



A Word from the President: David Boyt



It is amazing to think that just a year ago, we were planning the spring meeting, which was cancelled, and that this year's spring meeting - as well as the National Walnut Council meeting - has also been called-off. Our family missed the annual family gathering and multi-generational work days out in the woods last year, but we hope that the tradition will resume with gusto in 2022. Still, there is a lot of work to do out in the woods. The next couple of months are ideal for pruning, thinning, and trail clearing. Fortunately, this work can be done even when the ground is too soft to have heavy equipment out in the woods.

Does this happen to everyone, or is it just me? Things go along fine, then an unlikely sequence of events puts all the equipment out of service. In the space of two weeks, a log flipped up and broke off the fuel filter on the tractor. The broken fitting has SAE threads on one side and metric on the other, and even the Case-IH dealer has no idea where to get one.

Then, I rolled a log on my trusty Husq 365 to be followed by shredding the timing belt on our car. Fuel pump on the truck went out, requiring the removal of the bed to replace it. I'm still trying to untangle the spaghetti wiring mess to the tail lights.

This is a good time to catch up on reading and on-line learning. Bob Ball recently pointed out that the University of Missouri has an excellent selection of YouTube videos which you can find by searching for Mizzou Agroforestry. The site goes well beyond agroforestry, and includes information on everything from sustenance gardening to growing chestnut trees. A great way to stay connected when the weather and short daylight make it impractical to work outdoors.

While surfing YouTube, check out the Walnut Council webinar series which features videos on Timber Markets, Thinning Plantations, Forest Health Issues, Soils & Sites, Invasive Shrub Control, and **"Ask the Experts"**.

Hopefully, we are through the worst of the winter and, though we'll likely be slogging through the mud, on our way to a season of reawakening and renewal. My best wishes go out to those who are dealing with the COVID-19 virus, either personally or with a friend or family member. One more YouTube recommendation: **"The Keep Going On Song"** by the Bengsons.

A quick Get Well to Missouri Chapter member, **Wayne Porath**, who recently had hip replacement surgery and then, if that were not enough, he just underwent shoulder replacement surgery. We wish Wayne our best during recovery!

Memorials

Sadly, we have recently lost three long-time members: Bruce Beckmann, Chesterfield; John Johnson, Horsecreek Tree Farm of Galena; and Scott Brundage, Columbia, who was Past President of both Walnut Council and the Missouri Chapter. Our sympathies to the Beckmann, Johnson and Brundage families.

They Need to Chill – Turning Seeds into Trees

LEE REICH, Associated Press

NEW YORK — How exciting to think of a full-size tree locked up within each seed still clinging to the branches of sugar maples, hornbeams, oaks, sycamores and other trees at the end of summer.

It was with such visions that I dropped an apple seed into some potting soil in an 8-inch clay flowerpot one autumn day years ago.

I wish I could write that the seed has now been transformed into a majestic tree. But no, the seed germinated, started to grow, then stalled at about 4 inches high. The reason for the lack of growth was that apple seeds, like the seeds of many other trees native to cold climates, need pre-treatment before they will germinate or grow well. I was lucky the seed germinated at all!

Since then, I've learned the tricks of growing trees from seeds.

FOOL THE SEED

If an apple or maple seed grew as soon as it touched ground in late summer or early fall, the life of the tender young seedlings would be short indeed, snuffed out with the first frost. So most tree seeds that ripen in fall are able to stay dormant until they're convinced that winter is over.

You can fool such seeds into growing sooner by keeping them cool and moist for a couple of months. Pack the seeds into plastic bags with moist potting soil, then put the bag in the refrigerator or garage. This process is called "stratification" because nursery growers used to do it by alternating layers of seeds with layers of soil in boxes. Of course, you could also just sow seeds directly outdoors and let them wait out the winter naturally, but then they face hazards like squirrels, birds, flooding and more.

It is cool, not cold, temperatures that awaken a seed from sleep. Hours of chilling accumulate only when it's between about 32 and 50 degrees Fahrenheit. So chilling might begin in autumn but not finish until late winter or spring, thus reducing the likelihood of a seed sprouting during a February warm spell. Or all the chilling might take place in late winter or spring.

