



# Action in Agroforestry

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Michael Gold and Hannah Hemmelgarn, editors

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## Economic Development Research

### Translates to Major Commercial Application

The first commercial product, **PONCHO/VOTiVO 2.0\***, based on the invention jointly developed by scientists Dr. Chung-Ho Lin at MU Center for Agroforestry, Dr. George Stewart at MU Department of Veterinary Pathobiology and Dr. Brian Thompson at Elemental Enzymes, was launched by Bayer in 2018. The developed technology has been applied to approximately 10 million acres in the US already, during the first year's growing season. It will be expanded to 40 million acres in the US alone in the next growing season.

#### From the Manufacturer – Bayer:

What benefits does **PONCHO/VOTiVO 2.0\*** provide to the grower?

Poncho/VOTiVO 2.0 will provide early-season protection from above- and belowground insects and corn plant pathogenic nematodes, as well as

enriched soil health around the root system.

#### What's new in **PONCHO/VOTiVO 2.0\***?

The new complementary bacterium in Poncho/VOTiVO 2.0 increases the productivity of soil around the root resulting in an increase of available nutrients for the plant to use. The Poncho/VOTiVO 2.0 seed treatment system includes a new bacterium that enhances the microbial activity around the plant roots by providing a stabilized enzyme that provides more food (sugars) for the native microbes. The enhanced microbial population results in improved nutrient availability for plant uptake and once taken up by the plant, these nutrients, including nitrogen, phosphorus and potassium, optimize the plant's growth. The payoff is greater plant growth above and below the soil surface.

## 2018 Agroforestry Academy Open for Enrollment

The Center for Agroforestry will host its 6<sup>th</sup> Annual Agroforestry Academy this year from July 22<sup>nd</sup> through 27<sup>th</sup> at the University of Missouri campus in Columbia and at farms in the surrounding area. The Agroforestry Academy is a week-long training that includes integrated classroom workshops, multiple on-farm visits, hands-on demonstrations and content integration into practical agroforestry planning and design to advance adoption of agroforestry as a cornerstone of productive land use. The program is designed for farmers, landowners, and educators, and is led by an experienced team of trainers from the Center for Agroforestry, the USDA National Agroforestry Center, Extension and NRCS agroforestry specialists, and farmers who are agroforestry practitioners.

Full scholarships are available this year to women and minority farmers in Missouri, and US veterans. Please contact Caroline Todd at [toddc@missouri.edu](mailto:toddc@missouri.edu) or (573)884-2874 to register and for scholarship information. Program details can be found at [www.CenterForAgroforestry.org](http://www.CenterForAgroforestry.org).

#### Publications:

Danh C. Vu, Phuc H. Vo, Mark V. Coggeshall, and Chung-Ho Lin 2018 Identification and Characterization of Phenolic Compounds in Black Walnut Kernels. *Journal of Agricultural Food and Chemistry*. 66(17): 4503-4511. DOI:10.1021/acs.jafc.8b01181

Hank Stelzer, Hannah Hemmelgarn, Michael Gold (editors). 2018. Green Horizons Newsletter. Volume 22, Number 2. Spring Issue. <http://agebb.missouri.edu/agforest/index.php>

# KUDOS

## Spring 2018 Online MS Agroforestry Graduate



Meredith Evans successfully defended her MS Final Project, May 4, 2018. Her graduate committee included: Michael Gold, Harley Naumann (Plant Science), and Eric Bailey (Animal Science). Meredith initiated her graduate program in the Fall semester of 2016. Her M.S. Final Project is entitled: "Developing an Equine Silvopasture Project: An On-Farm Case Study." Concurrently, Meredith has also received her Graduate Certificate in Agroforestry. Meredith currently serves in the US Armed Forces as a Staff Sergeant in the Air National Guard and also (in her spare time) is a Professional Barrel Racer competing in the Great Lakes Pro Rodeo Circuit.

## Spring 2018 Online Graduate Certificates in Agroforestry



Michael Cooley (left) was awarded a Graduate Certificate in Agroforestry at the conclusion of Spring Semester 2018. Michael initiated his graduate certificate program in the Spring semester of 2017. After successful careers in Hospital Administration and as a Licensed Financial Advisor, he pursued formal education in the area of his long term passion and received a Permaculture Design Certificate and has subsequently taught numerous workshops on Permaculture. He currently has a permaculture demonstration site in Virginia's beautiful Shenandoah Valley growing numerous types of food producing trees, shrubs, perennial vegetables, livestock, and support species.

