green horizons

Growing tomorrow's future today.

February 2014

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

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Mike Gold, Mark Coggeshall and Savannah Kannberg, editors

URBAN FORESTRY

Forest ReLeaf of Missouri celebrates 20 years of giving away trees

By WENDY SCHLESIGNER

For 20 years, Forest ReLeaf of Missouri distributed trees to parks, schools, churchs, neighborhood associations—anywhere— providing plantings take place on public or nonprofit land. Any day now, Forest ReLeaf will have distributed an astonishing 150,000 trees. To celebrate their history and record-breaking accomplishments, they threw an October fundraiser, "20 Years and Growing," which was attended by over 215 guests from all over the State of Missouri.

The occasion drew attention from both the City of St. Louis mayor's office and the St. Louis County Executive, each of whom presented Forest ReLeaf with a proclamation declaring a special Forest ReLeaf Day. Over $30,000 was raised at the event, which included a live band and a silent auction. On Oct. 26, Forest ReLeaf planted 20 trees in Creve Coeur Park adjacent to their CommuniTree Gardens Nursery, to honor the original founders of the organization. Dedicated as the "Founders' Forest," the area will celebrate both the vision and dedication of these people: Ted Allison, Rob Emmett, Mary Lou Green, Mark Greuber, Skip Kincaid, Jim Rocca, Mary Sherfy, Kent Theiling and Ray Wiesehan.

In recent years, the CommuniTree Gardens Nursery increased its capacity in many ways. In 2012, it was expanded to allow for an additional 5,000 trees. The total inventory is now around 20,000. The expansion was to attend to the growing need for trees after the EF-5 tornado in Joplin, Mo., that took out over 20,000 trees in May 2011.

PHOTO COURTESY OF FOREST RELEAF

Volunteers at Forest ReLeaf go to the CommuniTree Gardens in Creve Coeur Park and help with weeding, potting, watering, tagging and loading trees during the spring and fall tree programs. They have distributed over 150,000 trees in 20 years.

This past spring saw a new milestone of potting up over 18,500 seedlings. The increase (up from 17,000 last year) is due largely to the ever-growing body of volunteers. Growing more seedlings leads to more available trees, which created another record this past fall of distributing over 10,000 free trees.

Caring for young trees and seedlings requires an experienced forester and a dedicated staff of volunteers. Operating under the direction of Mike Walsh, the organization's forestry programs manager, many of the regular CommuniTree Gardens Nursery volunteers are Master Gardeners or Master Naturalists. Several come with years of experience in construction, greenhouse management and other related interests. Given the expertise and enthusiasm of this cadre of volunteers, Forest ReLeaf is investigating additional expansion opportunities including a biodiversity greenhouse and enlargement of their 15-gallon pot-in-pot nursery section. If funding can be secured, these projects may be started in the very near future.

In this issue

AGROFORESTRY

Grazing your woods with silvopasture

By BRIAN SCHWEISS

Silvopasture is a touchy subject with some foresters. It is the intentional managed grazing of woods to utilize the forage in the understory, while maintaining a crop of trees for a variety of purposes. In the previous issue of *Green Horizons*, goat silvopasture was featured as a solution to reduce or eliminate the presence of exotic plants in the woods.

Many successful silvopasture stories begin with pine plantations. In these planted forests, trees that have grown beyond the reach of livestock are thinned and forage is established. Sometimes trees are planted at a wider spacing than normal to accommodate cattle. In oak hickory woods and forests, this can be trickier.

There are several legitimate concerns with silvopasture. The grazing of woods may lead to an eventual conversion without any management. Many woods have been grazed which can lead to altered species composition. Livestock are more likely to eat oak seedlings than hickory seedlings. Even years after livestock are removed, some woods are dominated by hickories. If grazing continues and the forest is thinned to promote forage, over time, the forest may be increasingly thinned until it becomes more like a park than a woodland.

Another concern some have with unmanaged grazing, which is not silvopasture, is that it could lead to increased erosion. Soil erosion in undisturbed woods is very minimal because trees, shrubs, herbaceous vegetation and leaf litter provide great erosion control. Many unmanaged, grazed woods are full of trees but do not have shrubs or ground cover. With enough grazing, even the leaf layer can disappear. Along with added soil compaction, there is increased erosion.

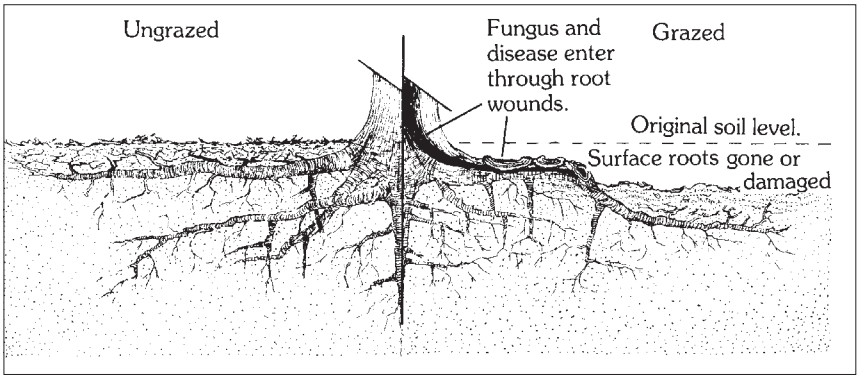
There is also the issue of reduced wildlife value. With the erosion, there is also a lack of cover and food for wildlife. Many wildlife species, from birds to deer, benefit from more diverse woods with groundcover, shrubs and trees. The livestock grazing reduces the diversity. Similarly, heavy deer browsing will damage trees and shrubs.

