

Walnut Council

Maryland Chapter Newsletter

Fall/Winter 2019

Volume 26, Issue 1

Everything You Need To Know About Forestry

David Robbins

Most Walnut Council members probably have a Forester who comes by every few years, looks at their property, and makes some recommendations. But do any of us really know what they are doing?

Well...Come to the Maryland Chapter Fall workshop, and you can find out!

We will be hosting a “Forestry 101” demonstration at our Fall Workshop, where you’ll get the opportunity to learn about the fundamental tools and concepts of the forestry trade. Basal area, stocking, poles, prism plots, increment bores...These terms may mean nothing to you now, but come to the Workshop and they will all be explained!

Forestry is a scientific discipline dating back to the 13th century in Portugal, the 14th century in Germany, and the 16th century in Japan. The first forestry school in America was founded in 1898, at the Biltmore estate in North Carolina. However, forestry is as much an art as a science.

Over the past 120 years, the forestry profession has grown in size, sophistication, and knowledge.

Inside This Edition...

President’s Message	....	1
Glyphosate Q & A	....	2
From Trash to Trees	....	3
Fall Workshop Details and Registration	....	insert
Upcoming Events	....	7



More notably, however, forestry has adapted to an ever-changing physical, cultural, and intellectual landscape. Things like invasive species, wildland fire, climate change, and unstable markets have had profound effects on forestry. Yet with each of these changes, the field of forestry has incorporated the latest science and research, and leveraged it into a positive paradigm shift.

Forestry now faces more challenges than ever. As these challenges increase, the forestry field expands in both complexity and knowledge.

The Walnut Council has always promoted scientific, sustainable forest management. As the field grows more complex, it becomes that much more important that our membership understand

Forestry 101 (Continued on page 3)

insert...

**Walnut Council Maryland Chapter Fall Workshop
Information and Registration Form**

Glyphosate Questions & Answers

Editor's Note:

There has been a lot of negative press lately, including television commercials, suggesting (and flat-out saying) that Glyphosate, the active ingredient in Roundup[®], is carcinogenic. These claims are largely based on false reports and speculation. The following information, presented in "Q & A" format, was published on the Oregon State University Extension Service website. We are reprinting it here because it is important that we all know the truth of the matter, so that we can educate others.

What is glyphosate?

It's a weed-killing chemical found in Roundup[®] and many other weed killers. Like other herbicides, it is usually combined with one or many other ingredients to make the final product.

Does glyphosate cause cancer in humans?

Maybe, at high enough doses. If it caused cancer at realistic exposure levels from using weed-killers, then farmers and other applicators would be the first to show this effect. The largest study ever published, looking at farmers and other applicators, found no association between glyphosate and solid tumors, such as Non-Hodgkins Lymphoma (NHL).

That study found a potential association between glyphosate exposure and a certain type of blood cancer that was not statistically significant. Another study suggested that using fertilizers could account for this risk.

Why do regulators disagree about this?

They don't. Not really.

The International Agency for Research on Cancer (IARC), an arm of the World Health Organization (WHO), determined in 2015 that glyphosate is a probable human carcinogen. That determination was surprising to many. IARC responded to critics by clarifying its intent – to identify potential hazards. They asked, "Can it cause cancer under any circumstances?" They group hazards based on the strength of evidence, not the potency of the carcinogen(s). They defer to national and international bodies to take the next step, which is risk-assessment. Risk assessment is based on expected levels of exposure and background cancer rates.

Many governments have published risk assessments about glyphosate, finding it is unlikely to cause cancer in humans when used according to the label directions as required, including:

- US Environmental Protection Agency, December 18, 2018
- European Food Safety Authority, November 12, 2015
- Australian Pesticides and Veterinary Medicine Authority, March 15, 2017
- New Zealand Environmental Protection Authority, August 2016
- Health Canada, April 2015
- International assembly of experts: FAO/WHO May 16, 2016

Glyphosate Q&A (Continued on page 4)

Forestry 101 (Continued from page 1)

the basics of forestry; so that we can begin to understand these principles...and teach them.

