



## October 2023 US Biochar Initiative Newsletter

### BUILDING THE BIOCHAR INDUSTRY and BIOCHAR 2024

by Tom Miles, Executive Director

The USBI strategy for developing a biochar industry is built upon market and business development. It involves industry networking, support, outreach, and education. **We would like to express our gratitude** to the USDA Forest Service, US Endowment for Forestry and Communities, private and industry donors, and USDA Natural Resource Conservation Service, the American Farmland Trust, and many other agencies and organizations for their funding and collaboration. As markets grow, we will work together with industry to fund future services.



**USBI has been on the road listening and learning.** Every day we learn about new biochar projects and applications. We have visited farms that are interested and using biochar. We provide resources on various biochar subjects to individuals who reach out to us. We assist producers in finding financing options and technologies that are suitable for both small and large-scale projects. USBI Program Director, Myles Gray, is leading a study to guide the development of biochar markets. We assist producers explore non-agricultural products, ranging from graphene to building materials. We collaborate with agronomists to create [informative materials](#), such as factsheets, for both consumers and producers. Stay tuned for our upcoming factsheet that will provide guidance on how to interpret biochar analyses. Also, be sure to check out the recent flyers and factsheets from the Forest Service on Biochar and from Louisiana State University on [Best Management Practices for the Use of Biochar in Sugarcane](#)

**Watch for announcements of webinars, workshops, forums, and demonstrations that focus on biochar use across North America and that we support.** These events are aimed at conservationists, resource managers, and regional groups such as the newly established Minnesota Biochar and Nebraska Biochar Initiatives. We also provide assistance to the [Chesapeake Bay Community of Practice](#) in developing best management practices and specifications for incorporating biochar in their filtration and urban soil remediation demonstration projects. It is a delight to see the increasing number of articles and announcements in the media that feature biochar.

**USBI assists in the creation of policies** that encourage the growth of markets and biochar production. This includes state air quality regulations, soil health programs like the [NRCS Code 336 Soil Carbon Amendment](#), initiatives like the NCAT [Biochar Research Policy Project](#) which promotes long-term federal research, and the emerging US Biochar Coalition.

**Grow your business with US Forest Service [Wood Innovation Grants!](#)** Fifty-million dollars in grant funding has been made available. Applications for Infrastructure Assistance are **due December 1**. Applications for Wood Innovation and Community Wood projects are **due December 15**. This USFS Wood Innovation Program has already assisted several biochar projects. Scroll down to our funding section for more about these grants.

- Tom

**SAVE  
THE  
DATE**

Join us in Sacramento at **Biochar 2024: The North American Conference on Climate Action with Biochar for Economic and Ecosystem Resilience** **February 12-15, 2024**. Engage in discussions on biochar products and markets, carbon markets, finance, new projects, displays of new technologies, equipment, and jobs, economic drivers, and networking with participants who can provide fresh and innovative opportunities. We eagerly anticipate the insights that Dr. Johannes Lehmann from Cornell University will share regarding biochar developments and future possibilities.

[\*\*BIOCHAR 2024 REGISTRATION OPEN! EARLY BIRD RATES! CLICK TO REGISTER NOW.\*\*](#)

**Sponsor and Exhibit.** Download the [Biochar 2024 Sponsor and Exhibitor pack](#). Click on the link to learn about how to get a booth or ways to elevate this comprehensive program through sponsorship opportunities.

- Tom



**MEET LEEF NASH**  
Interim President  
Nebraska Biochar Initiative  
Owner, [Flatwater Carbon](#)

*Eight years ago, I first worked with biochar on a biodynamic farm outside of Lincoln as an apprentice farmer. The owner was producing biochar from brush in half of a flame cap kiln he created from an old oil drum. I was amazed...*

[Read more](#)

Leef Nash, Interim President, Nebraska Biochar Initiative  
[LinkedIn Profile](#)

**USBI is proud to  
sponsor the 2023 IBI  
SYMPOSIUM**

Join us for this November 7-9 (virtual) event and explore how our biochar industry can meet its potential as a circular climate solution.

[Event registration](#)

The image features the International Biochar Initiative logo at the top left. Below it, a banner reads "2023 • ANNUAL SYMPOSIUM" and "Scaling THE Biochar Industry TO COOL a Boiling Planet". The date "7-9 NOVEMBER 2023" and "Registration now open!" with a red arrow are also present. The bottom of the banner includes the website "BIOCHAR-INTERNATIONAL.ORG". To the right of the banner, there is a grid of six circular images showing various biochar-related scenes: a person working in a field, an industrial facility, a hand holding a piece of biochar, a person in a greenhouse, a person waving, and a close-up of biochar.

