

# green horizons

Growing tomorrow's future today.

May 2014

A newsletter from the Center for Agroforestry in conjunction with the Forest and Woodland Association of Missouri

Volume 18 • Number 2  
Mike Gold, Mark Coggeshall and Savannah Kannberg, editors

## FOREST MANAGEMENT

# Prescribed burning at Thorny Mountain



Periodic burning at Thorny Mountain, in Shannon County, Missouri, helps restore and maintain the glade habitat and woodland characteristics of the mountain. Burns remove leaf litter and open up the canopy, so more sunlight can reach the forest floor. As a result, the understory has a diversity of grasses and forbs that are beneficial for wildlife.

The photos from the prescribed burning at Thorny Mountain show staff from the National Park Service and the Missouri Department of Conservation assisting the Nature Conservancy's seasonal burn crew. All prescribed fire photos are from Rebecca Landewe at the Nature Conservancy.



The Eastern Collared (*Crotaphytus collaris*) lizard, shown above left, benefits greatly from prescribed fire. More about them can be found at <http://news.wustl.edu/news/Pages/22557.aspx>. Left photo by Alan R. Templeton/WUSTL.

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## FOREST INDUSTRY

# Forestry production, marketing assistance available to producers and processors

By CHRISTINE TEW

Missouri landowners looking to manage their forested areas have many options, from guidance on caring for their resource to adding value to their standing and cut timber. Producers benefit from a broad base of experts in tree health, as well as an outstanding network of processors, retailers, marketers and exporters across private industry, state agencies and educational institutions.

Collaboration plays a key role in bringing those resources together. The Missouri departments of Agriculture and Conservation, the University of Missouri Cooperative Extension Service, the Missouri Forest Products, and Missouri Consulting Foresters associations all work together.

Available resources for landowners include technical assistance as well as networking and marketing support. Processors may also benefit from networking assistance in addition to domestic and international sales support. Landowners can receive targeted guidance for Timber

Stand Improvement and timber harvest and sales from the Missouri Department of Conservation and members of the Missouri Consulting Foresters Association, as well as from the University of Missouri Cooperative Extension Service.

For processors, the Missouri Dept. of Agriculture works with the Foreign Agriculture Service, Missouri Forest Products Association and buyers around the world to identify and grow markets for Missouri wood products. Staff from the Department of Agriculture also work to connect producers and processors with domestic and international marketing opportunities, assist with completing required applications and other documentation, as well as to serve as a liaison with staff from the Missouri Department of Economic Development on forestry products.

For assistance and to learn more about these and other opportunities, please contact the organizations and agencies mentioned.

## FOREST MANAGEMENT/URBAN FORESTRY

# MDC offers TRIM grants

Deadline for Tree Resource Improvement and Maintenance (TRIM) cost-share grant applications is June 1.

The Missouri Department of Conservation (MDC) is offering grants to assist government agencies, public schools and non-profit groups with the management, improvement and conservation of trees and forests on public land.

These grants, called the Tree Resource Improvement and Maintenance (TRIM) cost-share grants, are from \$1,000 to \$25,000, and can help communities fund tree inventories, removal or pruning of hazardous trees, tree planting and the training of volunteers and city and county employees on how to

best care for community forests. Through a grant from the U.S. Forest Service, it is possible to gain additional funding for emerald ash borer management. The deadline for TRIM grant applications is June 1.

TRIM grants are administered by MDC in cooperation with the Missouri Community Forest Council and the U.S. Forest Service. The program provides reimbursements between \$1,000 and \$25,000 to grant recipients to fund up to 60 percent of money needed for projects. Projects that are located in communities with

The Arbor Day Foundation's Tree City USA designation are eligible for an additional 10 percent in matching funds.

Grant proposals are assessed on a competitive basis for their value to the community, thoroughness as a tree-management program, the ability to promote, improve and develop a community's urban forest, and economic feasibility.

More information on TRIM grants, including the application for the grant and workbooks, can be found at [mdc.mo.gov/node/11123](http://mdc.mo.gov/node/11123).



## FOREST & WOODLAND ASSN. OF MISSOURI

# Tree Farm conference: Update for 2014

By BRIAN SCHWEISS

The 34th annual Tree Farm conference was held April 18 - 19, 2014 on Bill and Margie Haag's property in southern Callaway County, Mo. The Haags' efforts toward forest and wildlife habitat management have earned them the right to be named Missouri Tree Farmer of the Year in 2013.