Sometimes grazing can lead to undesirable trees and plants. Livestock eat seeds, but they do not fully digest them. As the livestock move around in pastures and woods, they deposit these seeds. I will never forget seeing a honey locust seedling growing out of a cow patty!

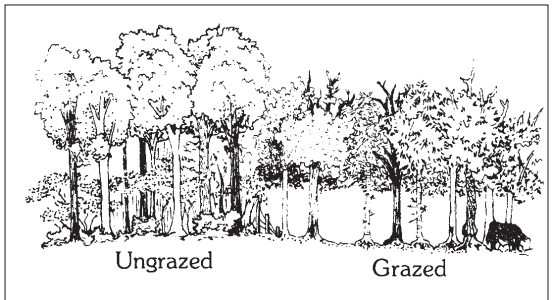
Concern also stems from worries about damaging desirable trees. If the end goal for a forest is veneer walnuts or oaks, livestock introduction may not be the best path. Simply keeping livestock away from trees with metal structures does not always work because the area around it often becomes heavily trampled. The structure protects the main bole of the tree, but the roots are not protected. Compaction and soil disturbance can crush and expose shallow roots. Rot can move through damaged roots into the tree.

Woods are also not always safe for livestock. Acorns, for example, can cause toxicity issues with cattle. I once discussed this with an elderly landowner who mentioned that when he was a kid, his job on the farm was "hog poler." Not understanding this, he explained it to me: "you strap a pole to the hog and lift him up into the tree so he can eat the acorns before they fall." Many farmers are aware of these issues but take their chances. Other dangerous plants include the black cherry and the Ohio buckeye.

If the above situations are happening, it is not silvopasture. The premise of silvopasture is that the woods and grazing opportunities are actively managed and maintained to minimize tree damage. It requires all of the things that Dr. Charlotte Clifford-Rathert advocated in the last issue of *Green Horizons*. Anything other than that is forest grazing and all foresters and agroforesters agree that unmanaged forest grazing hurts your forest.



COURTESY OF MDC



An obvious "browse line" forms in grazed forestland, destroying layers of wildlife habitat.

COURTESY OF MDC

FOREST MANAGEMENT

Get advice on your forest with MO Woods App

By BRIAN SCHWEISS

Hey, landowners, grab your smartphones. There is a new app ready for landowners with woods and forests.

It was developed specifically to assist Missouri landowners in an initial evaluation of their woodlands for forest health, wildlife habitat and timber sale potential.

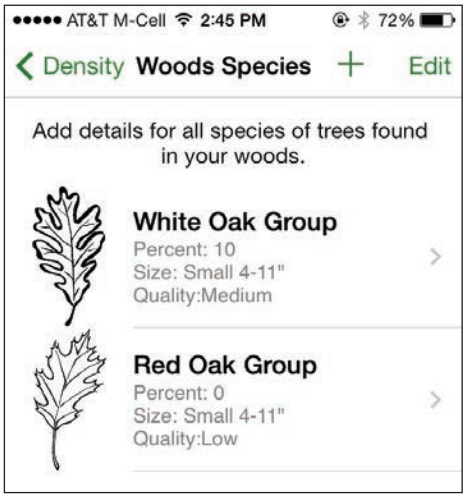
In the app there are links to other resources that may be of use too, such as: insect and disease issues for Missouri woods, wildlife habitat improvement options and timber sale guidance (from the Call Before You Cut website). Landowners now can email their results along with a picture of their woods and even request assistance from a forester.

Both iPhone and Android users can download this app, as it is available in both app stores. Start by searching for "Missouri Forestkeepers" or "MO Woods." Once downloaded on your phone, head to the woods. The app will guide you through some steps to gather information. A series of pictures will help determine details about the woods.

One of the first questions asked is about forest density. The app requires a visual estimate of the density using low, medium and high as references. Next up is tree species identification. Identify the primary species in your forest that make up the main canopy of trees. Leaf pictures are provided to assist in identification.

For each species chosen, the app asks for an estimate of the percent present in the forest. It also asks for an average size of tree for each species. Three categories are there to give guidance on how to measure trees. Then, figure out the average quality of your trees in the species. Pictures are provided to serve as a guide.

Continue on to the next step and three different prescriptions will be given: one for timber sale potential, one for forest health, and one for wildlife value. Interested landowners can then send an email to request further assistance or to simply ask a question about their forest.



Part of the app for adding details about the different species found in the woods.

The MO Woods app is not a substitute for a forester. It is meant to be a starting point, and is written to capture statewide scenarios in broad categories. It will not identify specific market conditions or forest health issues. When in doubt, send an email to a local forester.

