A Word from the President:
Bob Ball

Our vast knowledge in Walnut Council about growing and managing black walnut and other fine hardwoods is held, largely, by our members. The organization is trying to capture that wisdom through formal publications, technical articles, fact sheets, and smaller informational articles within our newsletters. Very likely the answer to your unique management questions is available. The key is finding those members who can help you or finding a publication they authored maybe years ago. We are taking steps to make those searches easier.

A little known feature at our website is a listing of “Technical Articles” where we have listed short articles on specific topics such as pruning, landowner liability, tricks of the trade, and woodland management. Look for additions to that section in the weeks ahead.

Recently, I have pulled together a select group of members now referred to as the “Hardwood Tree Establishment Working Group”. Our objective is to determine a stocking level to grow veneer black walnut efficiently and economically. Our members, and landowners in general, look to our organization as a source of information on how to establish plantations of hardwood trees. However, over the 48 years Walnut Council has been in existence, we have learned so much and not all of that knowledge has been published. Our Working Group is attempting to pull together what has been learned over time and pull that guidance into a fact sheet you can easily refer to when planning. Look for more on this topic elsewhere in this issue!

Our Chapter’s fall event October 5/6 in the Southwest Region attracted 37 people Friday with 20 attending our business meeting Saturday. My “Thanks” to our hosts Andy Thomas and Dennis Evans for handling local arrangements! Highlight photos are on page 6.

I am continually amazed by the expertise and special skills of our new members. And, as busy as these folks are, they all have plans to do something sustainable on their own lands for future generations. As you can, I encourage all our members to get involved in the operation of this Chapter because we need your talents and your ENERGY!

Below: Dennis Evans explains two tree planting options he used to establish his hardwood plantation.
The objective of the working group is “establishing a stocking level to grow veneer black walnut efficiently and economically”. Our intended outcome is a document our members can refer to in their planning process that provides the pros and cons of various planting options.

Factors taken into consideration in this publication must include: the capabilities and resources of the landowners carrying out the plantings, the size of the planting area, and the planting options. We know from the literature and talking with experts that stocking levels influence the form of the tree stems, crown shape, lateral branching, and growth rates. Higher density plantings provide “trainer trees” that help ensure the crop trees grow straight and tall. Limited sunlight due to tighter crowns reduces branching which then minimizes the need for pruning and herbicides to control competing grasses. The literature seems to indicate higher density plantings can reduce growth rates somewhat so there may be trade-offs. Growing high quality walnut trees is not easy nor inexpensive! Trying to balance the current costs of production to grow veneer logs for harvest in 50-70 years that could be worth $25,000—$60,000 or more per acre (assuming 30 crop trees per acre at harvest time)...is not a simple process. Planting trees on a 10’ x 10’ spacing may not be your best planting option. Yet, that spacing has been a standard for years.

A select group of Missouri Chapter members have been talking on this subject for many weeks. Our dialogue continued November 2nd and 3rd at the Black Oak Ranch hosted by members Jim and Schatzi Ball, Central Region Tree Farmers of the Year in 2017. Jim serves as the Northwest Region Landowner Representative for the Missouri Chapter and Chairs our Advocacy Committee. Members attending this working group session included: Harlan Palm, Dennis Evans, Matt Renkoski, Luke Skinner, Fred Crouse, Scott Brundage, and myself. Working Group members Dennis Potter, Jerry VanSambeek and Hank

**Upcoming Events**

- **November 12, 2018. Invasive Plant Workshop**, 6:30—8:30 PM, Boone County Extension Center. Join the USDA Forest Service, University of Missouri Extension, and partners for an information packed workshop on invasive plants of Missouri. Discussions on:
  - The ecology and importance of Missouri’s forests
  - How to identify and map invasive plants in Missouri
  - Native alternatives to invasive ornamental plants

  To RSVP or for more information contact Dacoda Maddox at (573) 875-5341 ext. 234 or DacodaMaddox@fs.fed.us.

