



August 2023

US Biochar Initiative Newsletter

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Plan to attend North American Conference on Climate Action with Biochar in Sacramento!
By Tom Miles, Executive Director

Welcome to the many new biochar producers and users that we hear from each week. There are some creative products and large projects underway. Your emails and calls help us understand your needs and provide appropriate market and technical assistance.



Engage. Join the growing universe of biochar at USBI's **North American Conference on Climate Action with Biochar for Economic and Ecosystem Resilience, February 12-15**, in Sacramento, California. Present your latest project. [Upload your abstract](#). Exhibit your products and equipment. Learn about the many new biochar projects in planning and development in California and beyond. Contact us at biochar2024@biochar-us.org to help at the conference.

Fact Sheets. Our USBI team of scientists and practitioners is preparing a fact sheet on how to use biochar analyses. Our goal is to make laboratory analyses more useful for developing products of consistent quality that meet certifiable standards. Many thanks to [Luisa Marin](#) at The Next 150 in Mexico for translating the "[Biochar Guidelines for Agriculture Applications](#)" into Spanish. Luisa and [Dr. "Trudy" Fernandez](#) at the Estacion Indio Hatuey in Cuba are coordinating a new Latin American Biochar Network.

Biochar Atlas. Dr. Kristin Trippe, USBI board member and USDA ARS scientist, is expanding the [PNW Biochar Atlas](#) with tools to guide biochar applications. Email [Rachel Baschieri](mailto:Rachel.Baschieri) to put your North American biochar on the map by submitting samples for analysis. Dr. Trippe's team is developing an online calculator to help guide biochar applications. It is intended for use by farmers and advisors like soil conservation planners who are preparing to use biochar in projects for the NRCS Soil Carbon Amendment (Code 336) protocol.

Market Survey. We will be calling on producers and consumers of biochars and biochar amended products for a North American Biochar market study. Myles Gray, USBI Program Director, is planning a market overview as well as "deep dive" analyses of key markets.

Enjoy the lingering days of summer!

PRESENT AT #BIOCHAR2024 ABSTRACT SUBMISSION OPEN!

Be part of the solution. Take this opportunity to present your research, real-world case studies, and action plans aimed at scaling biochar on a global scale.

Let's work together towards a sustainable future. Join us in Sacramento as we explore the potential of biochar to combat climate challenges and foster both economic growth and environmental resilience.

[Abstract & Poster Information](#)



BCB President Phil Marsh

Meet British Columbia Biocarbon (BCB), Canada

BioLesna Carbon Technologies LP (BCT) recently received a \$10 million dollar award from Canada's Natural Resources Ministry (NRCan) for a new biorefinery in Carrot River, Saskatchewan, CAN. BCT is a joint venture between BC Biocarbon and Dunkley Lumber Ltd. The operation will convert residual biomass from forest operations to produce four initial products - biochar, bio-oil, wood vinegar and pyrolysis gas. Phil Marsh, BCB President and Chief Technology Officer, founded his company thirteen years ago.

Q Tell us what drew you to founding your company.

Marsh The company was originally founded with a vision that fossil-based energy and agricultural products could be replaced by bio-based products derived from an abundance of locally-generated biomass. The idea was that biomass is widely distributed and diversely controlled so the commodity risk for these energy and carbon-based products could be reduced by using local inputs.

Q When will the project be operational and how many people do you expect to employ?

Marsh The project will become operational in September 2023 and we're planning to employ about twelve staff, working in shifts, to maintain operations at full capacity. We're very honored to have passed muster with NRCan and be building the first project of this scale using Canadian IP and Canadian built machinery here at home with federal support.

Q What process did you use to assess the demand for biochar, bio-oil, wood vinegar, and pyrolysis gas products?

Marsh When we first started in 2011, there was very little demand for any of these products except the gas stream. It's really taken twelve years of technology, product, and market development to get to the point of establishing offtake sales contracts. We now have very good demand for our biochar - heat and energy are always in demand. We are starting to get good market traction related to our liquid products (wood vinegar, tars, & oils). Until we have enough

demand to take our full production capacity for these products, some of the liquid stream is still diverted to energy production on site.

Q For what purposes are these products used?

