



## US Biochar Initiative Newsletter

November 2021

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**\$200 million dollars will be available " . . . for contracting or employing crews of laborers to modify and remove flammable vegetation on Federal land and. . .use materials from treatments to. . . produce **biochar** and other innovative wood products. . ."**

H.R.3684 - Infrastructure Investment and Jobs Act  
November 15, 2021

### CLIMATE CHANGE AND THE BUSINESS OF BIOCHAR

By Tom Miles, Executive Director

Carbon removal markets and corporate decarbonization have been popular topics in recent months. We see increased interest in biochar from investors and financial organizations. A growing number of companies are qualifying to sell biochar **CO<sub>2</sub> Removal Certificates** (CORCs). Carbon.Future and Puro.Earth are the two current markets for biochar carbon removal credits.



***Thanks to USBI VP Kathleen Draper for leading a dynamic team to Glasgow to carry the biochar message to COP26!***

Read the **Biomass to Biochar: Maximizing the Carbon Value**, a roadmap for biochar's future development in the Pacific Northwest and beyond. The report was recently released by the Washington State University Center for Sustaining Agriculture and Natural Resources (CSANR).

Join the online **Business of Biochar Symposium** December 7 - 9, to hear experts and practitioners describe current research and market trends and to pitch your company to potential investors.

Biochar-amended composts are popular amendments for homeowners and landscapers. Join us at **Compost 2022** January 24-27, in Austin, Texas, at the Annual Meeting of the US Composting Council.

Our **USBI Biochar in the Woods Seminar Live Webinar and Field Days** in January and February will offer a combination of live, online, and in-field presentations and demonstrations on making and using biochar in place in the forest.

Biomass energy plants are prolific biochar producers. Join us at the **16th International Biomass Conference and Expo** on March 14-16 in Jacksonville, Florida, to discuss how they can help scale the biochar industry.

### LEARNINGS FROM COP26 — MORE WORK NEEDED TO PROMOTE BIOCHAR'S VALUE

by Kathleen Draper, USBI VP and IBI Chair

Two biochar industry delegations attended the UN's November's COP event — the International

Biochar Initiative (IBI) and South American NGO ProNatura. As observers, our delegations spent time in the Blue Zone convention center which housed nearly 100 pavilions — mostly sponsored by countries or regions as well as other entities in the climate change arena. Each pavilion offered a [schedule of talks](#) focusing on different daily themes such as finance, energy, adaptation, loss, and damage, etc.

One panelist, Hannes Junginger, CEO of Carbon Future did an excellent job of representing biochar on two different panels; 'Between Voluntary & Compliance Market for Carbon Removals' and; 'On the Road to Net Zero: Scaling the Deployment of Negative Emissions Technologies'. Both panels were moderated by the Negative Emissions Platform and took place at the [IETA Business Hub](#). ProNatura's Axel Reinaud also spoke at the Cameroon pavilion about their [new pyrolysis plant](#) and convinced government officials to



COP26 delegates L to R - Hannes Junginger, Carbon Future, Lucia Brusegan, Starter/IBI Board member, Kathleen Draper, James McPhail, SeQuestand, Rob Nooter, Executive Director, IBI.

include biochar in their national climate strategy.

While progress was made in keeping 1.5C alive, a key conference theme, we could also see that there is significant work to be done to elevate biochar's role in mitigating and adapting to climate change. It is vital that our biochar industry continues the important work to educate the public and decision-makers about the benefits of biochar.

## *SCROLL ALL THE WAY DOWN TO SEE THE LATEST!*

- How to Apply Biochar Guidelines Development Underway
- Biochar Events Calendar
- Links to USBI YouTube and Real-World Profiles
- USBI Learning Center Featured Resources
- Welcome to the Directory
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- Ads and Opportunities

## REGISTER TODAY!

The International Biochar Initiative and USBI are pleased to invite you to **The *Business of Biochar* Online Symposium** **December 7-9, 2021** **11:30 am - 2:30 pm ET (US)**



Register Now



### "HOW TO APPLY" BIOCHAR GUIDELINES DEVELOPMENT UNDERWAY

USBI receives many requests from biochar users who want to learn how to apply biochar most effectively. Responding to your needs is our first priority so we have launched a project to develop materials to help. Funded by a US Forest Service grant, our USBI and the Nebraska Forest Service educational team is now in place to publish fact sheets, use guidelines, and market road maps in seven areas. These include compost, soil blends and growing media, stormwater management, landscape turf and trees, viticulture, animal feed, and manure management. The work will be led by [Delaney Forestry Services](#) in partnership with [CAWOOD](#) and completed over the next 18 months.