The Cloud Factory: MU's Power Plant

PHOTO BY HANK STELZER

The "cloud factory" north (left) and south (right) stacks at work.

By HANK STELZER

The other morning, as I was taking my neighbor's son to daycare, he looked out the window and exclaimed, "look, Mr. Stelzer, a cloud factory!" Fortunately, traffic was light, so I glanced in the direction of his gaze. And then I saw it. The University of Missouri's combined heat and power (CHP) plant producing a giant 'cloud' from the northern smokestack.

Smokestack, however is a misnomer. It should be called a 'water vapor stack.' The north stack vents the combustion products of the university's new biomass boiler, and the main component of the 'smoke' is water vapor. Woody biomass fed into the boiler is called 'green' or 'wet' and contains about 35 to 40 percent water. When the biomass is burned, the moisture is converted into steam which travels up the stack and into the air. In cold wintry air, the vented water vapor produces a 'cloud.'

No harmful sulfur oxides (SOx) are produced, nitrous oxides (NOx) are removed chemically and particulates (soot) are removed electrostatically inside, before the remaining water vapor is sent up the stack.

The south stack vents the combustion products from four coal-fired boilers that are also co-fired with 15 percent wood chips. Because coal is a drier fuel, its water vapor cloud is much smaller.

The biomass boiler started up in October 2013, after 18 months of construction and six months of testing. The boiler consumes about 21 tons of wood chips every hour, a little less than a semi-trailer load. The heat produces steam in a closed loop system. The high-pressure steam then turns a 15 mw generator to produce electricity. The low-pressure exhaust steam is distributed to about 340 buildings on the 600-acre campus via more than 30 miles of piping where it heats and cools over 13 million square feet. Afterward, the steam, now hot water, returns to the plant for another cycle of the energy loop. The overall thermal efficiency of the plant is 70 percent, more than double the energy efficiency of conventional coal-fired power plants.

AGROFORESTRY

USDA Reports on Agroforestry

Expanding agroforestry practices on farms, ranches and woodlands

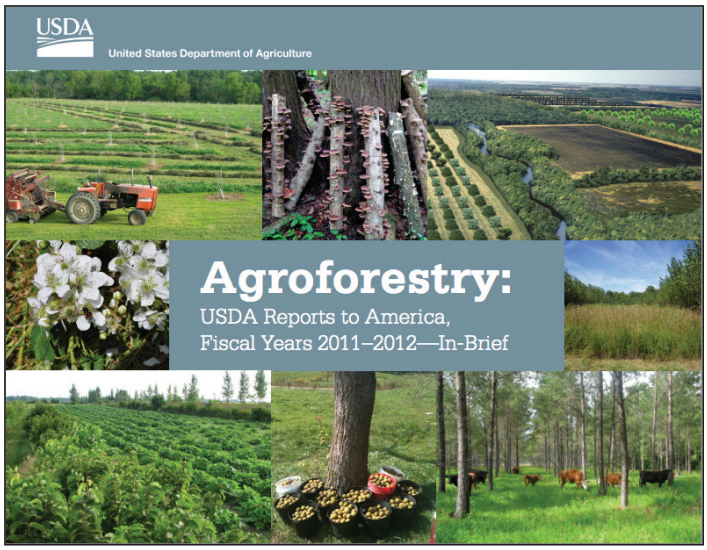
Agriculture Secretary Tom Vilsack released a report regarding USDA's role in agroforestry advancement. This is the first time this report has been released. Titled *Agroforestry: USDA Reports to America*, it has information on agroforestry practices and how they help farms, ranches and woodlands increase their agricultural productivity, protect the environment and increase their profits.

Even though under one percent of the USDA budget is spent on "tree-based practices," it is able to help provide public services including reduced greenhouse gas emissions and healthier agricultural lands.

For the past five years, USDA has aided landowners with creating about 336,000 acres of windbreaks and riparian forest buffers; around 2,000 acres of silvopasture; and 500 acres of forest farming. All those acres actually ends up being less than one percent of land that could be used for these practices. The USDA believes that they can help expand agroforestry in the U.S.

In a press release from the USDA, Secretary Vilsack said that agroforestry can be used in more than rural areas.

"In suburban areas, agroforestry practices can improve wildlife habitat, mitigate the movement of odors and dust, serve as noise barriers and act as filters that help keep water clean," Vilsack said.



The report is the product of multiple agencies working together to serve on the Agroforestry Executive Steering Committee and work with the USDA National Agroforestry Center.

After the release of this report, the USDA hopes that it will be able to start a conversation about agroforestry with current producers, landowners and communities, as well as young people who are America's future farmers.

The report can be found at www.usda.gov/agroforestry. Any comments or questions can be sent to agroforestry@USDA.gov.

Agroforestry Academy a success

The inaugural Agroforestry Academy attracted 26 enthusiastic educators from a seven state region. These trainees came to Columbia, Mo. in August for a week of indepth exposure to agroforestry. Post-Academy evaluations showed that 71 percent of the trainees found the Academy excellent.

