Welcome!

Welcome to “Missouri Chapter News” distributed to members of the Missouri Chapter, Walnut Council. The newsletter is intended to keep you informed about timely events while also distributing general information about the management of fine hardwoods. Members are encouraged to provide feedback about this outreach approach and suggest topics for future issues. Comments and suggestions can be emailed to Dennis Evans, Chapter President.

During the year we will also distribute “technical articles” on specific topics of interest to woodland landowners. Both the newsletters and technical articles will be archived at our chapter website.

A Word from the President: Dennis Evans

Over the last several years, you have entrusted the presidency of the Missouri Chapter of the Walnut Council to me. My policy has not been the status quo, but to look for long term betterment of the council. (I have a long term approach to things: I grow trees). I feel that you should receive a value to your membership in an organization. If that value is not perceived, you will not be a long term member. I feel that I receive value to my dues because of you, the members of the Missouri Chapter of the Walnut Council.

I am honored to have been your chapter president but, now it time to give the opportunity your president elect, Michael Williams, who will provide fresh ideas during his tenure.

National Walnut Council Meeting Report

July 31-August 3, 2016 (Lawrenceburg, Indiana)
Michael Williams, Incoming President

On July 31, several members of the Missouri chapter attended the four-day National Walnut Council Meeting in Lawrenceburg, Indiana on the banks of the beautiful Ohio River. The event was extraordinary and most informative through field trips and presentations! The latest forestry information was provided to 140 attendees from 19 states and Canada.

On Monday, we toured the Burnett walnut plantation. The thousands of 20-25-year old trees were tall, straight, and of very high quality, but needed thinning...10 years ago. Like many of us, Mr. Burnett has invested much time, money, effort, and...yes...love towards his trees, but he has postponed thinning the trees, hoping Mother Nature would do it for him. Mr. Burnett has recently hired a forestry consultant to evaluate the trees and devise a plan for thinning.

We also learned about the importance of tree genetics, site and soil characteristics, pruning techniques, and thinning strategies. For the latter, Dan Meisberger (consulting forester) demonstrated a technique for choosing crop trees in a rowed plantation. The forester marks the best edge trees first, then chooses the best crop tree from the next three interior trees within a row. That designated best tree starts a new cycle. He again chooses the best crop tree from the next three trees and...
continues down the row in this systematic manner. When finished with a section of rows, the forester re-evaluates the crop trees and makes any needed adjustments. The method can be found at [this link](#).

Another excellent publication from Purdue University mentioned during our tour describes [cradle-to-grave plantation management](#).

Over lunch, Dan Cassens (Purdue University) discussed quality differences and grades of sawed lumber, presenting boards with heartwood and sapwood (steamed and un-steamed) plus visible defects. While our afternoon plantation field trip was rained out, Dr. Walt Beineke, Purdue University, described what we would have seen if the access road had not washed out. Mr. Burnett inter-planted black locust trees (which are legumes) to add nitrogen to the walnut plantation. The impacts from any additional nitrogen is difficult to determine, but the locust trees have served as effective trainer trees helping the walnuts to grow tall with minimal limbs. Plus, the locust trees can be harvested for fence posts.

The evening presentations included three discussions: long-term volume and value data from managed woodlots (Dan Meisberger); invasive species control (Don Carlson); and stunning research on using verticillium wilt on Ailanthus (Tree of Heaven) in Ohio by Dr. Joanne Rebbeck, US Forest Service. Continuing research carried out by Penn State University, Dr. Rebbeck has verified that verticillium wilt (a native soil fungus) whose spores, when inoculated directly into the cambium of Ailanthus, kills this invasive rapidly. Her study includes looking at the most efficient methods of infecting Ailanthus with this wilt.

On Tuesday, we visited the Hammitt property, a large plantation of 30-year old walnut trees including progeny of the famous Purdue #1 tree. At various stations situated throughout the plantation, we learned about veneer evaluation, genetically improved planting sources, managing natural walnut trees, and walnut/Christmas tree mixed plantings using Canaan Fir.

We left the Hammitt farm and crossed the road to the Shaker Trace Nursery. With the aid of a small paid staff plus 20-or-so local volunteers, this nursery provides Ohio with native forbs and grasses for state prairie plantings. The nursery beds of various plants were hundreds of feet long and planted with a large variety of flowers and grasses native to the state. Workers hand-harvest seed heads at maturity, dry them in a barn, then separate seeds from chaff using a variety of wind/shaker mills.