The conference was a two day event with registration and a program on Friday afternoon, concluding with field tours and lunch on Saturday. Friday afternoon began with a seminar on Missouri woods. Lynn Barnickol led the program and provided samples of the many kinds of wood and impressed the audience with words like "parenchyma" (cells in trees that function primarily in the storage and conduction of food).

Saturday featured multiple field tour destinations before and after lunch, a silent auction and an awards ceremony to honor our conference hosts. Participants viewed managed and unmanaged forests and saw the benefits of good management. They looked at young regeneration cuts or clearcuts and learned why young "brushy" growth is good for wildlife. After lunch they learned about chainsaw safety and tree felling, and tips for a successful timber sale.

Bill and Margie were recognized over lunch with the Tree Farmer of the Year Award. The Haags have been passionate about wildlife management and healthy forests ever since they first acquired land in 1996. A strong interest in upland wildlife is a motivating force for them. Their 900 acres

has been ambitiously managed for forest health, wildlife habitat, water quality and recreation. In addition to deer and turkey, Bill is improving conditions for ruffed grouse through forest management efforts and timber sales. The young brushy growth developing from the TSI and regeneration style harvest is an ideal habitat for the grouse as well as a wide range of other species.

Bill has promoted this style of management to neighboring landowners since 2003, through a workshop he co-hosts with the Ruffed Grouse Chapter of the Quail and Upland Wildlife Society, and the Missouri Department of Conservation. During the workshop, interested landowners and tree farmers tour the property and see the benefits of active forest management.

Tree Farm is an excellent program to engage and promote action. For landowners that are hungry for more information and want to take their management plans to the next level, Tree Farm provides a network of professionals and topics relevant to their interests. Through Tree Farm, Bill and Margie have tapped into a network of resources to develop their vision for their land. As a result, they are now a leading example for Missouri Tree Farmers. There is no better testimony for Tree Farm and sustainable forest management than Bill and Margie's story.

For more information on Missouri Tree Farm, go to the Forest and Woodland Association of Missouri website at [www.forestandwoodland.org](http://www.forestandwoodland.org).

## HIGHLIGHTS



PHOTOS BY HANK STELZER

Tom Westhoff (in red) describes how Bill Haag uses small-acreage clearcuts to develop patches of early successional forests across his farm's landscape to bring back ruffed grouse. Not only did Bill create good wildlife habitat, but he generated approximately \$800 per acre from the sale of merchantable timber, and he regenerated his forest for future generations.



2013 Tree Farmers of the Year; Bill and Margie Haag, along with their son Bill, Jr.



Our 2013 Tree Farmers of the Year; Bill and Margie Haag, along with their son Bill, Jr. Presenting the Haags with their award are: MDC State Forester, Lisa Allen (far left); MDC Resource Forester, Angela Belden (left) and private consulting forester, Josh Stevens (far right).

# Keep an eye on your trees; know your pests

By CHRISTINE TEW

As warmer weather approaches and more people are outdoors enjoying Missouri's resources, it is key that individuals help keep an eye on our state's trees and for the invasive pests that threaten them.

The Mo. departments of Agriculture, Conservation and Natural Resources, in conjunction with the USDA Animal and Plant Health Inspection Service and University of Missouri Cooperative Extension Service, are working to protect the state's forests from invasive pests, including the Emerald Ash Borer, Thousand Cankers Disease, Gypsy Moth and Asian Longhorned Beetle.

The Emerald Ash Borer has been found in two areas of the state, in southeastern Missouri and near Kansas City. The insect is readily identified by its shiny, emerald green color and the D-shaped holes it leaves in the bark of Ash trees. Affected trees can also be identified by the distinct S-shaped paths the borers leave in the tree's trunk, beneath the bark.

The Walnut Twig Beetle and Thousand Cankers Disease have not yet been identified in Missouri, although the pest has been found in states to both the east and west. The beetle is dark brown and about the size of the "i" in the word Liberty on a dime. The beetle carries a fungus that causes cankers in the tree, eventually killing even healthy walnut trees.

The European Gypsy Moth attacks oak trees and many other host plants, feeding on the crown of trees and damaging foliage. The moth has been detected in Missouri during annual surveys as far back as 1974, but has not yet become established. These annual early detection surveys will help us to quickly and successfully respond to an outbreak before it can get a foothold in the state's valuable oak forests. Gypsy Moth caterpillars are hairy and dark

grey with red and blue dot pairs running down its back. Adult male moths are brown and have brown waves on their wings. Adult female moths have similar markings, but are typically white.