*At this time of thanksgiving, help us continue serving you and still keep USBI*

*dues-free.*

Check out the Cares Act Relief Tax and your employer match program to see how to stretch your gift!



## BIOCHAR EVENTS CALENDAR

**December 7-9, 11:30 am - 2:30 pm EST (US)** The International Biochar Initiative and US Biochar Initiative invite you to *The Business of Biochar online symposium - where investors and producers meet* [Register Now](#)



**January 24-27 Compost 2022 Austin, TX** This US Composting Council Annual Meeting will focus on biochar-amended composts



which are emerging as popular products for homeowners and landscapers. Registration info to come.



**January - February USBI Biochar in the Woods Seminar Live Webinar (January 27) and Field Days (February 1-3).** This exciting program offers a combination of live, online, and in-field presentations and demonstrations on making and using biochar in place in the forest. Click here for more details and [Registration](#).

## FEATURED NOVEMBER RESOURCES

- **Market Research and Insights for Grape Growers and Biochar Producers Report** - This report was produced by Dovetail Partners in collaboration with the International Biochar Initiative and US Biochar Initiative
- **In Search of Soil Podcast** Listen to an interview with biochar practitioner Kelpie Wilson on making and using biochar in the garden.
- **Great Lakes Biochar Network Regional Education Hub** This website centralizes biochar information for the Great Lakes area and offers articles, publications, videos, human resources and a webinar series. The site is hosted by Michigan State University and the MSU Extension.
- **Report: Biomass To Biochar: Maximizing The Carbon Value** Forty biochar producers, practitioners, scientists, and engineers

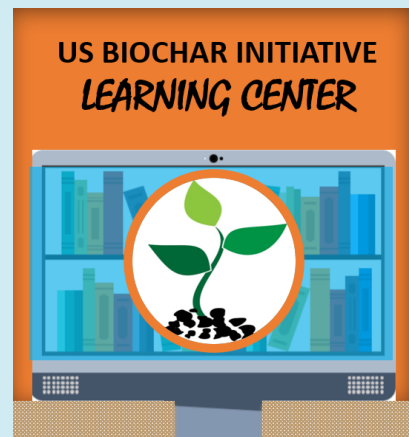


chart a roadmap for future development of the biochar industry in the Pacific Northwest and beyond.

**Our Biochar Learning Center database on the [USBI website](#) continues to grow!**



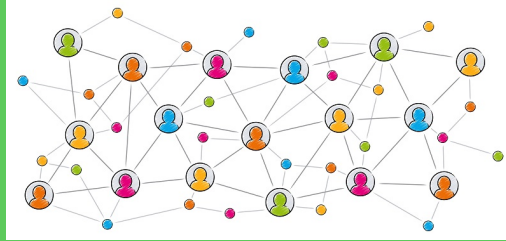
**[Check out our USBI YouTube Channel!](#)**

**[Read real-world profiles of biochar practitioners at work here.](#)**



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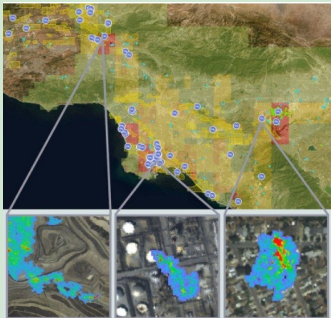
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## BIOCHAR NEWSLINKS

> [Advanced Resilient Biocarbon \(New York\) Secures Credit Enhancement](#) for €500 million Climate Bond. ARB, a provider of scalable Pyrogenic Carbon Capture and Storage (PyCCS) solutions, announces its first pre-issuance credit enhancement guarantor toward issuing a \$500 million Euro Climate Bond.

