

Missouri Chapter News

Walnut Council: Growing Walnut and Other Fine Hardwoods



A Word from the President:

Bob Ball



My two-and-a-half-year term as Chapter President has gone by quickly. I have enjoyed serving on this Executive Committee. Our members all share the same desire to inform and educate our members about establishing and managing black walnut and other fine hardwoods. Helping woodland landowners grow quality timber and

carryout woodland management practices is our passion.

We welcome **David Boyt** as our incoming President effective the close of our spring chapter business meeting **Friday, March 1st**. Dave is a longtime Walnut Council member, a woodland landowner, past member of the Forest and Woodland Association of Missouri Board of Directors and a current writer for "*Sawmill and Woodlot Management Magazine*". Plan now to attend March 1st and 2nd in Columbia. See the spring event announcement below and monitor our website for current conference registration details.

One strength of our chapter is the vast number of members with prior leadership experience either through their employment, personal businesses or through membership in various

organizations or groups. However, our challenge recently has been getting commitments from our talented members to volunteer and help lead the Missouri Chapter. Currently, we are seeking candidates for the positions of Secretary and President Elect. Our nominating committee, comprised of Dennis Potter, Scott Brundage and Wayne Porath, would like to hear from you! Please call our chapter phone number or send an email for more information about how you can serve as a chapter leader.

In closing, I want to express my heartfelt "**thanks**" to the Executive Committee, our four Regional Landowner Representatives and those members who have donated their valuable time to assist the chapter in carrying out our activities. Without your assistance, we would not have accomplished nearly as much.

Missouri TREE FARM
70th Anniversary Celebration
Hilton Garden Inn, Columbia, MO
Friday—Saturday, March 1-2, 2019

This Celebration will also serve as the Missouri Chapter Walnut Council's 2019 spring event. You are encouraged to view the Registration Brochure and register to attend. Our Chapter Business Meeting and election of officers will be held from 1 to 3 p.m. on Friday, March

Anniversary Celebration Saturday Session Topics

Registrants can select from four of the following:

- | | |
|--|--|
| <input type="checkbox"/> Invasive Species | <input type="checkbox"/> Wildlife Habitat Enhancement |
| <input type="checkbox"/> Timber Markets Present & Future | <input type="checkbox"/> Black Walnut Initiative |
| <input type="checkbox"/> Timber Stand Improvement & Cost Share | <input type="checkbox"/> Chestnuts & Ozark Chinquapins |
| <input type="checkbox"/> Tree Pests & Diseases | <input type="checkbox"/> Estate Planning & Succession |

Missouri Chapter Walnut Council Business Meeting

Will take place during the

Tree Farm Celebration

Friday, March 1, 2019

The Registration Brochure for the “Tree Farm Celebration” is distributed with this newsletter. Register early to ensure being able to attend the Business Meeting:



1 - 3 p.m.: Missouri Chapter, Walnut Council Business Meeting

To register online to attend this event, go to:
<https://forestandwoodland.org/treefarm/>

CONGRATULATIONS TO MIKE TRIAL, Walnut Council Life Member and Boone County Tree Farmer who recently received a 50-year Tree Farm certificate! For details see the Tree Farm Conference announcement.

Missouri Black Walnut Initiative Workshop

Will take place during the

Tree Farm Celebration

Saturday, March 2, 2019

10:00 - 10:50 pm. Concurrent Session - Period 1

Location: To Be Determined

Agenda

Introduction to Walnut Council and the Missouri Black Walnut Initiative: Bob Ball, President, Missouri Chapter

