



US Biochar Initiative Newsletter

March 2022

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DECARBONIZING OUR ECONOMY WITH BIOCHAR

by Tom Miles, Executive Director

"Decarbonizing our Economy" is the theme of our upcoming **North American Biochar and Bioenergy Conference** August 8-10, 2022 in Morgantown, West Virginia. USBI joins West Virginia University and the Mid-Atlantic Sustainable Biomass Consortium for Value Added Products (**MASBio**) which is deploying biochar from a variety of feedstocks in many applications. We look forward to industry, academia, and government gathering to develop practical markets and uses for biochar.



USBI joined biochar producers, users, and brokers at the 15th International Biomass Conference and Expo March 14-16, 2022 in Jacksonville, Florida. Our non-profit was invited to moderate a session on "Utilizing Pyrolysis to Convert Biomass into valuable Energy and Biochar Products". Participating USBI supporters included ArtiChar, Char Technologies and H2 Energy Group, Torresack (hemp solutions), GEA (system engineers), and Heyl & Patterson (carriers) exhibited and presented in other sessions. The biomass and wood products industries are important sources of biochar.

Educating consumers continues to be an important ongoing challenge. We appreciate the cooperation of USBI supporters in preparing factsheets and guidance documents for use in key markets.

Carbon Credit Purchase Powers Biochar Innovation



An ideal future is one where all organizations examine their processes and determine how they can be made sustainable. While we work towards that goal, ACT Commodities is helping entities around the world, like Microsoft, reduce their carbon footprint by issuing renewable certificates and carbon credits for biochar.

We are glad to purchase biochar-based carbon removal credits via ACT, from the Pacific Northwest-based, engineered-wood supplier Freres," said Microsoft Carbon Program Director Elizabeth Willmott. Biochar

production, in conjunction with forestry product systems, provides the opportunity to treat underused biomass in an economic and environmentally beneficial way," said Kyle Freres, Vice President of Operations for Freres Lumber. Freres' Biochar CO2 Removal Project was selected by Microsoft for its 2022 [Carbon Removal Program](#) and has also committed to investing some sales proceeds to research and development around biochar production – among other sustainability initiatives.

"Right now, biochar is an underutilized material that is not fully appreciated in the industry with tremendous potential for carbon mitigation," said ACT's Juan Camilo Escobar, Manager of Renewables and Carbon Americas. "With Microsoft's investment, the Freres' project will lead to new innovations in biochar production and utilization across many industries. We're thrilled to take climate action with one of the largest and most innovative companies in the world." To date, ACT has helped facilitate 145 million metric tons of CO2 reductions across more than 40 countries.

Freres' project
will lead to new
innovations...

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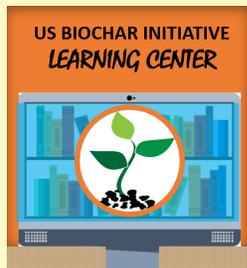


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BIOCHAR EVENTS CALENDAR

March 24 Biochar Pellet Techno-economic Analysis and Life Cycle Assessment Webinar 11 am-12 pm EST presented by Dr. Kamalakanta Sahoo from the USDA Forest Service. [Connect to free webinar here.](#)

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. [More details are available here.](#)



USBI LEARNING CENTER

Our digital database contains information for over 40 areas which can be searched by media type such as symposiums, webinars, websites, books, newsletters, downloadable pdfs, online articles, videos, and podcasts. Our 40 areas range from biochar basics, biochar characterization and testing, livestock feed and manure management, to carbon credits, compost, gardening, green roofs, viticulture, forest management and much more. [Click here.](#)

BIOCHAR NEWSLINKS

➤ [Biochar springs into action.](#) Now that spring is here, a permaculture designer shares her biochar seed starting recipe. Ingredients like molasses help biochar bring complex nutrients to supercharge growth of young seedlings.