The image features the IBI USBI logo at the top left. Below it, the text "GLOBAL BIOCHAR INDUSTRY SURVEY" is prominently displayed. A series of green speech bubble icons are positioned below the text. A grey box in the center contains the text: "We're on a mission to create a highly-needed biochar market snapshot for the global industry, policy makers, and investors. You can co-create the future of biochar with us!"

No more than 10-15 minutes to complete!

**BIOCHAR FUNDING  
OPPORTUNITIES**



**TAKE ACTION NOW!**

**NRCS Financial Assistance for Biochar as a Soil Amendment**

Through the National Resources Conservation Service's Environmental Quality Incentives Program, agricultural producers can apply for financial assistance under Practice Standard 336. Deadlines vary by state. [More information here](#).

**NRCS Conservation Innovation Grants for Practices that Improve Soil Health - Due October 30, 2023**

Grants are available for projects that deploy and evaluate innovative practices that improve soil health, such as biochar. For-profit and non-profit entities and collaborative project teams can submit applications. Please reach out to [john@biochar-us.org](mailto:john@biochar-us.org) if you have a detailed proposal and are interested in collaborating with USBI. [More information](#).

**Grow Your Biochar Business by Tapping Nearly \$50 Million in Grant Funds from US Forest Service Wood Innovation Grants.** The program's goal is to spark innovation, create jobs, new markets for wood products and renewable wood energy, expand processing capacity, and help tackle the climate crisis. [Here are grant writing tips, deadlines, federal agency strategic goals, and USFS contact information.](#) (USFS agents are willing to review your applications for free before they are submitted.) Deadlines are in December 2023. [See details](#)

### **EPA Climate Pollution Reduction Grants for Proposals to Reduce GHGs**

The EPA is requesting proposals to implement programs, policies, and projects to reduce greenhouse gas emissions with a focus on areas that have not yet been funded under BIL (Bipartisan Infrastructure Law) or IRA (Inflation Reduction Act) programs. States, municipalities, and tribes are eligible to apply by [April 1, 2024](#) for a total of \$4.3 billion in available funds. Potential biochar proposals could focus on conversion of wastewater treatment residuals into biochar, application of biochar as a soil amendment to reduce nitrous oxide emissions, programs to pair biochar with improved forest management to reduce wildfire risk and more. [More information](#).

## **NRCS BIOCHAR FUNDING FOR CODE 336**

### *A Quick Guide for US Producers - Rolling Deadlines*

This [Funding Fact Sheet](#) is a timely companion to our Code 336 Soil Carbon Amendment webinar series found on the [USBI YouTube Channel](#). Deadlines are approaching fast.

Read soon to learn how agricultural producers can qualify for USDA NRCS funding to inoculate their soil with biochar, including:

- Criteria to be eligible for using biochar on your land.
- How to begin the application process.
- Conservation Planning.
- Pro tips on best application strategies.



This guide explains how growers can offset the costs of applying biochar.

### **New Online Help to Implement NRCS 336**

Conservation planners have free access to the Pacific Northwest Biochar Atlas, an online toolkit that provides decision support tools for selecting biochar types and amendment rates. The Atlas is being expanded to help conservation planners implement the NRCS Soil Carbon Amendment (CPS 336). While the tool's expanded features are being developed, USBI Board members Kristin Trippe (USDA ARS) and Josiah Hunt (Pacific Biochar Benefit Corporation) have developed an [interim spreadsheet and guide](#). If you have feedback, please contact [Kristin Trippe](#).

## **BIOCHAR EVENTS CALENDAR**

**Oct 28-29 ASLA 2023 Conference on Landscape Architecture**, Minneapolis, MN - Visit the USBI booth at the largest gathering of landscape architects and allied professionals in the world. [See more info and registration](#).

**Oct 29-Nov 1 ASA-CSSA-SSSA (American Society of Agronomy (ASA), Crop Science Society of America (CSSA) and Soil Science Society of America (SSSA))**, St. Louis, MO - offers technical presentations, hands-on workshops, networking events, award ceremonies, and field tours. [More information here](#).

**Oct 30-Nov 1 Processing Technologies for the Forest & Biobased Products Industries Conference**, St. Simons Island, Georgia - attracts technical managers, product and process engineers and academics and features the latest research and advancements. [Register here](#).