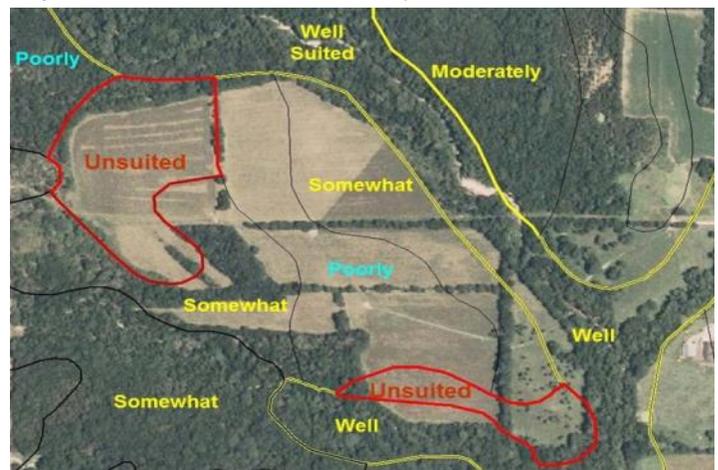
Converting Idle Acres to Land Equity: Harlan Palm, Past President Walnut Council

Potential Financial Assistance: Bob Ball

Role of Consulting Foresters: Harlan Palm

Questions & Answers: Audience

Figure 1: Black Walnut Soil Suitability Map



Upcoming Events

January 31, 2019: **10th Annual Agroforestry Symposium**, 8:30 AM - 6:00 PM, Bond Life Sciences Center, University of Missouri - Columbia.

February 1 - 2, 2019: **Missouri Nut Growers Association (MNGA) annual meeting and Nut Show**. For details monitor:
<https://www.missourinutgrowers.org/>

March 1 - 2, 2019: **Missouri TREE FARM 70th Anniversary Celebration**; Hilton Garden Inn, Columbia.

March 1, 2019; 1 - 3 PM: **Missouri Chapter Walnut Council Business Meeting**, Hilton Garden Inn, Columbia.

National Walnut Council Annual Meeting, June 16-19, Prairie Band Casino & Resort, Mayetta, KS. Monitor:
<http://walnutcouncil.org/events/annual-meeting/>

HERBICIDES FOR MEMBERS!

Members can purchase herbicides for timber stand improvement at our actual cost by contacting Scott Brundage, member and consulting forester: (brundage1934@gmail.com). For example, recently we have had **Generic Roundup** (Glyphosate Pro 4 - 41% glyphosate) for \$40.35 per 2.5-gal. jug.

Closer to the March meeting date, our herbicide order form will be sent to members by email.

Raise Black Walnut on Idled Land Along Streams and Creeks

Harlan Palm, Past President of the Walnut Council

More than 44 years of observations while managing black walnut on my tree farm as well as 28 other farms in northern Missouri helped lay the foundation for the **Missouri Black Walnut Initiative**. During that time, I have noticed several factors that influence the growth and quality of black walnut timber.

The walnut trees growing on my tree farm in Callaway County are uneven-aged volunteer walnut along a tributary of the Auxvasse Creek. The prior landowner pastured the Kentucky bluegrass. The creek bottom site had several nut-producing walnut trees, but few of those trees had potential to produce quality timber. With the change in land ownership, the land became idled pasture with no livestock. I pruned the volunteer walnuts and prevented the competition from other tree species. Although it may look nice now, I sure did it the hard way!



Figure 1: Harlan Palm, Past President of Walnut Council, estimating the length of a butt log in his Callaway County, Mo., black walnut plantation.

I also carried out timber stand improvement (TSI) for several farmers along four creeks in north Callaway County focusing on releasing scattered (but outstanding) walnut trees that were straight and limb-free for 20-30 feet, and those trees had never been manually pruned! On one farm, the scattered walnut trees were about 35 years old and were potentially producing veneer-quality logs. The walnut trees in the following photo were growing a little faster than surrounding hackberry, mulberry and ash. The low-valued

trees caused the walnut trees to grow straight and tall. Those surrounding “trainer” trees also shaded the trunks of the walnut trees, which caused natural pruning of the walnut. So, in this scenario, Mother Nature is producing premium quality walnut without manual pruning!



Figure 2: Straight and naturally pruned black walnut trees growing rapidly on well-suited soils.