That afternoon, a visit to the Miami-Whitewater forest and Bowles Woods included discussions on invasive species identification and control, crop tree management (including a magnificent 30+" DBH white oak), and grasses/forbs for prairie/savanna plantings.

Tuesday’s evening banquet included a silent auction, raffle, and musical entertainment. The need for increased membership and how to attract younger and more members was discussed. Chapter member, Scott Brundage, talked about the mission of the Walnut Council Foundation followed by the presentation of achievement awards.

Wednesday was “disease” day. The latest information on Thousand Cankers Disease was presented by various speakers. The fungus causing the disease has now been found on two beetles other than the walnut twig beetle, but there is no evidence these new beetles are transmitting the fungus to trees. Good news: In the eastern range of black walnut, researchers are now finding few, if any, walnut twig beetles in known infested areas. Further, they are seeing recovery of formerly diseased trees. Current hypotheses are that inadequate moisture levels lead to
stressed trees and infestations; adequate moisture levels find a return to “normal.”

One take-home message was to use appropriate “hygiene” when working with trees, i.e., remove all dead or dying material which may attract various insects.

Dr. Ted Troyer, MD, presented excellent information on tick-borne diseases such as Lyme’s, Ehrlichiosis, Rocky Mountain Spotted Fever and an emerging rare but serious disease termed Alpha-gal, an allergic reaction to mammalian meat originating from a tick bite. His overall conclusions about ticks? (1) It’s best not to get bit at all, (2) Use permethrin pretreatment on clothing, and (3) Use 40% DEET on clothing, not skin. Protect yourself!

It was heartbreaking to see the emerald ash borer devastation in southern Indiana and Ohio forests, particularly knowing it will likely do the same in Missouri unless we find a quick solution.

At the end of the meeting, Fred Crouse turned over the presidential gavel to another Missourian, our own Phil Moore from Pleasant Hill. Good job, Fred! Best wishes, Phil!

The next national meeting will be held during the summer, 2017, in Lafayette, Indiana focusing around a theme of celebrating the 50th anniversary of developing the Purdue #1 black walnut.

Meetings of Interest

The following list comes from the Missouri Nut Growers Assoc.

September 16: Black Walnut Field Day  Hammons Products Company, Stockton, MO. Pre-registration required. Early morning tour of the processing plant followed by presentations on growing and managing black walnut orchards. The afternoon will be spent at the nearby Sho-Neff Plantation and feature presentations on agroforestry options. Contact Caroline Todd at 573-884-2874 for details and to register.


September 23: Alternative Crops Field Day  SW Research Center, Mt. Vernon, MO. 1:00-5:00 p.m. An afternoon to focus on growing pawpaw, persimmon, elderberry, and chestnut. Educational presentations, fruit tastings, and tours of the research plantings and orchards.

October 8: Missouri Chestnut Roast  Horticulture and Agroforestry Research Center, New Franklin. The day includes several main stage presentations as well as tours of the center, highlighting ongoing research projects. Of course, there will be chestnuts to taste!

Note: Check with event sponsors to ensure details have not changed.

Minimizing Exposure to Ticks

Written by Bob Ball

A relatively new clothing product called “ElimiTick” was mentioned during the Walnut Council annual meeting. EimiTick® tick-repelling clothing uses Insect Shield® technology, which turns clothing into long-lasting, effective and convenient tick protection. You’ll call it your “tick armor”!

The active ingredient is so tightly bonded to the fabric fibers that it retains effective repellency through the life of the product. It repels ticks, chiggers, mosquitoes and midges (no-see-ums) and lasts through 70 washes. It is invisible, odorless protection just by putting your clothes on. Roomy jackets and pants are comfortable and easy to take along. The clothing uses a lightweight, comfortable fabric.

Several meeting attendees use this clothing and highly recommend it. ElimiTick is available from Amazon as well as stores specializing in clothing for hunting. View 10 Things You Should Know About ElimiTick™.
Imagine an agriculture field. Most are planted with row upon row of tidy cash crops. Now imagine that same field with rows of trees between the rows of crops. This forested field concept is called alley cropping. Alley cropping helps farmers diversify by growing long-term tree crops alongside short-term cash crops like wheat.

“For so long farmers have been taking trees off farmland,” said Josh Gamble, agroforestry researcher at the University of Minnesota Twin Cities, “So the idea of putting trees back on cropland is a little bit of a barrier.” Alley cropping is a type of agroforestry, which is the practice of combining crops and trees into one farming system. The dual income from the land can bring greater economic security to farmers.