Marsh With the high (and growing) demand for carbon removal, sequestration, and credits, the **majority of our products are now used in the agriculture and horticulture markets, but smaller amounts are going into digestors/water treatment, filtration applications, building materials, etc.** The **gas phase energy** is used locally for heating/drying applications with the **liquid phases** being used to replace a wide array of organic chemistry. The **wood vinegar** is specifically targeting the agriculture industry as a plant growth stimulant and on the industrial side as a deicer and dust suppressant agent.

Q What were the major challenges you were able to overcome that made this venture successful?

Marsh I believe the first challenge was to develop a pyrolysis process that was reliable at large scale. While technology development is always on-going, we now have a continuous flow, single pass system designed to operate 24/7 producing solids, liquids, and gases. The second challenge was to be patient enough to wait for the market to arrive and that's now happened.

Q What keeps you up at night?!

Marsh Nothing, I'm good at sleeping 😊. However, now that the market for our biochar and carbon credits is really opening up, we're trying to expand production as quickly as possible. While the company has grown substantially over the last two years and we are evaluating multiple new project opportunities in parallel, the team has to continually push to improve our technology and the process to further expand production capacity from each and every pyrolysis line we commission.

BIOCHAR EVENTS CALENDAR

August 23 - 24 2023 Healthy Soil Summit, Seaside, CA (Near Monterey Bay) Find **Corigin** and **Vgrid** on the exhibition floor.

August Aug 29 - 31 StormCom, Dallas, TX - the storm water industry's premier event connecting storm water managers, erosion control specialists, and engineers from around North America for idea-sharing and networking. [Register here.](#)

September 6 Webinar: Biochar Use in Poultry Litter and Poultry Litter Biochar - 8 - 9 AM EST - [Zoom Registration](#) - Dr Teel update on the Virginia Department of Forestry project utilizing wood biochar in poultry operations. Additional presentation on poultry litter and manure biochar by Dr Lima. Q&A follows.

Oct 4-6 WEFTEC (Water Environment Federation), Chicago - Learn from experts about the latest trends, and latest technology and trends [Register here.](#)

Oct 10-12 Mulch & Soil Annual Conference, Savannah, GA - Visit the USBI booth at the meeting dedicated to owners and top managers of North America's best mulch and soil producing companies. [Info & Registration](#) Meet with Myles at the USBI booth on the show floor and watch for his talk Thursday.

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. [Info & 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.](#)

February 12-15 2024 North American Biochar Conference, Sacramento, CA
Join leading industry experts to discuss the latest biochar science, application methods, material trends, government programs, and economic drivers building green biochar jobs!

Call for papers and posters! biochar-us.org/biochar2024-abstracts

Watch these newsletters and our social media channels for registration information, sponsor opportunities, exhibitor rates, lodging options, and much more.

Interested in sponsorship or exhibit space? Email biochar2024@biochar-us.



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

- USBI Board Member Corner - Albert Bates
- Outreach and Education
- Biochar Newsbytes
- Sponsorship Opportunities
- Biochar Jobs!

USBI Board Member Corner - Albert Bates

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

Albert Bates, Author, Global Village Institute

Author of more than 20 books on history, science and the environment including *The Biochar Solution: Carbon Farming and Climate Change* (2009); and (with Kathleen Draper) *Burn: Igniting a New Carbon Drawdown Economy to End the Climate Crisis* (2018).

In 1976 Bates launched an environmental law project, the Natural Rights Center, that brought cases against toxic polluters, the nuclear industry, the VA, the DoD and others. His organization won the Right Livelihood Award in 1980 for their work to preserve indigenous cultures. He first became acquainted with biochar on a trip to Amazonia and subsequently attended scientific meetings in Brazil, England, and elsewhere to learn more, which led to writing *The*



[Click to learn more about Albert](#)

Read his weekly blog, [The Great](#)

Biochar Solution and contributing to *The Biochar Revolution*. His recent focus is on natural climate solutions such as biochar, forestry, natural building and ecovillages. He is presently exploring plant-based alternatives to concrete, asphalt and other construction materials.