FURTHER CONSIDERS IN SEED GERMINATION

Some seeds have a hard coating which must be made permeable to water before the seed is stratified. One way to let water into redbud, juniper, hornbeam and other hard-coated seeds is to nick them with a small file. Dank warmth will accomplish the same thing as nicking with a file. Pack the seeds into plastic bags, as directed above, but leave them in a warm room for two or three months before stratification.

Sycamore and catalpa are among the few fall-ripening seeds that don't need stratification. Perhaps this is because they hang on the trees late enough into winter so that, by the time they drop to moist ground, temperatures are too cold for germination. Or else it is spring, and just the right time for germination.

SPROUTING IS THE FIRST STEP

Stratified seeds usually sprout as soon as they have accumulated the number of chilling hours they need. For sugar maple, that means three to four months; for dogwood, four months; for apple, two to three months. Keep an eye on stratifying seeds, because one week they'll be asleep and a week later — bingo! — they're sprouting fat, white roots. Once seeds sprout, either pot them up or keep them cool enough to hold back growth until it's time to plant them outdoors.

You might wonder, why go to the trouble of planting these seemingly delicate seeds when you can just buy a sturdy young tree at a nursery? Hey, you're reading this, aren't you? You're a gardener; you like to grow plants. Not to mention the satisfaction you'll get years from now as you look up into the branches of a tall tree you planted from seed.

DID YOU KNOW?

- More than **20%** of the world's oxygen is produced by the Amazon rain forest.
- Surfaces shaded by trees may be **20-45 degrees F cooler** than the peak temperatures of unshaded areas.
- Trees help **reduce** crime. Among minor crimes, there is less graffiti, vandalism, and littering in outdoor spaces with trees as part of the natural landscape than in comparable plant-free spaces.
- More than 180 million Americans receive quality drinking water from forested watersheds.
- One large tree can provide a day's supply of oxygen for up to 4 people.
- Trees **increase** property value. Within a 10-month timeframe, homes with street trees in Portland, Oregon, sold for \$7,130 more and 1.7 days more quickly, on average.

Black Walnut Pruning Guide

Proper pruning of young black walnut trees can potentially increase log value 10 to 20 -fold. The objective is to develop a straight, single-stemmed tree with a solid trunk free of side branches up to 10 to 24 feet, depending on site suitability for walnut. Complete the pruning by time the stem is no more than 3 to 5 inches in diameter.

General

- Prune during the dormant season (late November to early March) with January and February being the best timing.
- Use good quality and sharp clippers, pruning saws, and telescopic pole pruners with the cutting blade and saw blade combination.
- After confirming the lower stem on young trees is healthy and undamaged, make pruning decisions starting at the top and work down.
- Assist the central leader by assuring its tip or apical bud is taller or higher than any other leaders or branches that are competing for dominance. Totally remove or at least tip-prune any competitive leaders.
- Then look for the largest branches and remove no more than 1/3 of the leaf area per season.
- Do not prune flat to the stem. Instead, make an angled cut just outside of the branch collar so that the wound is about the same diameter as the branch. Do not leave stubs.

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Nutritional Value of Ozark Chinquapin Acorns Compared to Other Species

Mast Species	Protein	Carb.	Fat	Pot.	Cal.	Mag.
Ozark Chinquapin <i>Castanea Ozarkensis</i>	15.2%	61.07%	13.93%	.77%	.15%	.18%
White Oak <i>Quercus Alba</i>	4.6%	46.60%	2.90%	.08%	.22%	.05%
Scarlet Oak <i>Quercus Cocinea</i>	4.2%	35.60%	14.60%	.07%	.18%	.07%
American Chestnut <i>Castanea Dentata</i>	5-8%	43.00%	3-5%	n/a	n/a	n/a

About "Missouri Chapter News"

Missouri Chapter News is distributed to members of the Missouri Chapter, Walnut Council and selected guests. 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 being archived at our [chapter website](#).

Weed Control and Killing Toxic Fescue

Jim Ball, Member, Caldwell County

Killing fescue is so critical in establishing hardwood trees I thought it might be timely for Jim Ball to update a similar article he wrote a year ago. It is appearing early enough you have every opportunity for treating fescue prior to "bud break".