The black and white mottled Asian Longhorned Beetle primarily attacks maple trees, but can also affect elms, birches, willows, poplars and green ash. The larvae damage trees by tunneling and girdling, and over time attacks can kill even healthy trees. This beetle has previously been identified in major cities – including Chicago and New York – but not in Missouri.

The easiest way to protect Missouri's forests from these and other pests is by preventing their spread into and across the state by leaving firewood at home while traveling. Purchase or gather firewood where it is needed, near where it will be burned.

For more tips and information, and to report a sighting of one of these pests, visit [eab.missouri.edu](http://eab.missouri.edu), [mda.mo.gov](http://mda.mo.gov) and [mdc.mo.gov/node/14790](http://mdc.mo.gov/node/14790).



PHOTO COURTESY OF ISU EXTENSION AND OUTREACH

The Emerald Ash Borer has been found in two parts of Missouri: the southeastern area and near Kansas City.

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## Got pests? Newly launched Tree Pests website can help

Whether it's a tree in your yard or your 40-acre woodland, the Missouri Invasive Forest Pest Council has launched Tree Pests, a new website containing the latest information on a wide array of invasive tree pests that are threatening Missouri's trees. The site will have specific information on emerald ash borer and thousand cankers disease of black walnut to name a few. You will learn how to identify the invasive pest, where it has been found in Missouri, up-to-date plant quarantine information from the Missouri Department of Agriculture, control measures, and how to report a suspect tree to the proper authorities. You can find Tree Pests at <http://treepests.missouri.edu>. So, check it out today and help us slow the spread of these harmful invasive pests!

## FOREST MANAGEMENT

# Bush Honeysuckle: What it is and how to control it

By HANK STELZER

Bush honeysuckle refers to several species of this invasive plant. The most common in Missouri is the Amur honeysuckle (*Lonicera maackii*). Originally from parts of Asia, it was introduced in the U.S. in the late 1800s for use as an ornamental. In the 1960s and '70s, it was promoted for conservation and wildlife uses, and it expanded through the eastern U.S.

These non-native plants thrive in full sunlight, but can tolerate moderate shade, and are therefore aggressive invaders of a variety of sites including abandoned fields, roadsides and the interiors of open woodlands. It shades out desirable native woodland species, and can form pure, dense thickets totally void of other vegetation. Reproduction and spread is by both sprouting and seeds, which are disseminated primarily by birds.

While honeysuckle fruit is rich in carbohydrates, it lacks the high-fat and nutrient-rich content that most native plants provide migrating birds. Wherever invasive honeysuckle shrubs displace native forest species, there is a huge potential impact on migrating bird populations due to the reduction in availability of native food sources.

**Identification**

Amur honeysuckle leafs out earlier in the spring and retains its leaves later than most native plants. To identify non-native bush honeysuckle, look for shrubs with long arching branches and the following characteristics:

- Leaves—1 to 3.5 inches long without teeth, arranged oppositely along the stem; dark green with a pointed tip.
- Stems—grayish-brown, with short hairs on young stems; older, larger stems have broad ridges and grooves

and appear striped; older stems are hollow (native honeysuckle is solid).

- Flowers—white, fragrant tubular flowers, less than one inch long, along the stem in pairs from early to late spring.
- Fruits—quarter-inch round berries in clusters of 2 to 15; commonly red. Produced mid-summer to early fall.



CHUCK BARGERON / UNIVERSITY OF GA.

Bush honeysuckle is an aggressive invasive plant that can overtake your woodland in a few short years, crowding out native forbs and shrubs that provide nutritious food for a wide variety of wildlife species.

**Control Methods**

Since bush honeysuckle can sprout prolifically from the stump, any control method must remove the stump. Most removals require hand application of herbicides.

**Mechanical Control**

Removing the stump is an option. Any lateral roots left are unlikely to sprout a new plant. Small, knee-high plants can be removed by hand, especially after a rain since they possess shallow root systems. Larger plants can be removed with

devices like weed wrenches and poppers that are designed to remove shrubs. Mechanical control requires a significant amount of labor.

**Chemical Control**

Effective herbicide control methods include foliar sprays for small plants and cut stump applications for larger ones. With foliar spraying, a diluted herbicide goes directly on the leaves of targeted plants. This can be a very effective method, but should only be used when the target plants are within easy reach of the sprayer. In addition, care needs to be taken to ensure that herbicides are sprayed to wet the foliage but not to the point of runoff.