Change or find him on Clubhouse, Twitter Spaces, & YouTube. Visit his ecovillage at <http://hippy.place>. Email: albert@thefarm.org
Website - [Twitter](#) - [LinkedIn](#)

OUTREACH & EDUCATION

Biochar themed science fair!

by John Webster, USBI Communications Director

Lead by recent IBI Biochar Academy graduate, [Xiaozhou \(John\) Zhang](#), biochar was the carbon star at this youth science fair and BBQ hosted by the [Chinese American Chemical Society - East Chapter](#).

The theme, "Cool Earth with Fire" as inspired by the book *BURN* by Kathleen Draper and Albert Bates who mentored John at the Academy.

Some 160+ people showed up to learn about biochar from the young scientists and have a BBQ.

The fair showcased several well-prepared poster presentations, where they eloquently explained complex scientific concepts with impressive clarity and confidence. It was amazing to witness how our young scientists tackled environmental challenges through innovative solutions.

One highlight of the day was the captivating demonstration of biochar production with a DIY kiln.

Event site: <https://eastcacs.org/2023-summer-picnic>



USBI assisted with "I Heart Biochar" buttons and guidance on building the mini TLUD.

"Together, we are nurturing the next generation of scientific thinkers and environmental champions, and we can't wait to witness the incredible contributions they will make to our world in the future."

Sponsorship Opportunities - Biochar In the Woods

USBI is offering sponsorship opportunities for the Biochar In the Woods monthly webinar series and discussion forum.



Sponsor levels start at only \$500 per month.

This program supports forestry professionals, ecologists, and fire service professionals. Your support will help us bring this program to a wider audience.

Contact john@biochar-us.org for information.

BIOCHAR JOBS

STANDARD BIOCARBON

Now hiring a Sales Associate position to be a key member of their sales and marketing team.

Visit their [LinkedIn job posting](#) for details.

A number of other postings can be found on [LinkedIn Jobs](#).

Do you have a biochar job to fill? Let us know by emailing info@biochar-us.org.



NEWSBYTES



Courtesy of freshfruitportal.com

Modified Pineapple Peel Biochar Shows Promise as Electrochemical Sensor. Research shows food waste can be turned into a high value product.

London Ad Agency Doing More Than Its Part to Raise Awareness of Carbon Removal Technology Ad Agency MSQ is partnering with [Ecologi](#) to capture the equivalent of 1.5 tonnes of CO2 emitted by cars passing by the ad agency MSQ's London offices in a four-month period. Ecologi's certified carbon avoidance programs include biochar production.

Mid-year BCR Progress Report Emphasizes Deliveries - Published on Medium

Senior Policy Advisor @ Carbonfuture, [Sebastian Manhart](#), noted the following highlight observations on his LinkedIn page:

"Biochar carbon removal (BCR) might only be accounting for only 5% of purchases, yet is responsible for almost all deliveries (92%). As I've said many times before: BCR is the most shovel-ready quality CDR technology out there."

"Report highlights A) the need for more buyers, B) the exponential growth of purchases, and C) why we have to keep our focus on deliveries."

CDR.fyi publishes [real time data here](#).

Now Available - Biochar Market Forecast Report Highlights Growth Trends 2023-2027. The Biochar Market is forecasted to grow by USD 161.2 million between 2022-2027, accelerating at a CAGR of 15.82% during the forecast period.

[Turning Waste into Wealth: A New Perspective on Potato Peel Waste and Bioenergy \(& Biochar\)](#)

This article from late June and was very well written. Just a pleasure to read (7min). It highlights the innovation that biochar is bringing to 'waste' management and the opportunities our industry has to reframe the narrative. Waste-to-energy, and **biochar**, using potato peels!

UAPB Receives \$2 Million in USDA Grants for Research, Extension, Education Projects

UAPB Department of Agriculture project is to develop an interdisciplinary research program on biochar and ecosystem sustainability in crop systems.... UAPB project data will be used to determine agricultural best management practices for the use of biochar on a large scale. Expanding research is key to scaling biochar.

About Guideline Factsheets

Factsheets are part of a suite of biochar materials created through a USBI partnership with UNL and made possible by a US Forest Service Wood Innovation Grant.



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](#)
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Visit Biochar-us.org for more information.

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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