In the long-term, the goal is to realize widespread adoption of agroforestry in the U.S., and its objective is to create a regional "agroforestry knowledge network." To create this, we need to train a core group of individuals who deal with land management issues and/or interact with farmers and landowners. We need to facilitate collaboration among researchers, extension personnel and practitioners from diverse disciplines, departments and colleges, and with different agencies and organizations.

Trainers were there to provide detailed agroforestry expertise. The first two days of the Academy included a wide array of classroom presentations on both the biophysical and socioeconomic aspects of agroforestry practices. In addition, information intended to assist landowners develop financial budgets and to market specialty crops was presented.

Days three and four consisted of visits to practitioners' farms with established agroforestry sites (Shepherd Farms, Eridu Farms, Busby Farm – Lincoln University, Horticulture and Agroforestry Research Center – MU) along with a "hands-on case study," a farm visit with a landowner whose farm does not currently incorporate agroforestry practices.

The academy concluded on day five with an agroforestry planning and design "case study" exercise which summed up all the knowledge and experience received during the week. The case study design exercise (with small group presentations and follow-up discussions) facilitated experience in the implementation of agroforestry design and encouraged collaborative learning community efforts. The planning process helped participants envision how agroforestry practices can be successfully integrated on a farm.

The 2013 Training Manual and Handbook are available online at http://bit.ly/1e1Wf4J for your use, too. More information about the Academy can be found in the August issue of the Action in Agroforestry newsletter on UMCA's website.

FOREST MANAGEMENT

Evolution of a timber sale

By BRIAN SCHWEISS

Having a timber sale on their property in Madison County, Mo. is not something Stephen and Deborah Yemm thought they would ever do. To them, all logging seemed awful. However, several storms from 2009 to 2011 brought down a number of trees and provided the catalyst to begin some management.

Stephen bought the property in 1974. While he grew up in St. Louis, he knew it was not for him.

His parents purchased adjacent property, and had two sales marked by a MDC Forester. He understood their motivations for income, but it was not something for his land. Stephen and his wife, Deborah, consider themselves "tree huggers" and did not want to cut any trees. Stephen inherited his parents' land and now manages 273 acres of woods on their 471 total acres.

A derecho, or what some call an inland hurricane, hit in 2009. This caused widespread wind damage throughout the Ozarks and got the Yemms to thinking about salvaging damaged trees. In 2010 and 2011, there was damage from smaller wind storms.

Stephen had read about Call Before You Cut and called. He received a free information packet on timber sales. The program promotes the services of a professional forester who can help mark the trees that need to come out and bid them out to get the best price.

Remembering his parents working with a forester, he contacted the Dept. of Conservation and met Becky Fletcher, his local MDC forester. Becky began working with him on a sale on the back side of their property. He chose the location to test out the process. He learned about the concept of uneven aged management, which mimics small disturbances in nature where trees are thinned and openings created to allow oaks to regenerate.

Once he was convinced that it would suit the property needs, the Yemms needed a plan for the entire tract.

A forester marking the trees provided a clear understanding of the trees being offered for sale. The forester took into account the health and value of trees to harvest and to leave. One official written bid and two unofficial bids were received for the first sale. The Yemms learned the official bidder was reputable and offering a fair price. On the second sale, they received several bids.

The successful bidder for both sales was a Master Logger. Those who have earned the Master Logger Certification have been through training and demonstrate the use of good harvesting practices.

PHOTO BY BRIAN SCHWEISS

From left, the Yemms: Stephen, Treston, Deborah, Simeon. For more information on Call Before You Cut, go to www.callb4ucut.com

The plan has many benefits for long-term management. It lays out a path of tracts for timber sales and followup management, such as timber stand improvement. It is also critical for the next generation. With succession planning, the property will go to the Yemms' two sons. This management plan and ones to follow will let their boys know how the woods should be cared for.

Careful timber sales have allowed for more management of their property. The sales were done in a manner that protects critical wildlife habitats and preserves the cultural resources. Added income provides a trust fund for when their sons inherit the land. A timber buyer told Stephen, if you take a daily view of it, then it looks ugly. A decade later you would see a healthy forest and a century later, your harvest will appear insignificant.

Mo. Tree Farm News

PHOTO BY BRIAN SCHWEISS

Outgoing Missouri Tree Farm Committee chair Rick Merritt (left) with incoming chair Frances Main.

The Missouri Tree Farm Committee thanks Rick Merritt for his two years of service. Rick is the outgoing Chairperson. We welcome Frances Main as the incoming Chair. Under Rick's guidance, Missouri Tree Farm has met the challenge of being a membership pilot State. Rick was instrumental in bringing additional grant funding to Missouri and provided great leadership for Tree Farm Conferences and committee management. Rick is the general manager of Malinmor Hunt Club and they too have been great Tree Farm supporters with Rick's time and property management.

Frances Main brings years of experience to the committee. Rick expressed full support for her ability to lead the committee. She too will address challenges of certification needs and funding support. They both deserve our thanks for the past and future service they bring.