Bush honeysuckle leaves remain green late into fall (early- to mid-November) when most native plants have gone dormant. Foliar applications of some herbicides can be used at this time with little to no impact to non-target species especially after the first hard frost in the fall.

Cut stump treatments are very effective at controlling undesirable woody shrubs and work well on bush honeysuckle. It involves cutting the shrub close to the ground to apply a herbicide to the cut surface.

Utilize an oil-soluble herbicide (not water-soluble) when planning to return later to treat the stumps. Apply it to the entire top and sides of the cut stump without causing excess runoff. Apply as long as the stumps are dry and not frozen, like in the late summer, early fall or dormant seasons. Avoid applications during sap-flow (spring) as this lessens the effectiveness.

Monitor plants for at least one year to determine if complete control is achieved. Any plants that are not completely killed by the first treatment will warrant a follow-up treatment.

## AGROFORESTRY/THE “NUT” WORLD

# Black Walnut Oil wins 2014 Good Food Award

The Black Walnut Oil produced by Hammons Products in Stockton, Mo., won a 2014 National Good Food Award. The Good Food Awards celebrate food that is tasty, authentic and responsibly produced. Awards are given to outstanding American food producers and the farmers who provide their ingredients.

The annual awards ceremony honors Good Food Award recipients who push their industries toward craftsmanship and sustainability while enhancing our agricultural landscape and building strong communities.

In 2014, Good Food Awards were given to winners in ten categories: beer, charcuterie, cheese, chocolate, coffee, confections, pickles, preserves, spirits and the newest category, oil. The Good Food Awards seal assures consumers they have found something exceptionally delicious that also supports sustainability and social good.

The Good Food Awards oil category recognized America’s tastiest fruit, nut and seed oils from pioneering producers who are held to the highest standards of quality and sustainability. Good oil is pressed and bottled without the use of added heat, chemical extractors, artificial additives or GM ingredients.

For a full list of winners, head to: [www.goodfoodawards.org/winners/](http://www.goodfoodawards.org/winners/)



PHOTO FROM GOOD FOOD AWARDS  
The Black Walnut Oil from Hammons Products won a 2014 Good Food Award in the brand new oil category.

## FOREST MANAGEMENT

# MCFA report to the Forestry Committee

By SHELBY JONES

MARCH 22, 2014 — For 2014, MCFA has a total membership of 47 consulting foresters. Of them, 38 are actively involved in providing forestry-related services and eight are listed as retired from active business. In addition, there is one candidate member.

The annual meeting was held February 13 - 14, 2014 in Jefferson City, Mo. The major portion of the meeting was devoted to continuing education presentations over a day and a half. The program attracted 10-12 non-members and was highlighted by remote presentations in Vermont and even Australia.

The Fall MCFA Meeting will be held at the Ozark Underground Laboratory near Pro Tem, Mo. (in Taney County) on October 16, 2014. The theme will be Advancing Environmental Forestry. Program details will be available in August. This is a unique opportunity to tour a research cavern and its watershed. There will also be time to witness the nightly exit of approximately 50,000 bats from the main opening of the cave.



In 2013, MCFA approved a part-time position of Executive Director to organize and administer the regular activities of the association. This action is primarily to relieve the increasing workload of elected officers as the organization experiences growth. At the 2013 Fall Meeting in November, Shelby Jones was named Executive Director, and is now actively involved in those duties.

MCFA is also in the process of developing a series of workshops on various subjects for forest landowners, loggers and timber buyers, and professional foresters. The workshops will be offered in regional locations that are yet to be determined.

A statewide database of contact information and timber purchasing preferences for loggers and timber buyers has been compiled and is available to MCFA members for the improved marketing of timber sales. Out-of-state buyers are also included. This is potentially the most comprehensive list of loggers and timber buyers ever compiled for the state of Missouri. It will be a major benefit for private landowners who sell timber with the assistance of a consulting forester.

## FOREST INDUSTRY

# Timber and sales

By BRIAN SCHWEISS

Ask why someone owns timber and you'll hear: "It came with the land" or "I wanted some woods for hunting." Occasionally, it is to generate income from timber sales.

There may be a number of reasons for these sales, such as to help pay for the property, for needed income or to salvage dying trees. But one of the best reasons comes from Mark Nussbaum, a landowner near Burfordville, Mo. Mark said that "with proper management you can generate a regular stream of income from your woods while improving it for the future." His commitment led him to become the 2009 Tree Farmer of the Year and in 2013, he became the board president of FWAM.

