US Biochar Initiative Newsletter

January 2022

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LIGHTING UP AN INDUSTRY
By Tom Miles, Executive Director

Thanks to the **US Forest Service** Research and Wood Innovation programs, the **The Laney and Pasha Thornton Foundation**, and the many individual donors who enable us to provide market and technical support to a growing industry. Calls to USBI have more than doubled in the last three months. Newsletter subscriptions have increased along with interest and participation in the **Biochar@groups.io** forum and on social media. Our partners in industry and government are excited to see viable biochar businesses emerging.

We welcome the **Great Lakes Biochar Network** hosted by Michigan State University**.** They join active regional groups like Eastern Biochar who will host our **Biochar and Bioproducts 2022** conference in Morgantown, West Virginia, August 8-11, 2022. The theme is biochar and climate. Save the date!

Join us for an eventful year. We begin this month with a series of webinars and workshops– with **Dovetail Associates** webinars on the use of biochar in viticulture, and livestock and poultry; a webinar on biochar in agriculture and a podcast series on biochar technologies by the**International Biochar Initiative**; and our **USBI Biochar in the Woods Webinar and Field Days**.

BIOCHAR IN THE WOODS 2022

Learn to use biochar for forest resilience and carbon sequestration.

Jan 27 (Online Webinar)
Feb 1-3 (Field Days - free)

REGISTER HERE

What: A combination of live, online and in-field presentations and demonstrations on making and using biochar on site in the forest and WUI (Wildland Urban Interface).

Why: Given the ongoing drought and dangerous wildfire conditions in California and throughout the west, we see an urgent need to train more people on clean techniques to convert problem forest vegetation into biochar onsite for climate and ecological benefits. Biochar helps mitigate wildfire threat by increasing forest soil water-holding capacity and resilience.

Who: If you are a forestry contractor, arborist, forest landowner or staff from environmental NGOs and natural resource agencies who are developing biochar forestry projects and programs, you will benefit

from this workshop. Our presenters include experts and researchers from the US Forest Service, NRCS, Redwood Forest Foundation, Sonoma Biochar Initiative, Utah State University, resource conservation districts, permaculture programs, carbon traders, and forestry contractors who are doing the work.

Get a detailed agenda and register herefor both the Online Webinar on Jan 27 and the Field Events on Feb 1-3 in Butte County, California.

- **Online Symposium, $50 –** *Register and pay online*
- **Field Days in Butte County, FREE –** *Register online to reserve your place*

USBI is grateful to our sponsor, the US Forest Service, and all our partners who are contributing to Biochar in the Woods - NRCS, Butte Community College, Butte Fire Safe Council, CSU Chico's Big Chico Creek Ecological Reserve, and Applied Biomass Technicians.

USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

SCROLL ALL THE WAY DOWN TO SEE THE LATEST!

- USBI Learning Center
- Biochar Events Calendar
- USBI Learning Center
- Welcome to the Directory
- Biochar Newslinks
- Ads and Opportunities

MEET A BIOCHAR PRACTITIONER

Brooke Comer, Program Coordinator
Great Lakes Biochar Network (GLBN)
East Lansing, MI

Q How did you get involved with biochar in Michigan and the Great Lakes region?

A I became interested in biochar when I was working on development projects in SE Asia, having visited multiple farms and organizations that were producing biochar. From there, my interests in biochar and composting systems led me to Michigan State University where I received my PhD in horticulture in 2020. I based my work on composting systems and growing vegetable transplants in compost-based media. I found that biochar is a great ingredient in compost. It can bind nutrients that would otherwise be lost, and I am amazed at what it can do to arrest compost odors. That's really important when you are close to urban areas where people live. I found that biochar and compost can provide a sustainable substitute in growing media for some unsustainable ingredients like peat, perlite and vermiculite. Sustainability is important to me. I have always wanted to help develop closed-loop farm systems where farmers can use inputs from their own land and be more self-sufficient.

Q You are the program director for the newly formed Great Lakes Biochar Network. How did that get started?

GLBN's interdisciplinary team of researchers came together because they were all involved with biochar research in some capacity, some already working together and others networking informally. They had been seeing an increase in stakeholder groups and individuals, including agricultural producers, bioenergy facilities, individual corporations, and entrepreneurs, who were all seeking various types of information about biochar and its role in sustainable soil and environmental management. Collectively, we have expertise in basic and applied research on biochar production, application, and effects, spanning disciplines ranging from engineering, bioenergy, environmental soil physics, environmental chemistry, soil health, microbial ecology, ecosystem ecology, agriculture, forestry, and plant pathology. We also have support from the Michigan Department of Natural Resources, specifically with the aim of expanding markets for low-value woody biomass. We got our funding in the summer of 2021 and I came on as the Program Coordinator, so we are just getting started.