(Bob Ball, Editor)

During our 2019 fall Missouri Chapter Walnut Council meeting Jerry VanSambeek and I tag-teamed a presentation entitled "**Killing Toxic Fescue**". Jerry told us about the research which illustrated that fescue in combination with walnut trees (and probably all hardwood trees) is a sub-optimal idea. I gave a presentation about how to go about killing the fescue. The bottom line was if you want the best possible growth for your hardwood trees, control the weeds and especially fescue. We showed a photo (reproduced here on page 3) that illustrates the point. The photo is from a University of Missouri Center for Agroforestry research project carried out at the Southwest Research Center near Mt. Vernon between 1975 and 2002.

Jerry and I emphasized the need to control fescue because of its toxic nature and its vigorous appetite for nutrients, but other sod forming grasses such as Brome and large broadleaf weeds can also be a problem and should be controlled. Luckily, we have herbicides today considered safe to use that will control these pests if used at the right time of year and properly applied.

I approach this from the standpoint of two separate categories where the problems and solutions are different. One situation is with very small trees and the other is where the trees are big enough where glyphosate and some other contact herbicides can be applied without getting on green bark and/or foliage.

There is an excellent paper from Kansas State University that lists a number of herbicides and describes their efficacy along with precautions at www.bookstore.ksre.ksu.edu The title of the paper is *MF6565 Chemical Control in Tree Plantings-KSRE*. Please note the date of this paper is 2006,



Oust sprayed on dormant fescue (and dormant trees) will result in live trees and dead fescue.

In all cases be sure to apply herbicides at least out to the drip line of the trees regardless of their size. The photo above shows one example of proper spraying techniques.

SMALL TREES

Depending on where your trees are in Missouri and when you are going to treat for fescue, there may be two different situations to consider. In most of Missouri bud break will not happen for several weeks, but the first sign to watch for is bud swell when new tender tissue might be exposed. Once this happens, it is too late to apply any "**contact killing herbicide**" where it might hit those buds. Some grasses will likely have sprouted by this time, but to be on the safe side, consider it is too late to apply glyphosate or some other contact herbicide after bud swell. There are grass herbicides such as *Fusilade II* that can be sprayed over the top of trees after bud break. Those products also include warnings on the label about using them on very small trees and on tender foliage.

In this situation there are some pre-emergent herbicides that can also be used to prevent more germination, like Princep 4L liquid herbicide, but again some caution and paying attention to the labels is important.

See Toxic Fescue - Continued on Page 5.



Tall fescue can significantly reduce tree growth and nut production. The “No Fescue” tree row is growing here in Kentucky bluegrass after fescue had been excluded from the row for 15 years.

There are warnings on some labels about possible foliage damage to very small trees. You should read them carefully and weigh whether the advantage of weed control is enough to risk some foliage damage. I try to avoid this situation, if possible, by treating before bud swell, but I have have sprayed over the top of trees with little apparent foliage damage. If at all possible, avoid spraying over *newly planted* trees. At a minimum make sure the planting slits have closed so that no spray gets on the tender little roots.

A common pre-emergent herbicide used to control grasses around trees is Princep 4 which is a liquid product that uses simazine as an active ingredient . It is NOT a contact herbicide. It is relatively safe to use around smaller trees, but it has a milky like consistency that needs some agitation. I have never had any problems with an ATV mounted sprayer using Princep even without an agitator. Vehicle mounted sprayers likely have enough sloshing around to avoid the Princep from coming out of suspension. Backpack sprayers may need periodic shaking to ensure an even flow of herbicide.

If bud swell has not happened yet, but cool season grasses are starting to grow, this is an excellent time to apply herbicides with a contact killing chemical (like glyphosate) or a combination contact and pre-emergent herbicide.

I generally use **Oust** prior to bud break and even prior to any obvious “green up” of the grasses because it is dual action, i.e. both a pre-emergent and a contact herbicide.

Oust is effective in killing even dormant appearing fescue. You should avoid putting it on frozen ground because of the potential of runoff. In North Missouri, I can usually start putting it on in late February or very early March. See the photo on page 4 of an application I did two years ago prior to bud break that shows the effectiveness of Oust.