URBAN FORESTRY

Right tree right place

By EUGENE L. BRUNK

Finding the correct tree species for any given spot, in an urban landscape setting, will enhance the value and appearance of your property. It also helps to avoid many future problems due to an improper location or poor species selection for the planting site. Trees in urban settings are troubled by growing conditions that are less than ideal due to the removal of topsoil, soil compaction, soil contamination, air pollution, or lack of growing space. The more limitations on the growing site, the more care needed when selecting trees. It starts with evaluating the site.

Determine where you want to plant a tree and what you want it to provide, whether it is shading your driveway, separating two yards, screening the street, providing cover for songbirds or a nice seasonal color. Figure out why you want the tree there.

In your chosen area, calculate the amount of space there. Then, pick a tree that, at maturity, will fit the space.

Monitor the site and determine how much sunlight it receives throughout the day. Some trees grow well as understory trees and can tolerate shade well. Others require full sunlight for best growth.

Check out the soil and make sure it is at least 3 feet deep and allows water to percolate through it while retaining adequate moisture for the roots. Some organic matter is desirable, as is slightly acidic (pH 5 - 6) soil. Without good soil, trees will have more problems. To find out more about soil testing, contact your local UMC Extension office, or go online to extension.missouri.edu.

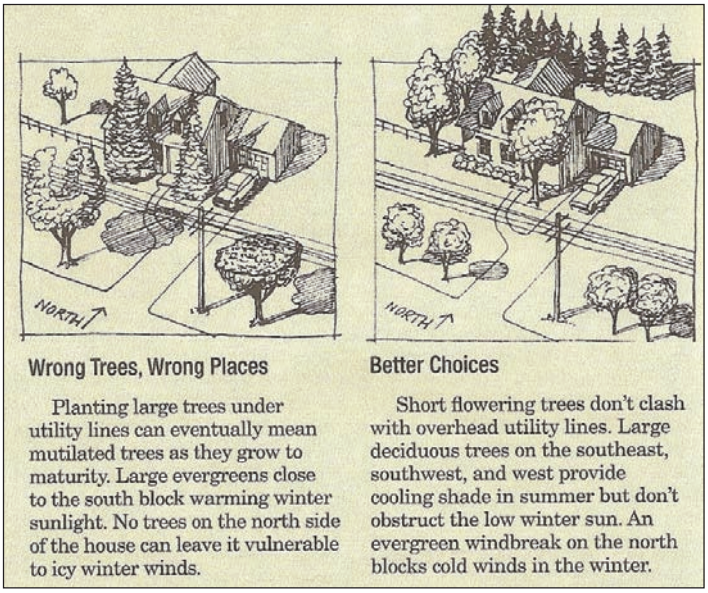


ILLUSTRATION COURTESY OF THE NATIONAL ARBORDAY FOUNDATION

To avoid many future tree care problems in the urban setting, get the right tree in the right place.

A percolation test can be administered, too, by digging a hole 12 - 18 inches deep and filling it with water. If there is water remaining 12 - 18 hours later, then you have heavily compacted or clay soil. Such soils may hold too much water and suffocate the roots. Conversely, very sandy or gravelly soils may not hold enough water for some trees.

Careful evaluation of the planting site and having a specific objective for the tree will go a long way in helping find the right tree for the right place.

Nature's own air conditioner

By JON SKINNER

It might be cold outside right now, but summer is coming and high air conditioning bills with it. You can do something now to help lower your future air conditioning bills – plant trees!

Trees provide cooling by direct shading of buildings, driveways, streets, air conditioners, and lawns. Wherever the shade is cast will be several degrees cooler than surrounding unshaded areas. We all enjoy sitting in the shade on a lazy summer day as evidence of this. You can use this shade effect to cool your home.

During the summer, heating of buildings by the sun occurs mostly in the morning and late afternoon. This is due to the orientation of the sun in relation to windows in a building. The low sun during these periods of the day provides direct sunlight entry through windows, while during the middle of the day the sun is high and sunlight does not directly enter windows. Blocking the sunlight from entering windows will reduce the amount of heat entering your building and reduce the need for air conditioning by ten percent.

To get the most benefit, plant trees on the east – southeast and west – southwest sides of your home to block windows from the sun. Planting on the south side has less of an effect due to the suns' track across the sky.

Take advantage of our natural air conditioners by planting trees.

New Missouri Department of Agriculture Director Named

In December, Richard Fordyce of Bethany, Mo., was named Director of the Missouri Department of Agriculture by Governor Jay Nixon. Since 2008, he has served as chairman of the Missouri State Soil & Water Districts Commission.

As Missouri's Director of Agriculture, Fordyce will oversee the Department's regulatory and business development efforts, including work to promote Missouri forestry products throughout the state and around the world.

A long-time advocate for Missouri's resources, Fordyce received the 2012 Soil Conservationist of the Year award from the Conservation Federation of Missouri. He is currently one of only three directors from Missouri on the United Soybean Board.