I also conducted a three-year project supported by a USDA Natural Resources Conservation Service “Conservation Innovation Grant” (CIG) and the Walnut Council to demonstrate to landowners how they could increase the density of black walnut on recently idled or planning-to-idle land along creeks. The bottomland adjacent to a creek in Callaway County is apt to be Haymond, Landes or a similar silt-loam alluvial soil, which is well-suited for black walnut. Eroded hillsides or hilltops are less-suited for walnut.

Those acres were recently idled because small (2-6 acres) fields were too difficult to farm with modern, large equipment. A couple of the farms no longer had cattle, or they recently fenced their cattle out of the creek. The farmers felt remorse for wasting the productive bottomland soil on their family farm and were much relieved when offered the idea of raising black walnut - the most valuable trees Missouri can grow along a creek.

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I observed that even if the site had not been idled more than a year or two, there may already be some seedling walnut within about 30 yards of walnut seed trees along the edge. Typically, the stand of walnut seedlings can be augmented in void areas by heeling in walnuts in the fall or planting the nuts in the spring after vernalization in a pit. Another option is to plant some seedlings purchased from the Missouri Department of Conservation state nursery or various private nurseries in adjoining states. If you prefer to avoid a monoculture stand of trees, you can also plant some swamp white oak or northern red oak acorns or seedlings with the black walnut.

About 30 walnut trees scattered across each acre of creek bottomland is optimal at maturity and much better than the average density in timbered bottomland. Of all the creek bottomland I have worked, the density of black walnut ranges from 0 to 5 per acre with large areas being void of walnut but dominated by relatively worthless sycamore, cottonwood, soft maple and basswood. These four fast-growing species will need to be cut back or removed as soon as they start to dominate over the walnut. "Managing the Competition" is crucial to a successful stand of black walnut. Those fast-growing but far-less-valuable trees will train your young walnut to grow straight and tall, and over time, actually doing most if not all of the pruning for you due to shading.

Walnut veneer ranges from \$2.00 – \$6.00 per board foot or more, while the low-valued species bring 7 – 25 cents. Which would you rather grow on these isolated areas along the creek on your family farm? Planting black walnut on these sites provides long-term farm income that will benefit future generations!

Photo Captions: These natural regeneration walnut trees have potential to someday develop into prime veneer logs like the tree in the photo to the right. You must **manage the competition!**

To learn more about the "**Missouri Black Walnut Initiative**" and other activities within Walnut Council, plan now to attend the **Initiative Workshop** during the "**Missouri Tree Farm 70th Anniversary Celebration**" on Saturday, March 2, 2019, at the Hilton Garden Inn in Columbia.

Register at: www.forestandwoodland.org/events



Managing Walnut Trees by the Numbers

Michael Williams, Member, Missouri Chapter

John Kelsey, Member, Ohio Chapter

Introduction: I received the following summaries from Michael and John via email. From time to time, our members share reports with me about activities at their tree farm. You will see from reading this report these members are very thorough in their plantation management! Members with similar interests seek out other Walnut Council members to discuss various techniques and methods of growing trees. This dialogue is a good example of the kind of topics that are often covered in these conversations. The mentioned attachments with these messages were omitted. —Bob Ball, President.

Michael Williams:

I started planting walnut, pecan, tulip poplar, white oak, swamp white oak and cypress trees on my Howard County farm in 2004 with either MDC bare-root seedlings (all varieties) or self-collected seed (walnut and pecan only). The DBH of all walnut trees is measured and recorded each year, usually during Nov/Dec. I keep detailed year-to-year spreadsheets of crown competition factors (CCF) on whole plots plus 3x3 tree subplots so I can assess plantation and individual tree crowding. I heavily thinned in winter 2017 using a hybrid of John Kelsey's thinning program and results of "best-of-3" tree assessments walked in multiple directions to minimize directional bias and tentatively identify crop trees.