**Nov 7-Nov 9 Scaling the Biochar Industry to Cool a Boiling Planet** Join International Biochar Initiative for their third annual IBI virtual symposium. This three-day collaborative, virtual event will focus on global biochar industry opportunities, learnings, and state-of-play. Get on the list by filing an [interest form](#).

**Nov 8 EletraTherm Webinar** on waste heat recovery - more information coming soon.

**Nov 27 CharBoss Demo** Umpqua National Forest in Oregon - details to come.

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

- USBI Board Member Corner - Kim Chaffee
- Sponsorship Opportunities

- Outreach and Education

- Biochar Newsbytes

- Biochar Jobs!

## USBI BOARD MEMBER CORNER

### Kim Chaffee, Board Member

*USBI is so grateful to the many talented, experienced, biochar pioneers who serve on our Board.*

Kim Chaffee, a USBI Board since 2018, is a passionate advocate for innovative strategies that scale up biochar's use to reverse climate change and environmental degradation. He has been a lead organizer for two USBI national conferences - Biochar & Bioenergy 2019 and Biochar 2018...



[Learn more about Kim](#)

## OUTREACH & EDUCATION

### ***Biochar Samples Needed for Ongoing Research in Florida***

Does your biochar self-ignite when kept fresh, dry, and/or in large quantities or has it failed the UN 4.2 test? In either case, your samples are needed to evaluate their transport safety. In return, you'll receive relevant data. Non Disclosure Agreements are available on request. For shipping instructions and further questions, please contact [New Polymer Systems Co-Founder and President, Joachim Roesler](#).



### ***Call for US Biochar Samples for USDA Biochar Atlas Project***

USBI is collaborating with USDA Agricultural Research Service (ARS) to develop the national Biochar Atlas. (Currently the [pnwbiocaratlus.org](#)) As part of this project, USBI is requesting biochar samples from United States biochar producers to be analyzed by ARS.

The goals of this process are to 1) Assess existing laboratory methods for biochar analysis by conducting split sample analysis by two separate ARS laboratories using IBI standards, 2) Develop datasets that could be used in the Biochar Atlas currently under development, and 3) Provide biochar suppliers with free laboratory analyses.

Interested biochar producers should contact [Rachel Baschieri](#), 541.738.4168 with the Agricultural Research Service to arrange sample shipments.

## Sponsorship Opportunities - Biochar In the Woods

USBI is offering sponsorship opportunities for the Biochar In the Woods monthly webinar series and discussion forum. Your support will help us bring this program to a wider audience.

Sponsor levels start at only \$500 per month.

Contact [john@biochar-us.org](mailto:john@biochar-us.org) for information.



This program supports forestry professionals, ecologists, and fire service professionals.

It includes webinars and monthly online forums to assist the conversion of stranded biomass from fuels reduction and thinning to biochar which can be used in forest management in applications like revegetation and stream restoration.



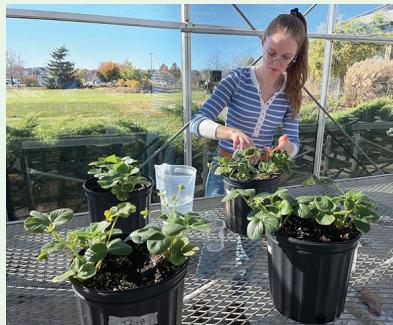
## Looking for biochar industry career opportunities?

Check out [LinkedIn](#) for sales, research, and internship postings and more!



## NEWSBYTES

**[What Is Biochar's Future as a Climate Mitigation Tool?](#)** The World Economic Forum site estimates that biochar has the potential to remove 6% of global emissions - equivalent to the climate pollution from more than 800 coal power plants, or nearly three times as much as the CO2 emissions from the airline industry.



**[More Good News About Biochar's Ability to Reduce Need for Fertilizer](#)** Learn what Niagara College researchers discovered when they used biochar and zeolite amendments to minimize fertilizer nutrient loss in greenhouse farming.

« *Ashley Paling, student research assistant, monitors crops grown in media amended with vermicompost and biochar. Photo courtesy of Niagara College.*

**[Glanris Biochar Carbon Dioxide Removal \(CDR\) Credits Take Flight](#)** Mississippi biochar producer Glanris is

supplying biochar CDR credits to Jet.Ai's recently announced DynoFlight, a platform that allows for flight-by-flight carbon removal credit purchases. Jet.Ai is an innovative private aviation and artificial intelligence company which will manage credits to offset carbon emissions from 250 different types of aircraft.



