



US Biochar Initiative Newsletter

December 2022

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Seasons Greetings!

by Tom Miles, Executive Director

Many thanks to all who have helped the business of biochar grow and mature in the past year. We expect biochar supplies to increase in the coming year as new pyrolysis and gasification plants go into operation and as more biomass power plants retrofit their facilities to recover biochar.



The prospect of increased production presents challenges for the industry because markets are developing slowly. What sells biochar? Need, price, consistent quality, and adequate supply. Customers are gradually discovering the qualities of biochars they need for specific applications. We get calls from farmers and engineers asking where to find suppliers, how to apply biochar, and where to find equipment to apply it. Join us at conferences, workshops, and webinars to promote biochar to landscape architects, engineers, agronomists, composters, and growers. Let's make 2023 a banner year for biochar!

USCC - Open Co-Sponsorship Opportunity

Join USBI at the US Composting Council **Compost 2023 Conference** January 24 -27, 2023, in Ontario, California. 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](#).

USFS to Demonstrate CharBoss in Pacific Northwest

USBI will assist Dr. Debbie Dumroese of the US Forest Service Rocky Mountain Research Station to demonstrate the **CharBoss** by Air Burners Inc. in the Pacific Northwest. Two Charboss mobile carbonizers will be used for research and demonstration.

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 by January 13, 2023.](#)

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.](#)



Feb 28-Mar 2 16th Annual International Biomass Conference and Expo, Atlanta, GA

*USBI get calls from farmers and engineers asking where to find suppliers, how to apply biochar, and where to find equipment to apply it. **Get in on the action** and [show your support](#) for the many USBI free resources available.*



BIOCHAR NEWSLINKS

> **'Dirty Jobs' Features Biochar** The TV episode, *The Biochar Maker*, unfolds at a plant in Oklahoma. "They're basically burning burnt wood ... and distilling it into pure, highly granular bits of carbon which they're using a kind of fertilizer, which is having a huge impact on the agricultural community," said host Mike Rowe. "As filthy as it is, it's one of the greener things you can do in the energy space."



> **Restoration Bioproducts to Produce Black Biochar and Green Energy** Local and state officials joined Restoration Bioproducts to break ground for its new facility in Virginia's Sussex County. Over the next three years, the company will invest \$5.8 million at the site and create 9-15 jobs. Restoration Bioproducts will purchase 34,560 tons of Virginia-grown wood products for producing biochar and 500kw of electricity generation.

> **Southwest Virginia Biochar Capacity Grows** Governor Glenn Youngkin has announced that SWVA Biochar, a leading producer of premium biochar in the region, will invest \$2.6 million to increase capacity at its operation in Floyd County, adding 15 new jobs.

Qualterra Expands Its Operations Into Spokane County Qualterra's biomass processing unit can process 450 tons of crop waste to create about 112 tons of biochar per year. Renewable energy eventually will be captured from the units and used to heat the onsite 2,500-square-foot greenhouse and the warehouse.

Ontario Town Approves Biochar Production at Municipal Yard Waste Site Smith Falls has approved a request by local environmental group, Rideau Roundtable, to create biochar on town land to mitigate the impacts of climate change. The biochar burning will occur in a 50-metre long trench that will allow for 100 cubic metres of brush and yard waste to be burned.



Proposed set up for creating biochar at the Smiths Falls municipal compost site. (Photo courtesy of Nate Morris)



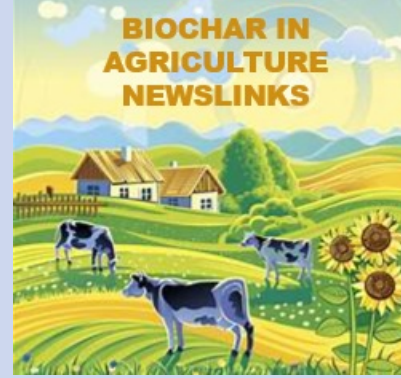
Biochar Activities Heating Up on Salt Spring Island. The Biochar Working Group led by Brian Smallshaw is experimenting with special portable open-topped kilns, designed to turn yard waste into charcoal and solve a dilemma faced by neighbors after every storm. "You get all the branches and stuff that comes down in winter storms," says Smallshaw. "And what do you do with it all?"

> **Good Seed, Bad Fungi** USDA Agricultural Research Service is developing a strategy to use biochar in seed coating to protect good seed from bad fungi. The seed coating is a natural mixture that includes the "good" strain of *Aspergillus flavus*, using corn-starch based bioplastic and biochar as a carrier.