So join us for the Maryland Chapter Fall Workshop, and learn about a field that is near and dear to all our hearts.

The Workshop will be held on Saturday, November 9th, at the Manor Area of Cunningham Falls State Park, from 9:30 a.m. – 4:00 p.m. Along with the Forestry 101 presentation, we will have a tour of the park visitor center and aviary, and an optional walking tour to Catoctin Furnace. A boxed lunch will also be provided.

For more information and to register, see the Fall Workshop announcement and registration flyer insert in this newsletter, or contact Dave Robbins at dave.robbins@maryland.gov.



From Trash to Trees

Dr. Douglass Jacobs & Dr. Owen Burney

While some try to find a home for excess vegetation, others are addressing the opposite problem. Douglass Jacobs, Fred M. van Eck Professor of Forest Biology, and Owen Burney, his former doctoral student, often find themselves in places such as Haiti and Afghanistan where trees are desperately needed.

“The amount of land that is being deforested and not replanted is still growing,” says Burney, now an assistant professor at New Mexico State University. There is a significant need for an improvement of the nursery system that then translates to reforestation.”

Trash to Trees (Continued on page 5)



Forester uses a 10-factor prism to estimate basal area. If you don't know what this means, come to the Fall Workshop to find out!

Glyphosate Q&A (Continued from page 2)

To put the IARC determination in context, they put the following items in the same category as glyphosate, Group 2A — “Probable human carcinogens.”:

- Red meat
- Indoor emissions from burning wood
- High-temperature frying
- Late-night work shifts

The following items were placed in a stronger-evidence category, “Known human carcinogens.”:

- Processed meats
- All alcoholic beverages
- Sunlight
- Engine exhaust
- Outdoor air pollution

What about the other ingredients in Roundup?

Researchers reviewed the scientific literature on glyphosate, its major metabolite AMPA, formulated Roundup® products manufactured by Monsanto, and the surfactant POEA. They concluded that none of the components caused cancer. However, POEA can be harmful to a variety of aquatic wildlife (i.e. minnows, frogs, micro-organisms).

It can be difficult to determine the risks associated with other ingredients in pesticide formulations, including Roundup®. This is because manufacturers are not currently required to identify “other ingredients” on product labels.

How have the courts ruled?

Courts have ruled in different ways on this issue. A California jury found Monsanto liable in

Glyphosate Q&A (Continued on page 7)



Glyphosate comes in many varieties and formulations, and is sold under many brand names - Roundup® is just one of them. Regardless of the formulation, you should always, always, ALWAYS read the entire label and follow all directions, particularly those detailing proper mixing, application, disposal, and personal protective equipment.



Growing in a container that's not ideal causes tree roots to curl. Photo by Doug Jacobs.

Trash to Trees (Continued from page 3)

Jacobs and Burney developed the Bottles to Trees program in response. With a few cuts and modifications, a discarded plastic soda bottle can work nearly as well to grow tree seedlings as the best technology on the market – and far better than the one-time-use seedling bags prevalent in these countries. The result has the added benefit of repurposing plastic that would otherwise contribute to local litter accumulation.

“Typically these bottles are just used once, and in many of these underdeveloped countries, they’re not even recycled because there is no market for recycling,” Jacobs says. “It’s quite possible we could produce forest tree seedlings in these plastic beverage bottles of higher quality than those in the bags that we see around the world.”

The seedling bags are cheap but cause seedling roots to spiral. When the roots reach the smooth sides of the bags, they grow horizontally in circles. That can choke plants and leads to shallow root systems and less viable trees.

The best seedling containers have ridges inside, which train roots to grow downward. But they can cost more than \$1 per unit, and shipping them to remote places can cost far more than the container itself.

Jacobs and Burney remove the tops of bottles, poke holes in the bottom for drainage and cut three slits along the sides. When roots reach the open air at those slits, they stop growing and don’t spiral. Using epoxy to add ridges to the insides of bottles has proven even better for root development. Jacobs and Burney hope to find industry partners, such as beverage companies or bottle makers, who might redesign their own bottles to include ridges, making them even easier to use as tree planters.