“The idea is that it’s potentially a multi-use system, with more diversity and more function,” said Gamble. Alley cropping is not only useful for diversifying a farm’s income. Fields with trees capture more carbon than fields without trees. Trees protect the crops planted alongside them by providing shade and wind protection.

In addition, trees can provide a buffer between the field and nearby waterways. When a field floods, the water runs off with nutrients and soil, leaving the field less productive and the river more polluted. Trees can filter the nutrients and stabilize the soil on farm land.

Tree crops are used for a variety of products. Some, like pine, are grown for timber. Others, like hickory and walnut, can be used for nut production. Josh Gamble is interested in growing biomass, or trees and crops that are grown for heat and power production. Gamble and his team chose two fast-growing, hardy trees — willows and poplars — and planted them alongside a variety of native grasses.

Other supporting practices such as cover crops, tree and shrub site preparation and establishment, field borders, mulching, and conservation cover will also be available.

Join Us At Our Fall Field Day

Dennis Evans, President

I’m pleased to announce our fall 2016 meeting. This event is scheduled for Friday, September 30 and Saturday, October 1 in Blue Springs and Pleasant Hill. The meeting will cover several diverse topics to help you manage your woodland resources.

Topics during the field days include: Controlling Invasive Species, Our Declining Pollinator Population, Agroforestry in a Walnut Plantation, Edge Feathering, Room to Grow for Valuable Hardwoods, How Much is Your Tree Worth? From Logs to Lumber, Demonstration of Timber Stand Improvement, Impact of Soil Types on Tree Growth and Management, and viewing a Walnut Buying Station.

The full agenda is available online. Please RSVP via e-mail or call Aaron Twombly at 913-704-5210 by September 25. Note which days you plan to attend AND if you will attend the Friday evening meal.

Our agenda has been approved by the Society of American Foresters for continuing education credits. The SAF will award 9.9 hours for attending the conference.

We encourage you to invite your friends and neighbors to attend!

Agroforestry: Alley Cropping

New Agroforestry Opportunity from NRCS

Contributions by Nate Goodrich, NRCS State Forester and Joe Alley, NRCS Area Forester

For the first time ever, Missouri NRCS (Natural Resources Conservation Service) will offer a dedicated fund pool through EQIP in Fiscal year 2017 for Agroforestry and Woody Crop Establishment. Setting these funds aside for agroforestry will provide financial assistance to install the five traditional agroforestry practices: alley cropping, multi-story cropping, riparian forest buffers, silvopasture, and windbreaks/shelterbelts.
The willows, poplars, and grasses absorb excess nutrients, preventing them from leaching into waterways. The grasses are especially productive and absorb nutrients quickly. Because the grass is cut and removed from the land at harvest time, fewer nutrients are released back into the ecosystem. Additionally, the roots that remain after harvest help stabilize the soil and prevent erosion.

Gamble and his team wanted to find out which pairings of trees and grasses were most compatible. “Some species pairings work, and some compete against each other,” said Gamble. Poplar and prairie cordgrass were among the best-performing pairs, but Gamble said that might change. “These are only the first four years, so we’ll see what happens,” said Gamble. “We’re trying to think about long-term productivity and diversity.” The trees and the grasses have to strike a truce for alley cropping to work well. “There’s a fine balance between competition and sharing resources,” said Gamble. The challenge is selecting species that benefit each other. Warm- and cool-season species can benefit from the shade protection of trees to survive heat stress. It’s also important to plant species that match the condition of the landscape. If a field is prone to flooding, farmers should plant species that can survive wet conditions.

Alley cropping adds a certain amount of complexity to the day-to-day management of farms, which can make it unappealing to some farmers. However, Gamble said that alley cropping is one technique in a broad suite of agroforestry tools that improve ecosystem function and boost productivity.

To be considered for the 2017 EQIP Agroforestry and Woody Crop Establishment fund pool, producers must file applications by the first sign-up deadline which is anticipated to be in mid-November 2016, but that date has not yet been determined. Producers can submit applications at local NRCS offices.

Planning and technical assistance to establish these practices is available.

**EPA Will Not Regulate Logging Road Discharges Via Clean Water Act**

On June 27 the Environmental Protection Agency’s Office of Water submitted a notice in the federal register that it would NOT regulate storm water discharges from logging roads under the Clean Water Act. This decision was in a response to a court decree requiring the agency to consider whether the clean air act requires the agency to regulate storm water discharges from forest roads (logging roads and trails).