Prior to being named Director of Agriculture, Fordyce held leadership positions on the National Biodiesel Board, the Missouri Soybean Merchandising Council, Missouri Farm Bureau and the American Farm Bureau Federation, as well as Agricultural Leaders of Tomorrow, University of Missouri Extension and the Northwest Missouri State Fair. He has also served as a member of the South Harrison R-II School Board, Green Hills Regional Planning Commission, Sherman Township board of trustees, and the Community Foundation of Northwest Missouri, as well as on advisory groups to Cong. Sam Graves and former U.S. Senators Kit Bond and Jim Talent.

Fordyce, a fourth-generation Missouri farmer, and his wife, Renee, grow soybeans and corn and raise beef cattle on the family farm in Harrison County.

COURTESY OF MDA

Richard Fordyce was named the new Director of the Missouri Department of Agriculture in December. Previously, he was chairman of the Missouri State Soil & Water Districts Commission.

THE "NUT" WORLD

MNGA 2014 Nut Show, Annual Meeting

The MNGA Annual Meeting and Nut Show will be located in the Community Center in Nevada, Mo., on Feb. 7-8.
www.missourinutgrowers.org

On Friday, Feb. 7, the 2013 crop year nut show entries will be evaluated in the morning. The Board of Directors will meet that afternoon. Saturday, Feb. 8 is the annual business meeting which includes viewing the winning nut entries and presentations by nut growers, industry, extension and university specialists. Again this year is the Nutty Cookie Contest. Entries will be sampled at lunch, and you'll want to mark the date now.

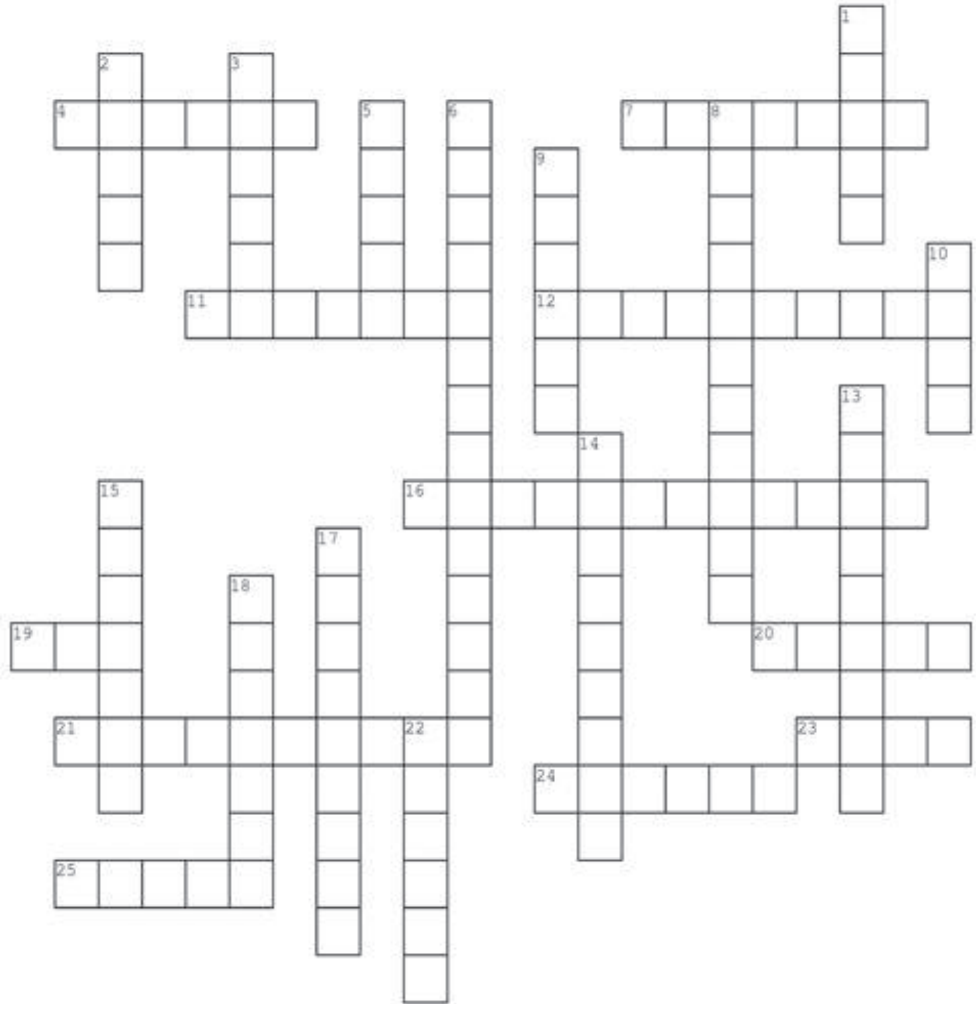
At this point, 2013 crop year nuts should be harvested, cleaned and dried for storage. MNGA hopes to see more entries this year. Hammons reported that they bought 28 to 30 million pounds of black walnuts, and the MNGA webmaster fielded many inquiries from people seeking out harvest equipment or contractors.