Jason Neumann (right) was awarded a Graduate Certificate in Agroforestry at the conclusion of Spring Semester 2018. He initiated his graduate certificate program in the Spring semester of 2017. Jason works as the Public Programs Manager and as a naturalist educator with the Cincinnati Nature Center. He has earned credentials through the National Association for Interpretation as a certified heritage interpreter, trainer, manager and planner. Jason has developed programs related to foraging, maple sugaring, black walnuts, pawpaw, and elderberry. He believes that the productive conservation principles within agroforestry can apply to those who own large tracts of land as well as homeowners with a quarter acre lot. He also has his own backyard farm "Someday Farm" specializing in niche crops and native plants.



# UPCOMING EVENTS

## Forest Farming Grower/ Industry Expo and Training Events

*May 19 - 20, 2018 | Kingsport, TN and Duffield, VA | Appalachian Beginning Forest Farmers*

On May 19, the Forest Farming Grower-Industry Expo and Training event in Kingsport, TN will bring together herb companies, apothecaries, and herbal product makers with experienced and aspiring forest farmers for a day of networking and learning. On May 20, a Forest Farmer Field Day will be held in Duffield, VA. It will include a tour of the Appalachian Harvest herb hub and Ryan Huish's forest medicinals farm, and a discussion on the economics of cultivating forest-grown medicinal herbs. The registration fee for each event is \$15. More information at

<https://www.appalachianforestfarmers.org/>

## Nutshell with Harry Hoch "Turning Waste into Gold: Brush Chopping Equipment for Agroforestry"

*May 22, 2018 | Free Online Discussion at 6pm CT | The Savanna Institute*

"Nutshells" are live online discussions with experts on practical topics in agroforestry and perennial agriculture. Limited space is available. Instructions for accessing discussions will be provided upon registration. More information and registration at <http://www.savannainstitute.org/events.html>

More upcoming events!

## **Farming the Woods: Profitable Agroforestry for Homesteads and Farms**

*June 4 - 6, 2018 | Craftsbury Common, VT | Sterling College*

This 1 CEU course will offer you skills to sustainably care for your woodlot and focus on log-grown mushrooms, tree saps and syrups, and silvopasture (grazing animals in the forest) as three of the best options for both the homestead and farm scale. More information at <https://sterlingcollege.edu/course/farming-woods-profitable-agroforestry-homesteads-farms/>

## **Managing Shade for Profitable Beef**

*June 13, 2018 | 3:30 – 7:30pm at The Mingo Farm, St James, MO | University of Missouri Center for Agroforestry*

Tour the Mingo Farm operation where natural shade is utilized in rotationally grazed paddocks; learn how timber, forages, and livestock are managed in an integrated system; and enjoy an equipment display and portable breeding barn demonstration. For more information and to register, contact Gregory O. Mori at (573)882-9866 or [ormsbyg@missouri.edu](mailto:ormsbyg@missouri.edu).

## **Comprehensive Elderberry Workshop**

*June 14 - 16, 2018 | The Carver Center, Jefferson City, MO | Midwest Elderberry Cooperative*

The New Growers Workshop will take place on June 14, followed by the Comprehensive Workshop and Field Tour on June 15-16. Terry Durham & the Midwest Elderberry Cooperative team thrive on helping growers learn all they need to know about growing elderberries safely and profitably. The Workshop brings together over a hundred growers annually to share best new-knowledge from horticulture research to marketing, pests, fertilization, and regulations.

More information at <http://www.midwest-elderberry.coop/events.html>

## **2018 Sixth Annual Agroforestry Academy**

*July 22 - 27, 2018 | University of Missouri campus, Columbia, MO | Univ. of MO Center for Agroforestry*

The Agroforestry Academy will take place July 22-27 this year in Columbia and at surrounding field sites. This is a week-long training that includes integrated classroom workshops, multiple on-farm visits, hands-on demonstrations and content integration into practical on-farm agroforestry planning and design. Full scholarships are available to veterans, women, and minorities. More information at <http://centerforagroforestry.org/academy/2018/RegistrationBrochure.pdf>

## **NAFEX Fruits of the Heartland Conference**

*July 26 - 28, 2018 | Danville, IL | North American Fruit Explorers*

Fruits of the Heartland is a joint conference of the North American Fruit Explorers, the Midwest Fruit Explorers, and the Savanna Institute. The conference will include presentations on growing and marketing fruit, hands-on demonstrations, and farm tours. More information at <https://nafex.org/index.php/nafex-annual-meeting/>

## **12th Annual Chestnut Roast**

*October 6, 2018 | 10:00am-2:00pm | MU Horticulture and Agroforestry Research Center*

The University of Missouri is celebrating its 20th anniversary at this year's Annual Chestnut Roast. The event includes roasted chestnut samples and sales, tours of the Horticulture and Agroforestry Research Center Farm, chef demonstrations, local craft and food vendors, and activities for the whole family. The event is free and open to the public.



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