> [Biochar Defeats Greenhouse Gas Nitrous Oxide](#). Microorganisms in the soil give off nitrous oxide as a byproduct as they cycle nitrogen. Since nitrogen stimulates nitrous oxide production, adding nitrogen fertilizers to soil tends to result in more emissions. Application of biochar to fields may help to limit nitrous oxide emissions.



> [Biochar Knocks Out Methane.Tool](#). An aerial survey by the NASA-Jet Propulsion lab in Pasadena captured images of escaping methane plumes from California dairies and composting facilities. Researchers are experimenting with adding biochar to these piles to arrest these greenhouse gas emissions.

« Views from NASA's tool provides methane data for California.

> [An Almond Shell Two-fer](#). Corigen, a sustainable ag operation in California's Central Valley, is producing both biochar and pyroligneous acid (a growth stimulating chemical for agriculture)

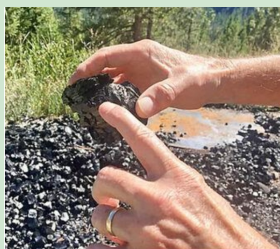
from pyrolysis of almond shells. The project is gaining urgency as California moves to phase out open burning to dispose of ag waste.

> [California Researchers Test Small Reactor with Global Potential](#). Startup Takachar, based out of both India and the Bay area, is testing a prototype for a small-scale, low-cost portable system that can turn forestry slash and agricultural residue like rice husks into biochar. Takachar won an Earthshot Prize for its device which also holds promise for improving air quality in areas affected by crop burning.

Takachar machine at work in Jackson State Forest. »



> [Company Helps Tackle Wildfires and Drought in California](#) VGRID Energy Systems takes on the challenge with their biochar-producing biomass energy generator providing multiple benefits to farms. Fred Leyendekker, farmer at South Corner Dairy, says, "VGRID not only reduces my energy costs but we have seen a reduction in mortality and disease since we started feeding carbon to our calves."



> [Montana Biochar Project is a Dream Come True](#). Forester David Atkins has won the support of a large group of organizations for the Twin-Gold Creek Project that will protect homes from wildfire. Biochar that the project produces will help make agricultural land more resilient to drought. For a forester and soil scientist, this is a dream come true.

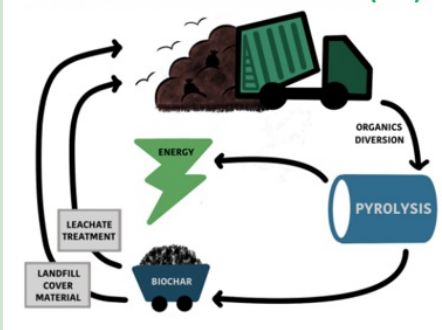
« Biochar produced from wildfire-prevention thinning using low-tech kilns.

> [Montana Invests in Biochar Infrastructure](#). Senator Jon Tester

reports that the recently passed federal infrastructure bill will provide \$200 million to remove flammable vegetation for creating biochar or innovative wood products. The bill encourages agencies to consider working with youth and conservation corps, and engage with tribes and veterans.

> [Pyrolysis for Resource Recovery in Waste Management](#). Pyrolysis is a promising waste

**OFMSW LIFE CYCLE ASSESSMENT (LCA)**



management strategy for the organic fraction of municipal solid waste (OFMSW) that recognizes the value of this waste stream. Pyrolysis offers an opportunity to improve energy production from waste over the current practice of methane capture from landfills.

« Researchers at University of Colorado Boulder are using life cycle assessment (LCA) to understand the environmental impacts of OFMSW pyrolysis.

➤ **Char Me, Don't Burn Me.** Options for a greener end-of-life could include pyrolysis as an alternative to highly polluting cremation or embalming chemicals. One biochar enthusiast writes, "I hope that, after my funeral, when my biocharred body has cooled down, my friends will take some charcoal home to use in their gardens. The biochar will help draw down carbon from the atmosphere and build soil health."



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