The MNGA evaluation protocol calls for submitting 30 pecans, 25 walnuts or 15 nuts of another species. They recommend placing clean, hulled nuts from a single cultivar or seedling tree in a brown paper bag and setting them in a cool, dry place to finish air-drying. Write your name and the sample tree ID (its cultivar name or tree identification for seedling entries on the bag). Use the 2013 Crop Year Sample Entry form (available on page 15 of MNGA's fall newsletter) and print as many copies as needed. Each sample should have its own form. It can be brought to the Friday nut evaluation session, or the sample can be mailed in. If you are not attending on Friday, entries can be mailed to Pat Miller at the Vernon County Extension Office.

TEST YOUR KNOWLEDGE

Crossword fun for tree lovers

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



When I took a course in plant anatomy as a graduate student, I had a very interesting professor. For our final exam, I happened to be sitting on the other side of the room from where he started passing out the exams. As he made his way across the room, I heard many gasps from students as they got their first glimpse of the exam. When he got to me, I saw why. It was a crossword puzzle. The test was not easy, you had to know your terminology. In a way, it was fun.

I have come up with a puzzle to test your knowledge on the trees of Missouri. Some hints are easy. Others may take a bit of research. Hopefully you will learn a few things. Answers will be in the next issue of *Green Horizons*.

Crossword by TIM BAKER

Across

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

Down

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

FOREST MANAGEMENT

Do you know where your property lines are?

By R. SCOTT BRUNDAGE

Being a professional forester for 51 years and a Consulting Forester for the last 30 years, I have been amazed to find that a majority of woodland owners do not know exactly what land they own. Most owners know where some corners are and some property lines, particularly if there is a fence, but do not know for sure where all the lines are.

If you are going to manage your woodlands properly, you need to know where the property lines are. Why? If you are going to have a timber sale, the forester has to know where the property line is so no trees are marked and cut on the neighbor's property. In Missouri, state statutes have a triple damage section concerning trespass. Therefore, as a Consulting Forester, if I mark for sale trees on your neighbor's land and they are sold, I am liable for triple damages. The same holds true for a Timber Stand Improvement (TSI) crew who kill undesirable trees and vines to release and let grow the valuable desirable crop trees. If the woodland owner puts in access roads, waterlines, skid trails or log yarding area, the owner should know where the property lines are.

When a forest landowner calls and asks for help, we set a time and place to meet. When I arrive, I have a current Plat Sheet of the area, an aerial photo, an aerial photo with topographic lines and another aerial photo of the property with the soils map superimposed on the landowner's property. All this is available from a computer except the Plat Sheet. I encourage landowners to collect the same tools so they can be more familiar with their property.

As mentioned before, the forest landowner must know exactly where their property lines and corners are. Usually, there are two choices to solve the problem: one cheap, one very expensive. Here is the fun (and inexpensive) way to relocate the old marked property lines. Previous owners most likely knew where their lines and corners were, and sometimes put up a fence. If you know where and how to look, you can often find evidence of the old fence. Start by going to your local Assessor's Office to get a large aerial photo map showing your property lines. These maps are very accurate because land taxes are based on them. Head out with the map, a compass and some fluorescent marking tape to re-establish your lines. First try to find a corner or starting point. Usually there is something visible, i.e., corner fence posts where fences come together at the edge of forest and fields. Often an iron surveyor's rod driven into the corner is visible.

If an old fence was present, start following your compass so you know approximately where the line is and look for old fence posts, wire on the ground, pieces of wire growing out of trees along the line, etc. If you follow the compass line and check the aerial photo often for confirmation (roads, fields, streams, buildings, powerline or pipeline rights of way, for instance), you can often follow exactly along the old fenceline. Kids love to help and go wild each time they find a wire, or some other piece of the puzzle.

"If you are going to manage your woodlands properly, you need to know where the property lines are. Why? If you are going to have a timber sale, the forester has to know where the property line is so no trees are marked and cut on the neighbor's property."

When you find any evidence of the old line, flag it with a piece of tape. The next step is to buy 6 to 6 1/2-foot steel "T" fence posts, and a fence post driver (which is safer than a sledge hammer). Begin at the property corner and drive in a steel fence post next to the surveyor's iron or corner post. I like to use three people and then start down the old, poorly marked line and drive in a new steel fence post every 100 feet. If it is more than 100 feet between the flagging tapes marking the discovered old line, one person goes ahead 300 feet and places a fluorescent ballcap on the old flagged area. Another person takes two fence posts and the driver and goes down the old line 100 feet. The third person puts his fluorescent cap on the last steel posts. Now you can tell the middle person exactly where to put in the next steel post. The middle man then moves on another 100 feet and repeats the last step. This method guarantees a perfectly straight line, and is much cheaper than a survey. Avoid using the small, cheap electric fence posts because they can easily be pulled out, making the line impermanent.

If you must know exactly in order to build a fence or something else, you must hire a surveyor, who can legally establish a property/boundary line.

There is a third option that is very cheap and could serve your immediate needs. You have found your corners, but have no line and want to have a timber sale. Take a compass and fluorescent flagging tape and start at a known property corner. Carefully shoot as straight a line as possible to the other known corner. Liberally flag the line so it will be easy to find on your return.