Mark manages 450 acres of woods on his family's 610 acre farm. He strives to have a timber sale every year on at least 30 acres. The woods are divided into 15 stands. Each year, trees within a stand are marked and sold to a local buyer. Mark has been working on this project for the past 20 years. Thus, some of these stands have been harvested twice already.

"With each harvest the timber gets better," Mark said. "Our goal is to generate a reasonable return while we grow better quality timber."

The practice of taking the good trees while leaving the rest is called high grading and makes future stands poorer. Unfortunately, high grading is common in Missouri. The state is ranked second in the nation with the number of rough, rotten and non-merchantable species growing in our woods according to Stephen Shifley of the U.S. Forest Service. This is not the case for Mark, who is focused on growing furniture-grade hardwood.

The key is to leave trees that have the potential to increase in both volume and quality. Over time, value can be maximized. A low quality tree may increase in volume but the board foot value remains the same. On the other hand, a crop tree's jump in grade from lumber to a stave or veneer log over time gives the owner a volume increase and value per board foot increase. This illustrates the principle that what you leave is just as important as what you take during a timber sale.

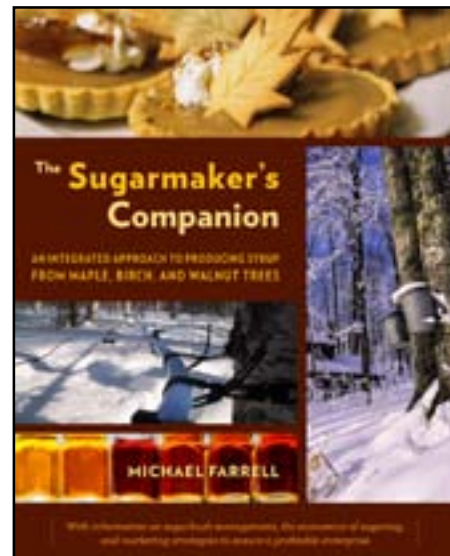
In Mark's case, his goal is to remove mature high quality trees and smaller low quality trees. Plenty of good quality smaller trees are left with growing space until the next harvest.

For most landowners, the first step is to get expert advice. Foresters from the Missouri Department of Conservation and private consulting foresters can help develop a plan for your woods. It will outline areas ready for a sale, areas that need to be left alone for now and areas that need pre-sale management.

Many landowners will not start with a high quality stand of timber. They may have stands with too many trees in them, but the ones that need to come out have little or no value. The best option may be to thin the stand by killing the poor quality trees and leaving them there. This type of thinning can cost over \$100 per acre, but there are some cost share programs to assist with this practice. A local MDC forester or private forester can tell you more about these programs.

Even with cost share programs, the landowners will bear some expense but the benefits are tremendous. Increased growing space for high value trees helps wildlife, and remaining trees grow faster and are in better health.

## AGROFORESTRY



## The Sugarmaker's Companion

Over the past two years, Michael Farrell worked on writing a book on sugaring. Entitled *The Sugarmaker's Companion: An Integrated Approach to Producing Syrup from Maple, Birch and Walnut Trees*, it is on sugaring and how to develop an efficient, profitable and enjoyable sugaring operation.

While attending the annual meetings of the North American Maple Syrup Council and the International Maple Syrup Institute, Farrell received compliments from many industry leaders who had already read the book. He wrote that getting "great feedback was a nice reward for devoting so much time and effort into writing [the book]."

Chelsea Green Publishing is handling most of the sales and distribution for the book. Farrell will be doing some limited sales and promotion. A 35 percent discount is available from Chelsea Green's online bookstore until Nov. 22.

# Fruit trees as landscape trees?

By EUGENE L. BRUNK

We foresters, and arborists to some extent, rarely think of using fruit trees as part of a home landscaping plan. Also, many homeowners seldom ask about fruit trees.

Perhaps both groups need a reminder that a home fruit orchard can be a delight to the eye and the palate. Many standard varieties of apples, pears, peaches, apricots, plums and cherries are also good shade trees, if planted in the right place. Dwarf trees that produce full-sized fruit can be used in smaller spaces, like under overhead electrical lines. Fruit trees can be just as lovely as flowering trees and large shrubs. They blossom too, and the fruit crop gives the color of a second blooming all summer.

Fruit trees are either self-pollinating or self-sterile. Self-sterile trees require pollen from another cultivar of the same species for fertilization to occur. They need a compatible cultivar growing within 100 feet. Without this cross pollination of the flowers, self-sterile varieties will not bear fruit, even though they may produce many flowers.

