



US Biochar Initiative Newsletter

January 2023

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BUILD SOIL CARBON WITH BIOCHAR

by Tom Miles, Executive Director



In 2019, the USDA Natural Resource Conservation Service (NRCS) released a provisional incentive program for increasing soil carbon. The **336 SOIL CARBON AMENDMENT** was approved for general use in 2022. Any state or territory can approve the program. Join us for a special two day webinar on January 18 when the **NRCS Soil Health Division** staff will show you how to navigate the NRCS financial assistance program to benefit your soil health goals. This technical overview will cover application methods and include how to monitor soil nutrient interactions. Presenters will also outline practical information to consider when sourcing and inoculating biochar.

"The USDA Natural Resources Conservation Service (NRCS) Soil Health Division looks forward to partnering with the US Biochar Initiative and others on this webinar series," said Amanda Branham, ED. D., Director of the NRCS Soil Health Division. "NRCS is dedicated to helping producers build their soil health and to furthering our scientific understanding of climate change mitigation through practices like incorporating biochar."

We encourage producers with acreage not to miss this! [Register here.](#)

US BIOCHAR INITIATIVE
NRCS CODE 336 REGISTER NOW SOIL CARBON AMENDMENT

BIOCHAR FUNDING
NRCS CODE 336/808
JANUARY 18 & 19, 2023

ALLIED FOOD SYSTEMS
USBI
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BIOCHAR EVENTS CALENDAR

Jan 20 Biochar Workshop, free biochar kiln demo by Wilson Biochar Associates sponsored by South Slough Reserve Coastal Training Program and Oregon State University Extension Service. Charleston, Oregon [Register here.](#)

Jan 24-27 Compost 2023, The World's Largest

Composting Event, Ontario, California Learn about a University of Vermont study on how biochar co-composting of dairy manure substantially reduces methane. **Register here.** Producers interested in co-sponsoring or attending, please contact john@biochar-us.org. Biochar-amended composts have good consumer acceptance in a highly competitive

market. Look for our USBI factsheets on biochar-amended growing media in the **USBI Learning Center.**

 <p>27 JAN. - FOREVER NO MORE: BIOCHAR IN PFAS MITIGATION</p> <p>FEATURING PRESENTERS PÅL JAHRE NILSEN, VP OF INNOVATION, VOW</p> <p>GERARD CORNELISSEN, TECHNICAL EXPERT, NORWEGIAN GEOTECHNICAL INSTITUTE</p>	<p>Jan 27 IBI Webinar on Biochar and PFAS New research has been demonstrating that pyrolysis and gasification have the potential to destroy PFAS. Equally exciting is that the resulting biochar can be used to sorb PFAS from wastewater and soils leading to significantly healthier outcomes.</p> <p>This IBI webinar will highlight extensive and encouraging research about PFAS, pyrolysis and biochar.</p>
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Feb 28-Mar 2 16th Annual International Biomass Conference and Expo, Atlanta, GA

June 19-30 IBI Biochar Academy The 2023 Biochar Academy is your chance to immerse yourself in all things biochar. Led by IBI Board Chair Kathleen Draper and other Upstate NY biochar experts and practitioners as well as world-renowned experts from around the globe, this two week, in-person program will be held from June 19 – June 30th, 2023. It will provide a unique opportunity to quickly connect with and contribute to scaling the biochar industry.

SCROLL DOWN TO SEE MORE NEED-TO-KNOW BIOCHAR NEWS!

■ Meet A Practitioner - enviraPAC

■ Outreach and Education Report
■ Get a Directory Listing

■ Biochar Newslinks

THE FUTURE of BIOCHAR

enviraPAC is one of the largest US producers of renewable, engineered carbon powders and granules with a production capacity of nearly 20 million pounds a year.

Q What kinds of biochar does enviraPAC produce?

Reese We're actively positioning our micronized biochar powder and biochar granules for use in agriculture and construction - specifically concrete and asphalt. Our micronized biochar is for use in indoor greenhouses and fertigation systems (for example, in the production of strawberries and hemp) where it is suspended in aqueous solutions and fine enough to filter through screens used in

Meet enviraPAC
Monticello, Arkansas



John Reese, General Manager

the growing process. Our large granular product is designed for crop fields because it retains its porosity and controls dust.

Q What are the keys to success in marketing and producing biochar?

Reese Know your product's parameters very well in terms of particle size, carbon content, and moisture retention properties. Not all biochars can serve all markets. Most suppliers are resource-limited so do your homework up front and be aware that these markets are cost-sensitive.