- **January 31, 1919. 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/](https://www.missourinutgrowers.org/)

- **March 1 - 2, 2019, Missouri Woodland Conference**, Hilton Garden Inn, Columbia.
Missouri Black Walnut Initiative – Why it began.
Harlan Palm, Past President

My 44 years of observations while managing black walnut on my tree farm as well as 28 other farms in north central Missouri helped lay the groundwork for the Missouri Black Walnut Initiative. Over those many years, I noticed several factors that seemed to influence the growth of black walnut:

The walnut trees growing on my tree farm in Callaway County are uneven aged volunteer trees along a shallow creek. The previous landowner pastured the Kentucky bluegrass. The creek bottom site had several nut producing walnuts. Due to change in land ownership, the land was idled, and I managed the walnut and controlled the competition from other tree species. While it may look nice now, I sure did it the hard way!!

Timber stand improvement (TSI) was carried out for several farmers along four creeks in north Callaway County focusing on releasing scattered but outstanding walnut that were straight and limb free for 20-40 feet. Those trees had never been manually pruned!!! On those farms I did a two-year study in which I compared intense TSI killing of every tree except uneven aged volunteer walnut versus felling everything but volunteer walnut. Commercial logs were sold to illustrate the relatively low value of a routine timber harvest versus the potential of a managed stand of walnut timber.

I soon realized the best method of increasing the density of walnut was clearing everything but the walnut. The “full sunlight” supported growth of additional walnut seedlings unable to grow in the shade of the competing tree canopies. I also conducted a three-year project supported by a USDA-NRCS Conservation Innovation Grant (CIG) and the Walnut Council to demonstrate to landowners how they could increase the density of black walnut on recently idled land along creeks.

I used the University of Missouri’s aerial imagery to locate potential small tracts along creeks that appeared to have recently been idled. I then superimposed the soil classifications over those aerial images. If it was Haymond or Landes Silt Loam, I got excited!!!

In talking with the landowners, about half were interested in hosting a study. The reasons the land was recently idled was because their small tracts (2-6 acres) were too difficult to get today’s large equipment into the small irregular crop fields. The soils were very well-suited for black walnut. The landowners felt remorse for wasting the productive bottomland soil on their family farm and were much relieved when offered the idea of raising the most valuable trees Missouri can grow. A couple of the farms no longer had cattle, or they recently fenced their cattle out of the creek versus fenced along the creek in the past. Change of ownership and land use was very common.

I observed that 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 a seed tree along the edge. Typically, the stand of walnut seedlings can be augmented by heel ing in walnuts in the fall or planting in the spring after vernalization in a pit. Another option is to plant some seedlings. The only “failure” I had in the CIG Project was a location with perennial tall fescue and smooth brome. I was not able to get back to the site in a timely manner with systemic post-emerge grass herbicides.

During the last couple of years on a portion of one site, I have been trying to duplicate what Mother Nature has done for ages. I am trying to “Manage the Competition” from all other young trees growing adjacent to the walnut. On well-suited sites, walnut can keep up with or surpass most common hardwoods such as elm, hackberry, box elder, mulberry, hickory and oaks. Walnut cannot keep up with sycamore, cottonwood, basswood and soft maple. On an annual basis, simply cut the leader off anything that is starting to surpass the walnut crop tree. I have to discipline myself to not kill the sycamore or whatever is overtaking the walnut tree. As the junk trees approach 15 feet, cut them off at about 5 feet. Multiple leaders will emerge, but they are all shorter than the walnut for a year or two and then cut off the main stem even lower and treat the stump. The point is that all this tight competition shades the lower branches and they die and cleanly shed from the stem.

I am now convinced more than ever that landowners can convert seedling black walnut trees growing on their idle lands today into quality walnut trees for the future!
Soils are distinctive, as different from each other as robins are from blue jays. (USDA NRCS, Public Domain)

WASHINGTON — "Soil don't get no respect."

Rodney Dangerfield might have said (but didn’t). Perhaps you know your state bird or flower, but do you know your state soil?

Well, in recent years soil has begun to get more respect. Since the celebration of the Soil Survey Centennial back in 1999, each state has been given its own official state soil. It was in 1899 that the U. S. Department of Agriculture started its survey of all the soils in the country.

SOILS COME IN MANY ‘FlavourS’

You might wonder what a “soil survey” really is. Isn’t it all just dirt — some perhaps stickier, or redder or deeper — that lies beneath forest, meadow, farm, home and garden?