« GLBN trainers in the field with attendees.

Q What are the goals for theGreat Lakes Biochar Network? What do you hope to accomplish?

Our primary goal is really to help all stakeholders involved with biochar here in the Great Lakes Region. Biochar applications are very individual and specialized, depending on soils, crops and the biomass feedstocks that are available for biochar production. Increased connections between researchers and farmers stemming from the GLBN may lead to on-farm trials for specific crop/soil types, for example. We want to better utilize forestry and other wastes that could be helping our agricultural producers do more with less. We have a lot of diverse soils and crops in Michigan, and a lot of interest from farmers, but a lack of good guidelines for all of the uses of biochar. To start with, we are reaching out to stakeholders and trying to find out what their needs are. Ultimately, we are about networking and making the connections across industry groups that need to work together to create a robust, regional bio-economy for providers and biochar users. We foresee growth of all the diverse groups of stakeholders involved with biochar in the coming years and aim to facilitate that with solid research and support.

Q It seems like you have hit the ground running - already offering webinars and other resources. Where can folks find those resources?

A We have created a Biochar Information Resource Center with articles, publications and video on the Michigan State University Extension website that can be accessed by anyone. GLBN's three webinars from last fall are also available at no cost - Introduction to the Great Lakes Biochar Network and Biochar Basics, Production of Biochar, and Economics of Biochar and Feedstock Availability.

Giving to USBI early in 2022 allows us to build resources now for your organization in the coming year.

Help us keep USBI dues-free.

Check out the cares Act Relief Tax, your employer match program, or an IRA distribution to reduce your taxable income.

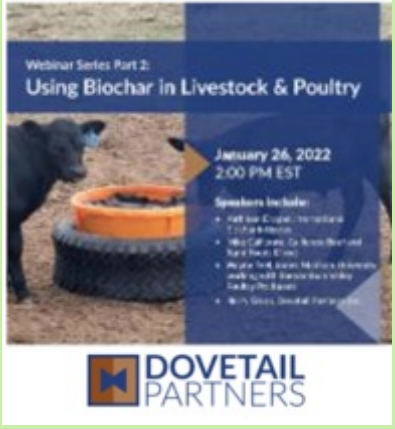
BIOCHAR EVENTS CALENDAR

January 24-27 ***Compost 2022 Austin, TX*** This US Composting Council Annual Meeting will focus on biochar-amended composts which are emerging as popular products for homeowners and landscapers. Presentations will range from foundations of composting, financing, and the carbon economy to operations and markets, including talks on the USCC Guide to Accepting or Rejecting Compostable Product. Attendees will also have an opportunity to tour a large-scale facility. Get program details and register here.

January 25 ***Biochar Use in Agriculture - What the Science Tells Us*** *Claudia Kammann and Maria Luz Cayuela will highlight the findings from a meta analysis that shows the impact that biochar can have on agriculture more generally. register here.*

January 27 ***Biochar in the Woods 2022 Webinar*** *Learn to use biochar for forest resilience and carbon sequestration. Also join us for free fields days February 1-3. Find program details and register for all events here.*

Using Biochar Webinar Series, free, hosted by Dovetail Partners
January 26 Livestock and Poultry, 2 pm ET
February 9 Stormwater Management, 2 pm ET
Register here. Here's a link to a recording of the **Biochar in Viticulture Webinar** that took place earlier this month.

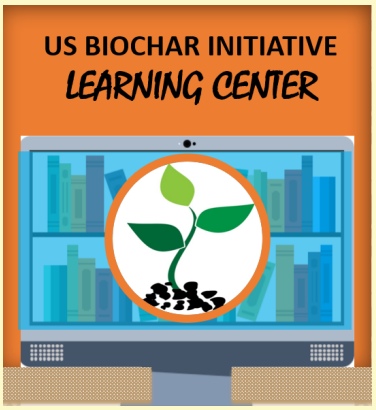


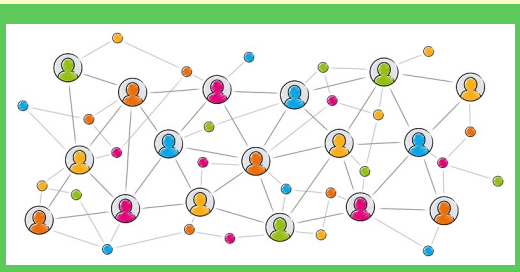
March 14-16 ***15th Annual International Biomass Conference and EXPO, Jacksonville, Florida***
Register now.