According to how vigorous the weed competition might be later on with species like giant ragweed or mares tail that can overgrow and shade the little trees, you may want to consider a second spraying of a pre-emergent about 45 days after the first application. Most pre-emergents continue to be effective for only about 60 days, so plan accordingly. I failed to do this two years ago on a couple of small CSP plots and, as it turned out, it was a very prolific year for weeds. By midsummer, those weeds overshadowed what had looked like a perfect stand of trees and, by fall, resulted in probably the worst survival rate I have experienced in my 29 years of tree planting. I ended up replanting the trees.

LARGER TREES: Meaning those trees having enough bare brown bark where herbicide can be sprayed and not be in contact with foliage.

We have more spray options with larger trees. You can apply pre-emergent herbicides any time that common sense and the labels tell you is appropriate. You can apply contact herbicide like glyphosate, anytime you like, but keeping the spray off the foliage. It is better to spray after the grasses have started to grow. Just do not spray so late you could kill the late budding broad leaf species that are not especially harmful to trees. Those species of weeds help prevent erosion and they have wildlife benefits. For me there seems to be enough seed in the seed bank of rag weed and foxtail millet that fits the bill.

STUDY THE LABELS

All herbicides mentioned here have labels on the container. Labels include pertinent information on safety, which weeds are controlled and how, the recommended dosage, and issues relative to protecting your trees.

See Toxic Fescue - Continued on Page 6

The dosage will usually be expressed in ounces per acre which is used for electric or PTO driven sprayers with booms. If you are going to use this volume formula, it is necessary to calibrate your sprayer which is not difficult, and the instructions are readily available.

However, if you are using a hand-held sprayer powered by an electric pump, like on an ATV or even a manual sprayer like a back-pack or pump-up sprayer, follow label rates for **“Hand-held % Solution”**. Often those labels provide different percent solutions for different targeted species. You may also find the percent solutions for different weed heights. Be sure and read the whole label not just the tables. If the grasses are small you may be able to cut back on the amount of herbicides illustrated in my sample below.

A **Tomahawk** brand label of glyphosate has 53.8% active ingredient and, for instance, calls for a 1.5% solution (in water) for fescue. Simply multiply the volume of water in your spray container, say 15 gallons, convert it to ounces = 1920 oz. Multiply 1920 X .015 to get the number of ounces of Tomahawk = 28.8 ounces or less than 1 Quart. The **Tomahawk** label also gives examples to help you determine how much of their product to use.

In all circumstances you should study the label and follow label warnings and recommendations. I also suggest adding a small amount of surfactant to improve efficiency, but you should check with your chemical supplier for their recommended dosage. Some labels include a suggested percent of surfactant to include, but many labels do not mention surfactants.

TIME IS OF THE ESSENCE

Spring is coming, and it will be here before you know it. The time is also nearing for you to be using herbicides to help **maximize the growth of your hardwood trees by killing toxic tall fescue.**

[USDA Offers New Forest Management Incentive for Conservation Reserve Program](#)

WASHINGTON, Jan. 19, 2021 – The U.S. Department of Agriculture (USDA) is making available \$12 million for use in making payments to forest landowners with land enrolled in the Conservation Reserve Program (CRP) in exchange for their implementing healthy forest management practices. Existing CRP participants can now sign up for the Forest Management Incentive (FMI), which provides financial incentives to landowners with land in CRP to encourage proper tree thinning and other practices. Contact your local USDA Farm Service Agency (FSA) office for details.

(Continued from Page 3)

Black Walnut Pruning Guide

Seedlings (< 1 inch in diameter)

- * Resist unnecessary pruning the first couple years.
- * Prune only to develop a single straight central leader.

Saplings (1-3 inches in diameter at breast height, DBH)

- * Prune to maintain the single straight central leader.
- * If a fork exists, save the shoot that is most vertical. Assuming they are nearly identical, save the one that has a strong lateral branch underneath which will influence the remaining single leader to straighten up. One-year old leaders will straighten up considerably, but two- or three-year old wood is too rigid to straighten very much. A splint can be taped to a leader to support and straighten a crooked leader.
- * If a tree is hopelessly crooked, coppice or cut off near ground level and start over. The root collar and strong root system will produce multiple sprouts the following season. After a couple of years, select the straightest and most erect sprout. Gradually, over time, eliminate the others.

**For More on Pruning Hardwood
Trees go to:
[Missouri – Walnut Council](#)**