Plant fruit trees to allow sun and space for their mature size. Most standard sized fruit trees will mature at 20 – 35 feet in height. Dwarf varieties will mature at about 8 – 15 feet in height. Most commercially grown varieties will

come with spacing recommendations, along with other pertinent information about the tree.

Homeowners with larger lots might find it very rewarding to establish an orchard using favored fruit producers. A homegrown apple or peach tastes mighty good when plucked from your own tree. My mouth is already watering for a nice juicy pear, apple, or peach, or apricot (I love ‘em), or cherry, or plum!

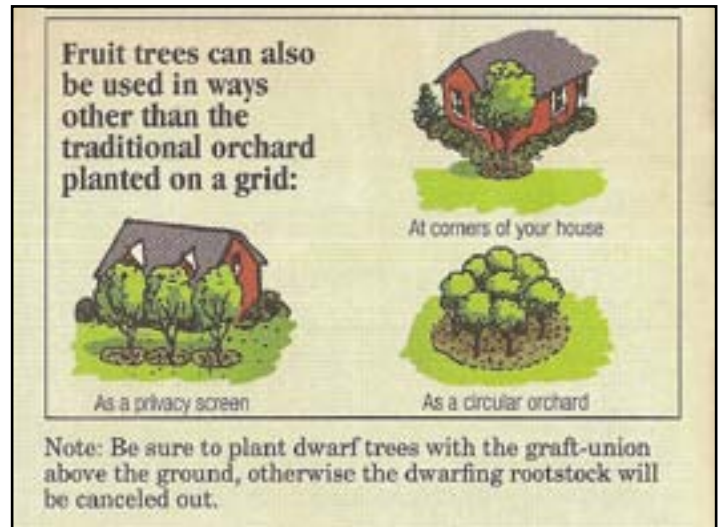


ILLUSTRATION COURTESY OF EUGENE L. BRUNK

## FOREST MANAGEMENT

# Cost-share practices available for landowners

The Mo. Department of Natural Resources Soil and Water Conservation Program has several cost-share practices available to Missouri landowners to protect their woodlands and forests from soil erosion. Cost-share is provided as an incentive for landowners to protect forests and woodland soil from erosion and protect or improve water quality through proper management. Soil and Water Conservation Districts are located in each county in the state. Landowners should contact their local office to determine if funding is available to assist with the following practices relating to the Woodland Erosion Resource Concern category.

### C100 Timber Harvest Plan

The purpose of C100 Timber Harvest Plan practice is to assist landowners with the proper design of best management practices such as logging roads and other conservation measures that minimize impacts to soil and water during timber harvest.

Timber harvests can result in disruption of soil by clearing land for equipment access and removal of trees from the site. Development of a timber harvest plan gives landowners a tool to work with loggers before a harvest to ensure components of the plan are established that are needed to mitigate harvest impacts.

Some of the best management practices include: avoiding the use of equipment or vehicles within 100 feet

of the top of a stream bank to protect riparian areas, mapping harvest locations, installing stream crossings and forest roads, and ensuring landing areas are greater than 200 feet from streams, ponds, lakes and so on.

Incentive payments are \$20/acre for first 75 acres, then \$15/acre for each additional acre. Limits on the practice are \$3,000 per farm or cooperator per year with a \$9,000 total eligibility. The local soil and water district office in partnership with the Mo. Department of Conservation (MDC) will provide technical assistance for this practice. MDC staff will evaluate and certify the practice to ensure best management practices in the timber harvest plan have been followed.