**[First Time Tiger Carbonator Is Being Used in a Metro Area for Biomass Disposal At Scale](#)** Up to half of the biomass removed from the park could be converted into biochar," said Park District Assistant Fire Chief Khari Helae. Park biochar is already being used to enhance park soil health, improve water retention, and ultimately increase productivity.

« *East Bay Regional Park District spans 125,000 acres across Alameda and Contra Costa counties in the San Francisco Bay Area.*

**[Experiment Uses Waste from Our Clucking Friends to Boost Hay Growth](#)** The goal of the research underway by two University of Arkansas divisions is to significantly boost hay growth and reduce ammonia production/exposure while providing farmers an affordable waste solution and sustainable fertilizer product.

**[How Could Biochar Lead to Better Soils for Mexican Farmers?](#)** Forbes outlines a project in Mexico that is investigating biochar's potential benefits of biochar to improve soil quality, agricultural productivity, and water retention - crucial for Mexican farmers facing water scarcity.



### **[Biochar Is Reducing Steel Industry's Environmental Impact](#)**

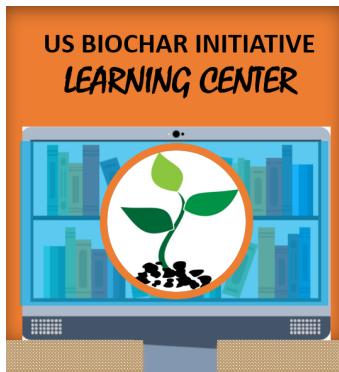
Australian biochar producer, BioCarbon, has been exploring replacing coke (made from coal) and traditionally used in steel production, with biochar derived from wood waste. Using biochar can reduce the environmental impact of the steelmaking industry, which accounts for

between six and nine percent of all the world's CO2 emissions.

« [Biochar vs. coke reduces CO2 footprint.](#)



## BRAND NEW FACT SHEET - Best Management Practices for Making Biochar from Sugarcane ([See pdf here.](#))



### Useful Biochar Fact Sheets on our USBI Learning Center

- [Plant Survival](#)
- [Compost Benefits](#)
- [Manure Management](#)
- [Stormwater Management](#)
- [Carbon Markets](#)
- [Application guidelines PT 1](#)
- [Beyond Application Part 2](#)
- [Guía aplicaciones PT1](#)
- [NRCS Biochar Funding](#)



#### SITUATION

Sugarcane is Louisiana's No. 1 ranked row crop. Commercial sugarcane is a large grass that produces high biomass composed of sucrose in the juice and fiber. Sugarcane is harvested, washed, shredded, and juice is extracted by a series of mills. The juice is clarified, evaporated, crystallized and processed into sugar. Sugarcane is a fast-growing crop compared to a bagasse. Bagasse is composed of fiber (cellulose, hemicellulose, lignin and ash content), some field soil and water. The fiber content of bagasse is about 50%. Approximately, 30% of the sugarcane brought into the raw sugar factory for processing is bagasse.

#### USES OF BAGASSE

Most bagasse produced at the raw sugar factory goes into the sugar refinery. Bagasse is burned as a fuel source to generate steam – the main energy supply for factory operations. However, the raw sugar factory does not have the capacity to burn all the bagasse. About 40% of bagasse production is excess and stored in large, nearby piles. These bagasse piles are expensive to maintain, a safety hazard and remove valuable acres from agricultural production.

The Louisiana sugar industry has spent decades and millions of dollars looking for alternative uses of excess sugarcane bagasse. One solution is the production of biochar from sugarcane bagasse.

#### WHAT IS BIOCHAR?

Biochar is like charcoal and produced by heating sugarcane bagasse at moderate to high temperatures in the absence of oxygen. Biochar is a form of charcoal with a feedstock source (fresh vs. aged within the bagasse piles vs. leafy trash from the field). Composition varies by source, temperature, time and temperature and time of treatment. The table below provides further information of biochar composition.



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STAY CONNECTED



Visit [biochar-us.org](http://biochar-us.org) for more information.

USBI thanks the USDA Forest Service, Wood Innovation Program for continued support of its activities and publications. USDA is an equal opportunity provider, employer, and lender.

USBI is supported in part by The United States Endowment for Forestry and Communities, Inc. The Endowment is a not-for-profit corporation that works collaboratively with partners in the public and private sectors to advance systemic, transformative, and sustainable change for the health and vitality of the nation's working forests and forest-reliant communities.



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