Upcoming Events Details

MNRC 2014: Forestry Workshop

A part of the three-day 2014 Missouri National Resources Conference involves a workshop on Missouri's privately-owned woodlands. Head over to Salon B at the Tan-Tar-A Resort on Friday, Feb. 7 for this workshop from 8 to 10 a.m.

The main focus is on the biological and economic status of woodlands and opportunities for management. A Forest Inventory Analysis noted three things recently: timber in Missouri is growing well beyond the annual harvest rate; Missouri is among the nation's leaders in the number of cull trees; and the annual rate of mortality has more than doubled over the last 30 years, which calls for better management of woodland acres.

This workshop is for identifying and discussing Foresty Inventory Analysis information which relates to Missouri's privately-owned woodlands, evaluate its biological and economic implications, and "brainstorm" how the forestry community can improve its communications with private landowners.

Register for this conference at the MNRC website: http://www.mnrc.org.

Tri-State Forest Stewardship Conference

Head over to Sinsinawa, Wis., on Saturday, March 8 for the Tri-State Forest Stewardship Conference. The conference includes presentations on: Thousand Cankers Disease; Updates on Timber Markets; Control and Management of Woodland Invasive Plants; Woodland Planning for Success: "Why do I Need a Forest Management Plan?" and Prescribed Burning for Prairies and woodlands. More information can be found at the website: http://www.extension.iastate.edu/forestry/

Cover Crops and Soil Health Forums to take place this winter at hundreds of locations nationwide

You are invited to attend a free, live broadcast of the National Conference on Cover Crops and Soil Health and discuss how to build soil health, improve yields, curb erosion, manage pests and build resilience in your farming system. On Feb. 18, over 200 Natural Resources Conservation Service (NRCS) and Extension offices nationwide will host Cover Crops and Soil Health Forums where farmers will have the opportunity to learn from one another while exploring local and national perspectives on cover crops.

For more information about the Cover Crops and Soil Health Forums and a list of forum locations, visit www.SARE.org/covercropconference.

Facilitated discussions on local issues pertaining to cover crops will follow a live-streamed broadcast of opening sessions from the national conference, including a dialogue with Secretary of Agriculture Tom Vilsack (invited) and Howard G. Buffett, plus a panel discussion with expert farmers. Because the national conference attendance is already completely full, the local forums represent a way to include farmers, educators and researchers across the country in the emerging conversation about the use and benefits of cover crops.

Please RSVP to ensure adequate seating and to get specific details about the forum as programs will vary by location. Live streaming from the national conference will begin at forum locations at 9 a.m. CST, except at PST locations, where the broadcast will begin at 10 a.m. Pacific Time. Attendees are encouraged to arrive 30 to 45 minutes ahead of time for check in and introductions.

FOREST PEST UPDATE

EAB quarantine in Iowa

Be vigilant! Stay tuned! An infestation of the Emerald Ash Borer has been detected in Creston, Iowa.

Creston is in the southwest corner of Iowa, about halfway between Des Moines and Maryville, Mo. This is the fifth location of EAB identification in Iowa.

On Nov. 1, 2013, a quarantine was established in twenty-five counties of eastern Iowa restricting the movement of hardwood firewood, ash logs, wood chips and ash tree nursery stock out of the quarantined counties. Moving firewood is one of the easiest ways that EAB can spread and cause more infestations.

According to Iowa State University Extension and Outreach, there are preventative chemical treatments available for healthy ash trees in urban areas (treatment of trees in forested areas is not practical).

PHOTO COURTESY OF ISU EXTENSION AND OUTREACH

For details on EAB, see: www.extension.iastate.edu/Publications/PM2084.pdf

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The Center for Agroforestry
University of Missouri
A Global Center for Agroforestry, Entrepreneurship and the Environment

Calendar of Events

Feb. 5-7, 2014 — 2014 Missouri Natural Resources Conference – Battles in Conservation: Politics, Science and Stewardship; Tan-Tar-A Resort, Osage Beach, Mo. – www.mnrc.org/

Feb. 7-8, 2014 — MNGA Annual Meeting and Nut Show; Nevada, Mo. – www.missourinutgrowers.org

Feb. 17-19, 2014 — National Conference on Cover Crops & Soil Health: Harvesting the Potential; Omaha, Neb. – sites.google.com/a/swcs.org/2014-omaha-cover-crops-conference/

March 1, 2014 — Shittake Mushroom Workshop; Tab Leach's Farm in Callaway Couty, Mo. – www.forestandwoodland.org/events.html

March 8, 2014 — Tri-State Forest Stewardship Conference; Sinsinawa, WI – www.extension.iastate.edu/forestry/

March 10-12, 2014 — Missouri Community Forestry Council 2014 Conference: Preserving, Sustaining and Growing the Urban Forester; Jefferson City, Mo. – www.mocommunitytrees.com/mcfcconference2014.html

April 19, 2014 — Forest and Woodland Association of Missouri (FWAM) Spring Tree Farm Conference – www.forestandwoodland.org

Early May 2014 — MNGA Spring Grafting Meeting, Date and location will be established at the Annual Meeting – www.missourinutgrowers.org