There you go again. Not enough respect. In fact, soils are distinctive, as different from each other as robins are from blue jays. These differences are hard to appreciate, of course, because soil is mostly underground, hidden from view. But if you were to dig some holes a few feet deep and then look carefully at their inside surfaces, you would find that soils are made up of layers of varying thickness, called horizons. One soil might differ from the next not only in the thickness of its horizons, but also in their appearance and feel.

Horizons might be as white as chalk, as red as rust, or as dark brown as chocolate. A horizon might be cement-hard, gritty with sand, or stuff for sculpture. And if you were to tease the dirt along one edge of the hole so it falls away naturally — wow! — each horizon would reveal its particles clumped together in arrangements like plates, blocks or prisms. Such information, and more, has allowed soils to be classified, much as birds, flowers and other living things.

CLASSIFYING SOILS

Modern soil classification goes back only a few decades, when all the world’s soils were grouped taxonomically into a dozen “orders.” Differences among orders reflect the formative influence of a particular combination of climate, plants and animals, topography, time and original rock material.

Just as all vertebrate animals are huddled together by biologists into smaller groupings (mammals, say) and those groupings into still smaller ones, so each soil order is...
divided and subdivided to include more distinctly different soils. At the end of the dividing and subdividing, you end up with a “soil series” identified with a proper name — like the Haven series in my vegetable garden, for example.

YOUR STATE’S AND BACKYARD’S SOIL
A particular soil becomes an official state soil by being widespread within the state; being distinctive chemically or physically; having some degree of name recognition; and, of course, getting a legislative stamp of approval. Examples include soils like West Virginia’s Monongahela soil, Texas’ Houston Black soil, California’s San Joaquin soil and New York’s Honeoye soil.

The job, now, of these “ambassadors” of the benevolent underworld is to rekindle awareness of soil’s value as a natural resource that can only be renewed very slowly. Soil provides food, shelter, clothing and more, yet it is being lost at alarming rates to everything from blacktop to erosion.

Out in the garden this spring, dig a hole deep and wide enough that you can see and appreciate at least some of the various and distinctive horizons.

Then, if you want the name and a detailed description of that soil — or any soil — look at the maps and descriptions in the Soil Survey Reports issued by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). Search online for “soil survey nrcs” and you’ll find links to soil maps for counties throughout the U.S. Or go to the link to “web soil survey,” At this site, you can type in a street address around which you “draw” your area of interest (AOI). The site will delineate the names and descriptions of soils within that AOI.

So, what is the state soil in Missouri?

**Menfro Silt Loam**

Woodland Invasives

Soil grows invasive species too, and it doesn’t discriminate. Soil grows our good plants, but it also grows the bad ones! Virtually all of us are plagued by common woody invasives like: autumn olive, bush honeysuckle, Japanese honeysuckle, euonymus, multiflora rose, ailanthus (Tree of Heaven); plus, the vegetative species like garlic mustard, sericea lespedeza, Smilax (roundleaf greenbriar) and Japanese knotweed.

An excellent publication for applying herbicides to woody species is “*Manual Herbicide Application Methods for Managing Vegetation in Appalachian Hardwood Forests*”, General Technical Report NRS-98 published by the USDA-Northern Research Station of the U.S. Forest Service. We may have a few extra copies available.

You can purchase herbicides for timber stand improvement at our actual cost by contacting Scott Brundage, member and consulting forester: (brundage1934@gmail.com).

Scott says we have Generic Roundup (Glyphosate Pro 4 - 41% glyphosate) for $40.35 per 2.5-gallons jug.
Missouri Chapter, Walnut Council

Fall Event
Field Days and Business Meeting
October 5-6, 2018
Mt. Vernon, Richey & Pierce City, MO

*Event Photos*

Andy Thomas, Research Assistant Professor, Southwest Research Center, Mt. Vernon explains the complexities of growing black walnuts for commercial nut production.

Andy Thomas, left, and Josh Abercrombie, below, “Hammons Black Walnuts”, explain the operation of this prototype nut harvester developed by Hammons.

Dennis Evans demonstrating how he prunes his black walnut trees.