May 16-19 ***Sustainable Energy for a Sustainable Future, San Jose, Costa Rica,*** third in a series. This ASABE (American Society of Agricultural and Biological Engineers)Global Initiative Conference will promote interdisciplinary dialogues and present regional energy innovations with a global perspective. ASABE's call for abstracts is open now through January 31. More details are available here.

Featured January Resource

Soil Carbon Sink article. Read how biochar garden genius, David Yarrow, builds rich garden beds on poor, compacted soils using biochar, minerals and microbes. Follow his step-by-step process to build an accelerated garden bed on a special plot at the Columbia Agriculture Park in Columbia, Missouri. Yarrow is a soil and carbon consultant for biochar supplier, Terra Char.





USBI WELCOMES FIVE NEW MEMBERS TO THE DIRECTORY!

The USBI Directory extends big welcomes to Phoenix Pyrolysis (NC), VGrid Energy Systems (CA), BioEnergy Innovations Global,Inc/Terra Char (MO), Green Quest LLC (WI), and Rocky Mountain Soil (CAN)! With a **USBI biochar directory listing**, customers can find your products or services SO much more easily.

BIOCHAR NEWSLINKS

➤ **Carbon Negative Biofuels Build Soil and Rural Prosperity** A trio of Midwest ag researchers opine: "The emerging pyrolysis-biochar-bioenergy industry is an exciting opportunity for Iowa farmers to create jobs and opportunity in their communities and to become heroes in the global fight against climate change. But it won't happen without concerted action by federal policymakers."

➤ **Farmers Need to Know - How Biochar Helps** A technology that features carbon sequestration and soil and environmental benefits was highlighted in a recent North American Ag Spotlight. Jacek Chmielewski, BioMass Solution principal, discusses the benefits of biochar and how to pay for it with carbon credits and NRCS cost share programs.

➤ **Oh What a Relief It Is. Biochar Helps Lettuce Stand Up to Fusarium Wilt**.Robert Masson, University of Arizona agriculture extension agent, discusses a trial showing good results fighting fusarium with biochar. It is similar, he says, to carbon that is given to patients to absorb toxins from alcohol poisoning - no different for crops fighting against the fusarium wilt toxin.

➤ **Peat Shortage Piques Interest in Alternatives, Including Biochar.**Nursery growers are facing a shortage of substrates like peat. Many have trialed biochar as a substitute for perlite and a partial substitute for peat. They also find that "the stability that biochar adds to substrates is exceptional."

➤ **UniqueTriple-bottom-line Project Reduces Wildfire Risk, Produces Renewable Energy, Helps the Climate and Local California Community.** A special partnership between Phoenix Energy, EQTEC plc, the North Fork Community Development Council, and Carbonfuture is coming to the aid of Sierra Nevada forests. The team is helping support communities by removing carbon from the atmosphere, reducing wildfire risk, generating renewable energy, and creating jobs.

➤ **Let Fire Do the Job.** Researchers have found that controlled burning of natural environments could help offset our carbon emissions. "Most of the fires in natural ecosystems around the globe are controlled burns, so we should see this as an opportunity. Humans are manipulating a process, so we may as well figure out how to manipulate it to maximize carbon storage in the soil."

«Prescribed burn of oak savannah. Photo courtesy of Adam Pellegrini.

.➤ **This Santa Brings Coal to the Good Kids.** Urban permaculture designer, Laura Marie Neubert, explains why she is handing out jars of biochar to friends as holiday gifts. She invites friends to follow her blog throughout the year to learn more about using this amendment to help build healthy, balanced, self-regulating edible ecosystems, and sequester carbon in soil.

➤ **Colorado State University Project Receives a $1.9 Million Grant to Explore Affordable Water Treatment with Biochar.** "The main concept with our proposal is to determine a means by which we

we can selectively remove even greater amounts of phosphorus and nitrogen from this water," said researcher Jim Ippolito. "It's relatively difficult to remove both of these simultaneously from the water column. Our goal is to create novel materials to do the removal for us, yet capture these nutrients in such a way so they can be reused as a fertilizer source."

➤ **From Trash to Terroir: Reusing Vineyard Waste As Compost.** Vineyards in Napa are making high quality compost from a variety of materials, including biochar. At Seavey Vineyard, Fred Seavey burns dead vines and other wood to capture carbon. He learned the technique from the Napa Resource Conservation District.

«By burning wood in the absence of oxygen, Seavey Vineyard is able to produce biochar for its compost.

Join the bioenergy community in Jacksonville, Florida for the 15th Annual International Biomass Conference and EXPO, March 14-16, 2022

INTERNATIONAL 15th Annual BIOMASS CONFERENCE & EXPO MARCH 14-16, 2022 JACKSONVILLE, FLORIDA

USBI MASBio West Virginia University

AUG 8 - 11, 2022
Morgantown, West Virginia

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