Trash to Trees (Continued on page 6)



In a more ideal container, tree seedling roots grow straight down into the soil, instead of curling.



Adding epoxy ridges inside the bottle or cutting slits in the sides of the bottle can encourage the roots to grow correctly.
Photos by Owen Burney.

Trash to Trees (Continued from page 5)

“Deforestation is a serious problem, but there is a solution,” Jacobs says. “And using these plastic bottles, we can solve this problem without even having to spend a lot of money. That’s the beauty of this.”

Plastic bottle litter can be used to create efficient seedling planters in nations where reforestation is a

priority and commercial planters are expensive or unavailable. Learn how at bottlestotrees.com.

Learn more about the Purdue scientists finding new ways to use the unused – and see our step-by-step video showing you how to make plastic bottle planters at <https://ag.purdue.edu/envision/s18-unused/>



Glyphosate Q&A (Continued from page 4)

August 2018 for causing a man's cancer, who had used glyphosate weed-killers for years. The case has been appealed. In contrast, a federal judge in California ruled in June 2018 against the state's case for placing warning labels on containers of glyphosate under Proposition 65, which would require warnings about the potential for glyphosate to cause cancer. The judge cited a "heavy weight of evidence" that the risk was very low. The courts will likely evaluate more cases in the future.

Are foods with glyphosate residue safe to eat?

A tiny amount of glyphosate is not likely to cause harm, even if we eat those foods daily. There are residue limits for glyphosate on many fruits, vegetables, corn, grains, milk, and eggs. The FDA monitors the level of glyphosate on foods in the marketplace. So far, they have not found foods with too much residue, based on risk assessments. The dose makes the poison.

How can I reduce my risk?

If you choose to avoid glyphosate exposure altogether, seek out organic foods with the official logo from USDA. Glyphosate is not allowed to be used in organic settings. Use alternative methods of weed control. Talk with your local master gardeners about what's working for them.

If you choose to use glyphosate weed-killers, make sure to follow the product label carefully. The label is the law. While glyphosate is poorly absorbed through the skin, some parts of the body are more absorptive than others. Minimize your exposure, and keep others away until sprays have dried. Talk with your neighbors about any concerns they might have, and take steps to accommodate their needs.



Upcoming Events:

Walnut Council MD Chapter Fall Workshop

November 9, 2019

Location: Cunningham Falls Park-Manor Area
6709 Cunningham Falls Park Road,
Thurmont, MD 21788

Contact: David Robbins
443-273-3046
dave.robbs@maryland.gov

Ask a Master Gardener—Plant Clinic

November 14, 2019

Location: Kent Island Farmers Market
Stevensville, MD

Contact: Rachel Rhodes
410-758-0166
rjrhodes@umd.edu

Carroll County Forestry Board Workshop

March 14, 2020

Location: Wesley Freedom UMC
Sykesville, MD

Contact: Jamie Weaver
410-848-9290
jamie.weaver@maryland.gov

Walnut Council Annual National Meeting

July 26-29, 2020

Location: Carbondale, Illinois

Contact: Liz Jackson
765-583-3501
jackson@purdue.edu
www.walnutcouncil.org

Invasive Plant ID For Homeowners

September 19, 2020

Location: Community Resources Building
Prince Frederick, MD

Contact: Calvert County Extension Office
RSVP Required
410-535-3662

2019 Maryland Chapter Officers:

President: David Robbins
Reisterstown, MD
443-273-3046
dave.robbins@maryland.gov

Vice President: Vacant

Secretary/Treasurer: Phil Pannill
Sharpsburg, MD
301-739-7743
philpannill@gmail.com

Editor: Christina Robbins
Reisterstown, MD
443-273-3046
curvesmiddletown@aol.com

Regional Directors:

Southeastern: Jim Haerer
Dunkirk, MD
301-855- 8067
midgie2@verizon.net

Central: Dave Earle
Woodbine, MD
410-489- 7948
jdearle38@verizon.net

Western: Vacant



Walnut Council
Maryland Chapter Newsletter
c/o Christina Robbins, Editor
2 Pemberly Lane
Reisterstown, MD 21136