Q What is the biggest challenge biochar for producers serving the agricultural market today?

Reese We now have USDA AND NRCS support but there are a lot of skeptics that are holding agricultural customers back. Many aren't sure that biochar is a safe alternative. Even people at pretty high levels worry that biochar's long-lasting effects could create a negative outcome and destroy their

fields. We have to educate ourselves and end-users to understand that when it comes to biochar, one size doesn't fit all and it's not a magic bullet.

The old adage applies here – garbage in garbage out. Does the biochar we're producing comply with IBI quality standards? What level of carbon content does it have on a scale of 10-90%? Do our pyrolyzed materials contain contaminants? Do customers understand that applying raw biochar isn't what we're recommending (since it will absorb nutrients and have the opposite effect than intended)? Biochar is part of a holistic solution which requires composting and pre-charging crops with nutrients, crop rotation, cover crops, and no-till practices.

Q What are some of the current key factors to consider in producing biochar for the construction market?

Reese In our market development for biochar used in asphalt, we're looking at how our powders perform in base and wear layers, parking lots vs. highways, and shingles in terms of strength and durability. Agriculture, asphalt, and concrete – large commodity markets – are always very cost-sensitive. We're also learning how we compete with other products such as calcium carbonate and asking, if we know we're going to add cost, where are we adding value?

Q If you had a crystal ball, what do you see in biochar's future?

Reese With Code 336 and the Inflation Reduction Act, we believe we have a foothold for reaching the agricultural market. I'm seeing a lot of energy, especially in the carbon credit arena. Resource conservation of all types is going to become a more and more important issue as we continue to experience the negative consequences of droughts, water shortages, and toxic run off.

For many of us, there have been many long nights and lean years trying to move the needle. Some people are ahead of others, different individuals have different data sets, and most data is not yet commonly shared. But there are some exceptions, for example, the [Pacific Northwest Biochar Atlas](#), developed jointly by USDA, the Northwest Climate Adaption Science Center, and the University of Oregon, and others that automate the decision-making process.

I believe we're turning a corner and that, in the next three to four years, as our ability to quantify biochar's value with solid data advances, we'll see the benefit of all our efforts and a remarkable growth in demand.

OUTREACH & EDUCATION

UTAH FARM & FOOD CONFERENCE

USBI Outreach & Education Update
by John Webster
USBI Director of Communications

This past week, US Biochar Initiative sponsored a booth at the 2023 [Utah Farm & Food Conference \(UFFC\)](#) sponsored by [Red Acre Center](#), a Utah nonprofit that works to promote and protect farmers, small rural and urban farms, and the right to choose what you eat.



Now in its 7th year, UFFC's 3-day event drew over 400 attendees from throughout the southwest US. The conference is a unique opportunity for smaller to mid-scale acreage producers, farmers, ranchers, chefs, activists, homesteaders, artisan producers, researchers, and educators to break bread, gain insight, and engage in conversations, workshops, a seed exchange, farm tours and markets, and most importantly, to gather.



Interest in Biochar Is Expanding

At the conference, I heard regenerative-focused producers with no-till and conservation till practices express their concerns over water and drought conditions. Utah and surrounding areas are really suffering. To support these producers and bring biochar's message, our USBI presentation focused on biochar and drought mitigation. Most of the attendees who attended this session already knew about biochar compared to last year when less than 20 were aware of its benefits.

Some of the presentation attendees also signed up for the coming 336 seminars scheduled this week. The growth in new shows and documentaries talking about soil carbon and biochar on streaming channels is also evidence that excitement around in biochar is building. One rancher told us he just bought another 35 acres (putting him just under 200 acres) and wants to incorporate biochar in all of his operations.

Many conferees had questions on biochar:

- Distribution and local availability
- Education resources (USBI Learning Center.)
- Calculation tools for use in soil
- Application strategies, especially for no-till
- State of Utah familiarity

* The answer is yes, as Utah is signed-up for NRCS Code 808 and expected to sign up for Code 336.

USBI took the opportunity to raise biochar awareness among attendees by distributing 200 custom sample packs and 350 samples during our outreach and education efforts at the farmers market.

Thanks to the Symbria and Sara from the Red Acre Center and [Red Acre Farms](#) for having USBI! For inquiries about this event please reach out to communications@biochar-us.org.

If you want to volunteer to assist at events like this around the US, please reach out. We'll add you to the list and notify you when opportunities arise.

BIOCHAR NEWSLINKS

➤ ['Dirty Jobs' Features Biochar Out Now!](#) Tune in to watch the TV episode, *The Biochar Maker*, which unfolds at the BiocharNow plant in Oklahoma and is a great introduction of biochar to mainstream audiences.