## TEST YOUR KNOWLEDGE

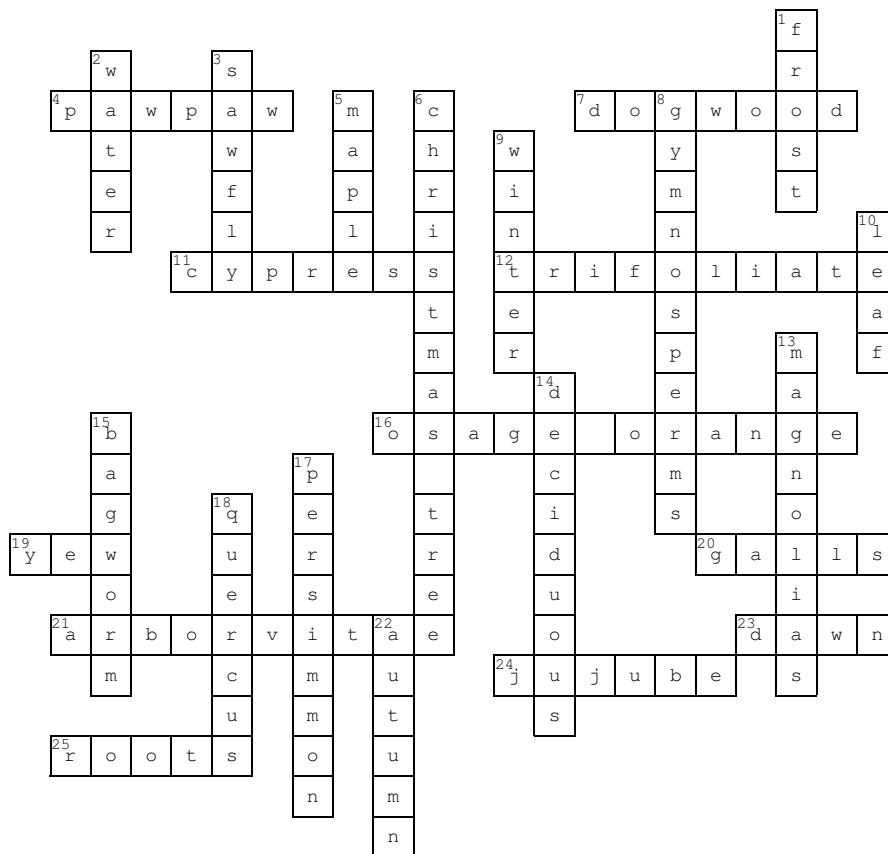
# Crossword fun for tree lovers

### Trees of Missouri

Some of these answers have two words. Be sure to leave a blank spot between them.

By TIM BAKER

In the last issue of *Green Horizons* in January, we published the Trees of Missouri crossword puzzle. Now, after much anticipation, here are the answers.



Created on [TheTeachersCorner.net](http://TheTeachersCorner.net) Crossword Maker

#### Across

4. A native tree in the custard apple family (**pawpaw**)
7. State Tree of Missouri (**dogwood**)
11. A needled tree that loses its leaves in the winter is the Bald \_\_\_\_ (**cypress**)
12. A tree in the citrus family that grows in southern Missouri is the \_\_\_\_ Orange (**trifoliate**)
16. This tree makes great fence posts, but is not in the citrus family (**osage orange**)
19. Tree that sounds like a female sheep (**yew**)
20. Insect-caused growth on leaves or woody parts of trees (**galls**)
21. From the Latin, 'Tree of Life' (**arborvitae**)
23. A redwood tree that grows in Missouri is the \_\_\_\_ Redwood (**dawn**)
24. Chinese Date (**jujube**)
25. Gathers nutrients and water for a tree, also providing support (**roots**)

#### Down

1. Most temperate zone trees can survive very low temperatures, but their flowers may be subject to \_\_\_\_ damage (**frost**)
2. The lack of this substance may cause leaves to drop prematurely (**water**)
3. This insect eats pine needles (**sawfly**)
5. Tree that makes delicious syrup (**maple**)
6. Tannenbaum (**christmas tree**)
8. Vascular plants are either angiosperms or \_\_\_\_ (**gymnosperms**)
9. Most major pruning should be done in late \_\_\_\_ (**winter**)
10. Full of chloroplasts, this part of the tree is where photosynthesis occurs (**leaf**)
13. Moonlight and \_\_\_\_ (**magnolias**)
14. Tree that loses its leaves (**deciduous**)
15. Insect that loves eastern red cedar, creating a small bag out of it's leaves (**bagworm**)
17. If you try to eat the unripe fruit of this tree, it will be too astringent to eat (**persimmon**)
18. Oak Genus (**quercus**)
22. The most colorful time of the year for many trees (**autumn**)

# Save the dates

## MCFA Fall 2014 meeting

The Missouri Consulting Foresters Association has scheduled their Fall Meeting at the Ozark Underground Laboratory (OUL), Pro Tem, Mo. (in Taney County) on October 16, 2014. The theme will be "Advancing Environmental Forestry." The program will be led by Dr. Tom Aley, owner of OUL and a MCFA member, as well as his staff. The full day program will include a tour of the research cavern and its surface watershed. The program will also include the unique opportunity to view the evening feeding flight of about 50,000 bats from the main entrance to the cave. The program will be open to non-MCFA members, however space is limited, so pre-registration is required. Program and registration details will be available soon, in August 2014 by contacting Shelby Jones, Executive Director, at 573-635-4598 or [midwestforestconsultants@embarqmail.com](mailto:midwestforestconsultants@embarqmail.com).