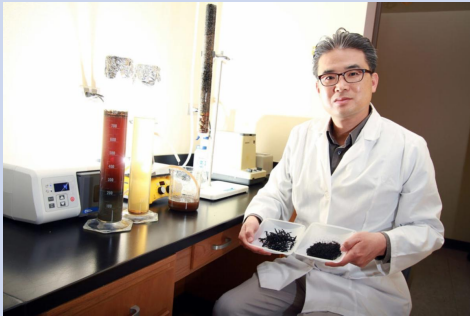
Easy Way for Dairy Farmers to Reduce Their Climate Impact Adding even a small amount of biochar to a dairy's manure-composting process reduces methane emissions by

84%, a recent study by UC Merced researchers shows.

Biochar for Blueberries Determining how wild blueberry growers can use biochar to increase soil moisture and aid in the crop's ability to be resilient to drought will be the focus of a



new study by University of Maine researchers funded by the USDA NRCS.



Soybeans Get Biochar Boost A team of researchers led by The University of Texas at Arlington will examine various innovative biochar treatments that will reduce greenhouse gas emissions in soybeans, while helping small and underserved farmers in Texas, Arkansas and Missouri increase their soybean production.

« Eun Sung Kan, Ph.D., shows the biochar results of a unique process he has developed that will help soybean farmers. (Photo courtesy of Tarleton State University)

Biochar Helps to Keep Pharm Off the Farm. Penn State University researchers are exploring the efficacy of natural biochar to absorb pharmaceutical contaminants from wastewater to prevent the chemicals' entry into soil and subsequent uptake by food crops. The research is being funded by the U.S. Department of Agriculture's Agricultural Research Service (USDA's ARS).

Trade Your Crop Byproducts for Electricity V-Grid Energy is offering electricity in exchange for crop waste. CEO Greg Campbell says they're looking for farmers who have crop waste and large electricity bills. "If we can take those nutshells or dead trees...and convert that into electricity and carbon in the form of biochar, then put that biochar into the soil to help plants grow, what we are affectively doing is we are short-circuiting or bypassing that CO2 that would have otherwise gone back into the atmosphere."

Manure-treated Biochar Can Act As Slow-Release Fertilizer Researchers at Iowa State University are using treated biochar to absorb nutrients from liquid manure and repackage them as slow-release fertilizer pellets. The ISU team discovered that pretreating biomass consisting of corn stover, wood chips and crop residue with very small amounts of iron sulfate – an inexpensive, nontoxic byproduct of steel production – made the resultant biochar able to trap phosphorus from swine manure.

Texans to Turn Gin Trash Into Biochar

Treasure Professors from two Colleges at West Texas A&M University recently won a major national grant to study a project that can recycle cotton gin waste into biochar to help reduce the amount of water required to grow cotton.

Dr. Nathan Howell holds a handful of cotton gin trash that » will be converted into biochar in a new research initiative.



Bottoms into Biochar Dyper has become the first diapering company in the world to successfully "char" a diaper with its Byochar technology. Byochar reactors have the capacity to process 2 tons of diapers per day. That's approximately 7200 diapers every 10 hours, or 12 diapers a minute.

South San Francisco Cleans Up Sludge with Pyrolysis Bioforcetech is one of the only pyrolysis facilities treating biosolids in the US. The company has worked with the EPA to test the efficacy of pyrolysis as a

tool to combat PFAS. The process has proven to eliminate or reduce to minimum detection level an average 97% of the 41 PFAS compounds tested.

Bioforcetech facilities are located in Redwood City. >>



Swiss Re & Carbonfuture Partner to Boost Carbon Removal Market Standards Reinsurance giant Swiss Re and carbon removal tracing platform Carbonfuture, have signed a multi-year offtake agreement to support high-quality standards in the biochar carbon removal market.

Growing the Community Wakefield BioChar has partnered with the Columbia Missourian to provide a \$1,000 scholarship to recognize a student who is forward thinking about the future of the community. The winning essay by MU student Madisyn Gentry describes her vision of community gardens to help the disadvantaged.

Leader Behind Controversial NY Biochar Business Has Ties to Troubled Nebraska Ethanol Plant Three business partners from Saratoga Biochar Solutions in New York say they've found an environmentally friendly way to turn sewage sludge into a "revolutionary new bio-fertilizer." The company includes an official who previously worked at the AltEn ethanol facility shut down by the state of Nebraska over environmental concerns.

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