➤ [Nasdaq Advances Carbon Removal Marketplace Starting with Oregon Biochar.](#) [In this short video report](#), Nasdaq and Puro.earth feature Oregon Biochar's plant in Jackson County, Oregon—a showcase for their collaborative move forward in the carbon removal credit market.

➤ [From Germany to Maine, Plans Advance for Enfield Biochar Plant.](#) Standard Biocarbon has received delivery of their pyrolysis equipment from German manufacturer Pyreg. The goal is to use the P1500 to produce about 100 tons (10,000 cubic yards) of biochar per month from sawmill waste.

This P1500 unit will be installed at Standard Biocarbon's

Enfield plant. >>



➤ [Carbo Culture Talks Scaling Biochar.](#) Carbo Culture CEO Henrietta Moon explores the range of carbon removal solutions currently being researched in this [What Is Carbon Dioxide Removal\(CDR\)? webinar](#).

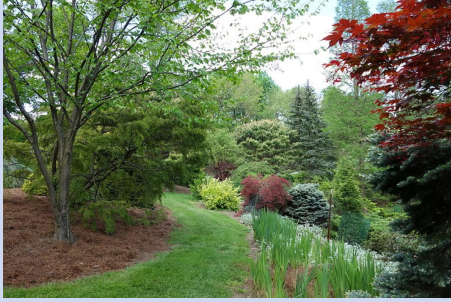
➤ [Cincinnati Parks Invests \\$1.1 Million in Municipal Biochar Project](#)—Municipalities continue to realize the value of biochar and adopt new management practices for water holding capacity, nutrient distribution, soil reclamation, waste water filtration, landfill leachate management, and green waste reduction practices. Biochar adds durable value all while capturing and sequestering carbon.

Need help with municipal planning? [Reach out to USBI!](#) We're here for you!

➤ [ReEnergy Biomass Maine \(REM\) Receives Grant to Produce Biochar.](#) REM, which operates biomass power facilities in Maine's Androscoggin and Franklin counties, has been awarded a \$523,900 grant to produce biochar from their existing biomass energy plants. The funds will be provided through the Forest Recovery Initiative of the Maine Jobs and Recovery Plan.

➤ [Environment and Agriculture Win-Win.](#) Northstar Lime LLC in Crookston, Minnesota is one of 21 projects that will soon be open for public comment regarding its participation in the Fertilizer Production Expansion Program. Northstar Lime pellets are made from a byproduct at the nearby American Crystal Sugar plant. The pyrolyzer used to create biochar will produce heat to dry the lime, a value-added product, and capture carbon that would otherwise be released into the atmosphere.

➤ [Cincinnati Parks Invests \\$1.1 Million in a Carbon-Negative Biochar Project.](#) Cincinnati Parks Board and Great Parks of Hamilton County are directing grant funds toward a new biochar production facility that will use plant waste from the city's parks to make biochar. The plan is to produce enough biochar tree-planting projects to pay for the projects

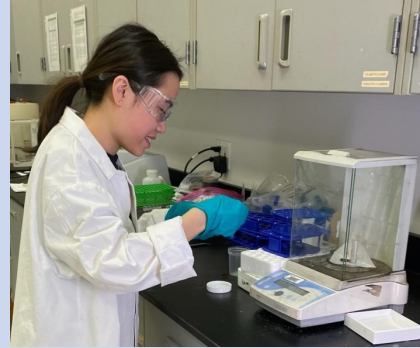


by selling surplus biochar.

« Officials say Mt. Air Forest will likely be the home for Cincinnati's first biochar production site.

Need help with municipal planning? [Reach out to USBI](#) We're here for you!

► **Gainesville High School Student Among the Top 300 in National Science and Math Competition.** High school senior Angela Gao is one of just 300 students named "Scholars" in this year's competition organized by the Society for Science and the Public. Gao's submission is an environmental science project called "Iron Modified Biochar Recovers Phosphorus from Wastewater as Fertilizer through Column Filters and Flow Reactors."



Credit: Alachua County Public Schools »

► **Worth the Wait: Benefits of Biochar for Turf Take Time.** Jeff Norton, vice president of business development for V-Grid Energy Systems and Ben Pease, turfgrass agronomist with The Andersons Plant Nutrient Group, share the benefits of biochar and how lawn care operators (LCOs) can incorporate them into their lawn care operation.

- biochar suppliers
- equipment manufacturers
- researchers
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