In the notice, the Agency pointed to a broad array of “state, federal, regional, tribal government, and private sector programs” that already exist to address the kinds of water quality problems the court decree was asking the Agency to regulate. The notice goes on to note that “the Agency has concluded that efforts to help strengthen existing programs would be more effective in further addressing logging road discharges than superimposing an additional federal regulatory layer over them.” The notice also points to the importance of quality logging roads for private woodland landowners as they work to “maintain economic viability and facilitate sustainable forestry.”

**Woodland Management TIPS**

*The following TIPS are offered by Betty Lowe (Joy Valley Tree Farm, Joy, Ohio)*

I live on my 3,000-acre certified tree farm located between Athens and Marietta in Joy, Ohio, which is in southeastern Ohio. I lost my better half last year, but I still oversee what happens in the forest. I have a part-time paid helper. We have planted a lot of walnut, white pine, oak, black cherry, and various other trees. My husband, Marshall, and I have planted seedlings from other nurseries, started seeds in our nursery, and have done direct planting, mostly walnuts.

Here is how I have direct planted black walnuts with good success:

- Select a growing site with rich, deep, well drained soils; preferably a site near a stream.
- Gather black walnut seeds in late autumn after the rubbery husks ripen to a bright, yellowish-green color. Collect the nuts from the ground avoiding any fruit with obvious signs of insect or vermin damage; such as large holes and black spots.
- Put on thick gloves before working with black walnuts. The husks will stain your skin dark brown.
- Walnuts require a period of cold stratification to enable germination in the spring. So planting in the fall will naturally do this for you.
- After gathering the appropriate volume of quality walnuts, select a FALL day when the soil at your site is damp but not hard. The soil should be firm enough to not allow squirrels to easily dig up the nuts you have just planted!
- Place 3-4 un-husked nuts in one spot on the surface of the ground. Use a small mallet to hammer these nuts into the ground about 2-3" below the soil surface. That’s it!
You should plant more nuts than you need to ensure a successful stand. You should see walnut seedlings emerging in early spring. These seedlings will grow well over a foot in the first season and maybe even two! You can always remove the weaker stems later retaining the best.

More TIPs:
- The excellent woodland management publication titled “Manual Herbicide Application Methods for Managing Vegetation in Appalachian Hardwood Forests” is available online.
- The USDA Farm Bill programs are available to help woodland owners like you do the activities you need to keep your land healthy. But what do you need to do to apply? Many federal financial assistance programs require a forest management plan, although you might be able to apply for funds to help you with the development of that plan. Your local USDA service center can work with you to identify and apply for the programs that are right for you.

Logging Can Decrease Water Infiltration Into Forest Soils, Study Finds

Decrease of water infiltration can cause erosion and negatively impact forest tree production

Written by MU News Bureau

Soil water infiltration, or the ability of soil to absorb water and allow it to move through different soil layers, is an important environmental factor in forests, especially forests undergoing logging operations. This property can affect how quickly those forests can regenerate after being logged. Now, University of Missouri researchers have found that logging operations can negatively affect soil density and water infiltration within forests, particularly along makeshift logging roads and landing areas where logs are stored before being trucked to sawmills. Stephen Anderson, the William A. Albrecht Distinguished Professor of Soil Science at Mizzou, says changing the soil density and water infiltration within forests can cause many different problems.

“We found that along these logging roads and landing areas, the soil was more dense and compact with slower water infiltration than in the surrounding, untouched areas of the forest,” Anderson said. “This can cause many environmental challenges in forests because dense soil prevents rainwater from soaking in; rather, this water will run off and cause erosion. This erosion can carry fertile topsoil away from forests, which enters streams and makes it difficult for those forests being logged to regenerate with new growth as well as polluting surface water resources.”

For their study, Anderson and his former graduate student, Langston Simmons, took soil core samples up to 40 centimeters deep from logging roads, log landing areas and logged areas in portions of the Mark Twain National Forest in Callaway County, Missouri. They found that the soil from logging roads and landing areas was more dense, had much slower water infiltration and lower water retention capacity than the areas of forest that had been logged. Anderson says this study shows the need for treatment of these impacted areas within logged forests.

“It is clear that even though logging companies can take precautions to prevent many types of negative environmental impacts from their operations, soil density and water infiltration are being negatively affected,” Anderson said. “It is important these areas of compacted soil be identified and treated to reduce soil compaction and prevent long-term effects on forest regeneration and production. It is in the land managers’ best interests to ensure that forest soils remain a healthy density because dense soil can lead to reduced tree production and poor wood quality for future logging operations.”

This study, “Effects of logging activities on selected soil physical and hydraulic properties for a claypan landscape,” was published in Geoderma.

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