## Walnut Council annual meeting



The annual meeting of the Walnut Council is from June 8 - 11, 2014, in Manhattan, Kansas. The meeting will include field trips, indoor presentations, and the Landowner Show and Tell. Some of the field trips throughout the meeting include a trip to the Wayne Geyer Forestry Research Area which will show crop tree release studies, tree felling and portable sawmilling demonstrations. Their annual awards banquet will be on Tuesday, June 10. Registration can be done online at [www.walnutcouncil.org](http://www.walnutcouncil.org) and closes on May 26.

## Northern Nut Growers Association meeting

This year's meeting of the Northern Nut Growers Association is a milestone one. It is their 105th Annual Meeting, from August 10 - 13, 2014. The NNGA meeting will be in Corvallis, Oregon, at Oregon State University. There will be a technical presentation, a tour of the Oregon hazelnut factory and more throughout the meeting days. Registration is not open yet, but those interested can send an email with the subject "NNGA 2014 Meeting" to the webmaster at [icomserve@aol.com](mailto:icomserve@aol.com). Head to [www.nutgrowing.org](http://www.nutgrowing.org) for further information.



## Missouri Agriculture Experiment Station field days



Farmers can find out more about the latest in agricultural science through these field days, August - October 2014. Future details can be found at [aes.missouri.edu/events.php](http://aes.missouri.edu/events.php)

### AUGUST

1 - Bradford Research Center Organic Field Day  
5 - Lee Greenley Research Center Field Day  
14 - Bradford Research Center Soil Health Expo  
26 - Graves Chapple Field Day  
27 - Hundley Whaley Research Center Field Day

### SEPTEMBER

2 - Delta Research Center Field Day  
4 - Bradford Research Center Tomato Field Day  
11 - Southwest Center Ag Education Day  
12 - Southwest Center Field Day  
16 - Bradford Research Center Ag Education Day  
23 - Forage Systems Research Center Field Day  
27 - South Farm Research Center Showcase

### OCTOBER

2 - Wurdack Ag Education Day  
3 - Wurdack Field Day  
TBD - Horticulture & Agroforestry Center Field Day

# green horizons

## editorial board

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MU Center for Agroforestry

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Kim Young, Vice President/General Manager  
Forrest Keeling Nursery

Scott Brundage, Consulting Forester

Dennis Potter, chair,  
Missouri Walnut Council

Eugene L. Brunk

Donna Coble, Executive Director  
Forest ReLeaf of Missouri

Brian Schweiss,  
MDC Private Land Forestry Programs

Gene Garrett, Emeritus Professor  
MU Forestry Department

Clell Solomon,  
Mo. Christmas Tree Producers Association

## CONTRIBUTORS



## CONTACT GREEN HORIZONS

Send story ideas, address changes and subscription requests for Green Horizons to:

Mike Gold  
Green Horizons  
University of Missouri  
203 ABNR  
Columbia, MO 65211  
email: [goldm@missouri.edu](mailto:goldm@missouri.edu)  
phone: (573) 884-1448

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## Calendar of Events

**June 1, 2014** — TRIM grants due – [mdc.mo.gov/node/11123](http://mdc.mo.gov/node/11123)

**June 8 - 11, 2014** — Walnut Council Annual Meeting; Manhattan, KS – [www.walnutcouncil.org](http://www.walnutcouncil.org)

**June 12 - 13, 2014** — Elderberry Workshop and Field Tour; Lincoln University Carver Farm, Jefferson City, MO – Registration fee: \$60/individual, \$100/couple; includes lunch, dinner on Thursday and lunch on Friday – Contact Deni Phillips at (573) 424-9693

**August 10 - 13, 2014** — Northern Nut Growers Association Annual Meeting; Oregon State University, Corvallis, OR – [www.nutgrowing.org](http://www.nutgrowing.org)

**October 16, 2014** — Missouri Consulting Foresters Association Fall Meeting – Advancing Environmental Forestry – Ozark Underground Laboratory, Pro Tem, MO. – contact: Shelby Jones, [midwestforestconsultants@embarqmail.com](mailto:midwestforestconsultants@embarqmail.com)

**August - October 2014** — Missouri Agriculture Experiment Station Field Days; Various sites – [aes.missouri.edu](http://aes.missouri.edu)