the Federal level and (2) the concerted effort of the forestry community here in the Show-Me State. Because of this, competition for funding in FY2011 will depend on how many landowners apply. If you are interested in financial assistance for forest management practices, now is the time to sign up for EQIP. The next ranking period is just around the corner, with an anticipated November sign-up. Visit your local NRCS office for the latest information and to fill out an application. GH



Missouri EQIP Forestry Allocations 2005 - 2010

Conversion of Older Orchards (cont. from front page)

Grafting onto large, established rootstocks is probably not as costly as starting from scratch with new trees, but still requires a dedicated investment of both money and time, Thomas said. Once grafted, the trees will require diligent care, maintenance, pruning and training until healed (about five years post-grafting). Once healed and well-established, the yearly costs and maintenance should decline as the trees enter nut production.

This technique of black walnut orchard conversion is still experimental and is not yet recommended to producers, Thomas said.

"Probably the chief drawback to top-working is the long-term exposure and slow healing of the graft union, and potential weakness of the tree even after it is healed," he said.

Part of the study includes painting a fungicide onto the exposed rootstock stump to prevent fungus from beginning to decompose the stump until it is healed and sealed over. After just one season, this technique has shown "slightly positive" results.

The study was initiated in May 2009 using a 20-year-old orchard on an excellent site at Hammons' Sho-Neff plantation in southwest Missouri. Fifty-six trees were grafted at various heights, with an equal number of control (ungrafted) trees maintained. Because the grafts are placed onto large, mature root systems, researchers expected a very high percentage of grafting success, followed by very rapid scion growth. Indeed, initial grafting success in 2009 was 97 percent, followed by an average scion growth of 53 inches in just the first year.

Stay tuned for more data and results, as this long-term project will be followed for many years. GH

Thousand Cankers Threat Level Increases (cont. from front page)

"all plants and plant parts of the genus Juglans including but not limited to nursery stock, budwood, scionwood, green lumber, and other material living, dead, cut, or fallen, including logs, stumps, roots, branches, and composted and uncomposted chips" from the western states of Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Washington, Utah, and any other areas of the United States as determined by the state entomologist to have Thousand Cankers Disease of Walnut. This last clause catches Tennessee, as well as any states where TCD might be found in the future.

This quarantine also prohibits moving any hardwood firewood from these states into Missouri. Sound familiar? It should. Similar restrictions apply to transporting hardwood firewood from states infested with another pest, the emerald ash borer (EAB).

Specific exceptions to the state quarantine are nuts, nut meats, hulls, processed lumber (that is 100 percent bark-free, kiln-dried with squared edges), and finished wood products without bark, including walnut furniture, instruments, and gun stocks.

Finding TCD this late in the growing season is a mixed blessing. Since the obvious symptoms of wilting, yellowing or collapsed brown leaves still attached to the branches are best observed in June and July, we have some time to put together a good monitoring program and educate natural resource professionals and the general public. However, it gives the disease more time, too.

Remember, TCD has not been detected in Missouri yet, but we do need to be aware of this serious threat to our most valuable hardwood species. More information on the disease is available from the Missouri Department of Agriculture at http://mda.mo.gov/plants/pests/thousandcankers.php **GH**

Hardwood Management and Wildlife (cont. from page 2)

Herbicides should be used to kill out all remaining trees of unwanted species down to two inches in diameter.

The size of your woodland and what the surrounding land is used for can have potentially devastating results for non-target wildlife and exotic pests.

If you are creating openings in a forest covering hundreds of acres, the openings have little effect on area-sensitive wildlife species, like some songbirds. However, if your woodland is small and surrounded by agriculture, blue jays, rat snakes, raccoons, and other nest predators can easily find songbird nests. Also, brown-headed cowbirds can easily locate the nest of other songbirds and lay their eggs in the nest. Their young grow faster, get more food, and out-compete the other songbirds, resulting in a net decrease in the desirable songbirds. Openings in forests in highly fragmented environments (woodland 'islands' in a 'sea' of agriculture and urban development) are very susceptible to invasion by alien or exotic plants. Invasive and undesirable tree species like autumn-olive and woody shrubs like bush honeysuckle lose no time in establishing themselves in these openings. **GH**

Group openings, whether created by Mother Nature or man, provide food and cover for many wildlife species.

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/*

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.

The Bid Box

(All volumes reported in Doyle Scale)

Timber markets have become somewhat soft again suggesting that the sustained recovery everyone was hoping for was, in fact, a simple short-term supply-demand response. At any rate, one fact remains… in strong or soft markets it always pays to seek competitive bids for your timber!

Ray County

- 20 acres
- 39 walnut trees
- Estimated volume: 5,347 bd. ft.
- Forester valued the sale at $7,756

Two bids

- o $10,193.70 (accepted)
- o $8,186

- ***Return: $510 per acre***

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

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Calendar of Events

Oct. 30, 2010: Great River Road Chestnut Roast, Elsberry, Mo. Details at www.forrestkeeling.com

July 24-27, 2011: Walnut Council Annual Meeting and Walnut Research Symposium, Madison, Wis. Save the date.