➤ [Biochar Is Shovel-Ready Carbon Removal.](#) The demand in the voluntary carbon removal market is expected to boom this year but the supply of mature carbon-negative projects is low. Puro.earth has a portfolio of biochar projects using bamboo, olive orchard waste and Canadian forestry waste that fits the bill.

« *Biomass-based engineered removal, such as biochar, needs scaling to store huge amounts of carbon for the long-term. Image courtesy of Amata Green.*

➤ [Oregon Lumber Company Sells Biochar Carbon Credits to Microsoft.](#) Microsoft has agreed to purchase biochar carbon removal credits generated by Freres, a forest products company which has committed to investing part of sales proceeds to research and development around biochar production – among other sustainability initiatives.

➤ [Construction and Demolition Waste Has a New Use: Biochar.](#) Before getting into biochar,

Champion Waste ground most of its wood scrap into mulch, biomass, and other landscaping products. However, because of an excess of material, the company is now using a carbonizer to make biochar, and exploring markets for its use.

➤ **Manitoba Company Locks Funds for Biochar Development.** Carbon Lock Technologies was one of 18 companies, and the only Manitoba business, to be named a semi-finalist in the novel technologies stream of the federal government's Food Waste Reduction Challenge. Carbon Lock Technologies hopes to recycle carbon from food waste into farm fields as biochar.

➤ **Citizens for Clean Air Embrace Biochar.** Smoky summers have become more frequent in Grand Valley, Colorado which is why Citizens for Clean Air (CCA) started a project to study biochar as an alternative to field burning. Their plant growth study has already convinced some local farmers that biochar is a worthy solution. Plots with various compositions were planted - compost only, no soil amendments, 10% biochar and compost and 20% biochar and compost.



The 10% biochar-compost and 20% biochar-compost mixes >> produced the healthiest, most valuable crops. Photo courtesy of Citizens for Clean Air



➤ **Nebraska Forest Service Fires Up Batch of Biochar.** Grimm's Gardens in Nebraska City hosted a biochar demonstration to raise awareness about charcoal-like material's growing power. Forest products specialist Heather Kingery said: "My dream is that we would have a thriving biochar industry in Nebraska with biochar producers and with every Nebraska household knowing what biochar is and how they can use it."

« Forest products specialist Heather Kingery said Nebraska is part of the Great Plains Biochar Initiative to add value to woody material that would otherwise be discarded as waste.

➤ **Sustainable Options to Costly Traditional Fertilizers** Fertilizer typically makes up 15% of all farming costs in the United States, and growers are struggling to secure supplies this year. Adding natural amendments such as biochar to the soil can reduce fertilizer requirements by up to 50%, according to James Gaspard, CEO of Biochar Now in Loveland, Colorado.

➤ **New techniques for Making Biochar Fertilizers Clean the Environment Too.** Recently researchers at Iowa State found that pretreating biomass with iron sulfate, an inexpensive byproduct of steel production, modifies the surface of biochar to adsorb, rather than repel, negatively charged phosphorus, creating a slow-release fertilizer from manure, while preventing pollution

➤ **North Carolina State Presents: The WASTE Lab.** NC State has a slew of projects using biochar to add value to waste. There are currently five ongoing research projects being conducted by undergraduate and graduate students that primarily focus on the use of biochar.



Nitesh Kasera is studying the effect of nitrogen doping on >> biochar and its ability to remove nitrate and phosphorus from aquacultural wastewater.

➤ **Stopping the P in Wisconsin.** Because phosphorous concentrations are at a dangerously high level in Wisconsin, University of Wisconsin-Platteville student researcher Olivia Kozlowska is presenting her work on biochar and phosphorous removal to State Capitol legislators. "I hope that leaders can see how important this is and what kind of difference it makes in run-off water and the health of farms," she said.

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

Decarbonizing our Economy

North American Biochar & Bioenergy Conference 2022



August 8 - 10, 2022
Morgantown, West Virginia

www.biochar2022.com for more information



 West Virginia University

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