In December 2018 I finished walnut pruning and measurement census in one plot (N = 262). The average DBH growth for 2018 was 0.38 +/- 0.14 inches. This mean is 93% of the norm, a pleasant surprise given the drouthy year. I expected much less growth. The average DBH in this plot is 6.5 +/- 1.4 inches. I've not taken height measurements, but I believe this site index is about 70 (bottomland) given past anecdotal observations. Trees in this plot range in age from 9-16 years; this age difference grossly exaggerates standard deviation measurements. After a harsh thin in late 2017, plus addition of 2018 growth, the plot mean CCF is 60; however, the older-tree subplots are CCF = 70, my target. Younger subplots that were minimally thinned or not thinned at all low-biased the CCF of the entire plot. If the mean annual DBH growth persists, my next thin will be in 10-12 years when the CCF is about 120. My annual CCF increase is about 4-5 CCF units, although this value needs refinement with more years of data.

John Kelsey:

Attached is the data from our 2018 black walnut growth survey - a sample of 55 trees. The diameter growth was .38" and the basal area growth was 10.5 sq.in. - both slightly better than our measurements for the last two years. This year, we measured the crown of each tree. The spreadsheet includes plots of diameter growth and basal area growth vs. measured crown area.

I also computed a column for something like growth potential (GP): that is, the measured crown area divided by the max crown area for its DBH. A GP of 1.0 means the tree's crown is about as big as it can get for its DBH. A GP of 0.5 means its half the size it could be and supposedly growing at half speed. GP is basically like the inverse of crowding. A GP of 0.5 is like CCF of 200%, but for a single tree instead of an entire plot. Krajicek says there is a hard limit at a CCF of 200%. Plots more crowded than 200% CCF just start losing trees. In other words, in our notation, trees with GP less than 0.5 are at risk. In the spreadsheet, I have colored the trees that are mortally threatened.

All the trainers in this plot were recently killed, so I think the small crowns are left-over from being crowded, need to recover and expand, and are not in need of release.

Incidentally, this plot is 23 years old and is 54 feet tall. Using the usual chart, that's a site index of 80. They should be 80 feet tall at age 50. They have 26 feet to go and 27 years to go, so they should continue growing about a foot taller per year.



About Missouri Chapter News

Missouri Chapter News is distributed to members of the Missouri Chapter of the Walnut Council. The newsletter is intended to keep members 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 Bob Ball, Newsletter Editor. During the year, we will also distribute "technical articles" on specific topics of interest to woodland landowners. Both the newsletters and technical articles are also being archived at our [chapter website](#).

Forest Thinning

Missouri Department of Conservation

Forest thinning may be the appropriate management tool if you want to improve timber production, increase wildlife or grow vigorous, healthy trees on your property. Thinning rates for your wooded area depend on your objectives and the type of wooded site. Depending on current condition and trees per acre, different types and amounts of thinning may be necessary to improve a forest stand or create a more open woodland.

There are basically two general types of forest and woodland thinning: commercial and noncommercial. A commercial thinning, or timber harvest, is an excellent forest and wildlife management tool if it is planned and administered properly. If the trees to be thinned are of marketable size and quality, they can be selectively sold and removed from the stand to achieve your management goals. Income from the sale can be used to accomplish other habitat projects.

If a timber harvest is not an option, then a noncommercial thinning, or timber stand improvement (TSI), can be performed to achieve many of the same results.

To learn more about Forest Thinning from the Missouri Department of Conservation, visit:

<https://mdc.mo.gov/property/improve-my-property/habitat-management/forest-and-woodland-management/forest-thinning>



Private Lands Conservationist Mike Gaskins and Shannon County Landowner Ron Graef discuss timber stand improvement.



Thinning competing hardwood trees can include a timber harvest to remove maturing trees (see photos to the left and above) where marketable trees are removed from the stand to stimulate the growth of the next generation of timber growth by reducing their competition for sunlight, moisture and soil nutrients.