



September 2020 Newsletter

USBI UPDATE – TOM MILES, EXECUTIVE DIRECTOR

Welcome to our first monthly USBI 2020 Newsletter. After ten years of hosting conferences, presentations, workshops, and webinars we find we need to communicate with producers, users and supporters on a monthly basis.



USBI is a volunteer-driven organization with limited resources. Through strategic partnerships with other organizations we accomplish more together. USBI's collaboration and support comes from many partner organizations including the US Forest Service (USFS), the Natural Resource Conservation Service (NRCS), the Council of Western State Foresters, the University of California - Davis, the Soil and Water Conservation Society, National Association of Conservation Districts, and the USDA Agricultural Research Service. We continue to build the North American biochar community through networking, education, and demonstration.

The US Forest Service (USFS) – A Key Partner

The USFS has enabled USBI to provide technical support for biochar from wood processing and forest residues. Since 2017, USFS support has helped us assist in product development, processing, and markets. USFS has also enabled surveys where you, our USBI networkers, have told us what you need - product characterization, standards, and guidelines to support markets like landscaping, turf and trees, horticulture, and stormwater, and emerging markets for the strategic use of biochar in remediation, agriculture, building and construction. The USBI-USFS partnership has also produced biochar webinars covering topics like biochar markets, abandoned mine land reclamation, production, and combine heat and biochar. Next month, we will assist the USFS in the demonstration of a prototype mobile carbonizer for making biochars from forest residues and gorse, an invasive species.

Natural Resource Conservation Service (NRCS) - Best Practices Projects

We have also collaborated with NRCS to promote their Soil Carbon Amendment Interim practice 808 which will provide cost-share to farmers who use biochar. In addition, with help from Cornell University Cooperative Extension and USDA Agricultural Research Service scientists, USBI has applied for an NRCS grant that will demonstrate biochar on 100 farms using the new 808 practice and help NRCS develop biochar use guidelines.

Biochar Education and Outreach Update

USBI has assisted NRCS, USFS, Council of Western State Foresters and many other agencies and organizations with biochar education this year. For example, we delivered training and presentations to the Soil and Water Conservation Society, National Association of Conservation Districts, and industry associations. We also presented a workshop at the US Composting Council January 2020 national meeting which would have been impossible without the help of USDA Agricultural Research Service, Jon Nilsson of Chargrow, Peter Hirst of Symsoil, and Jack Hoeck of Rexius Products. Special thanks go out to these experts!

Developing Best Practices

Developing best practices and guidelines has been a special focus this year. Another collaboration with the University of California, Davis resulted in two biochar management practices proposals for

the California Department of Agriculture Healthy Soils Program. In addition, USBI has been working with state agencies to develop practices and guidelines for use in storm water and green infrastructure. To further promote biochar use, we have also aided other cities, states, and regions in Canada, Mexico, and the US through the sharing of information and policies.

Laboratories One of USBI's many goals is to update our list of laboratories that are capable of analyzing biochars and collaborating with biochar producers and scientists to develop standard practices and guidelines for key biochar uses. Biochars which meet International Biochar Initiative standards now qualify for sale in the Carbon Future market platform.

We look forward to your ideas, experiences and help to develop strategies for biochar production, marketing, use, and education. You can also help us grow the industry by advertising in the newsletter and on our website!

BOLDER USBI INITIATIVES NEED YOUR SUPPORT NOW!

Kim Chaffee, USBI Fundraising Committee Chair

At USBI, we're planning big bold initiatives to grow the biochar industry, demonstrate biochar's versatility, and build a vibrant customer base. In this month's Update, Tom Miles details our emerging plans for education and outreach programs, best practices that will maximize results for biochar users, webinars and workshops, case studies, monthly newsletters, directories for the biochar industry and testing laboratories, and a website upgrade.

We're also planning more cooperative arrangements with allied industries and government agencies. That's not all. We also intend to create more standards (including for animal feeds), model state and federal policies, national and regional conferences, more grant writing capabilities, etc.

These ambitious goals have vastly outgrown the capacity of our volunteers. Since USBI does not require fees for membership, we need your financial support to hire professionals who will tackle our bold initiatives with a sense of urgency. We appreciate any amount you can give.




NEW BIOCHAR LEARNING CENTER (BLC)

Kelpie Wilson, USBI Outreach and Education Committee Chair

Biochar stories and research are found online everywhere now. That's great, but how can you determine which information is most current and credible? Providing you with reliable answers is the goal of USBI's new Biochar Learning Center (BLC) on the USBI website. Over the next year, we will be building a repository of information for beginner, intermediate, and advanced biochar learners. [Here are assets now available:](#)

The Biochar Atlas - an online, interactive tool from the USDA-ARS. The tool provides guidance to farmers, gardeners, and other end-users on the



2020 BIOCHAR LEARNER SURVEY
WHAT DO YOU WANT TO LEARN ABOUT BIOCHAR?
The first 100 survey takers receive a free USBI Directory listing valued at \$25!



potential benefits of biochar, including decision support tools to select biochar types and amendment rates. Learning level: Multiple

Green Roofs, Biochar, and You - This publication covers the benefits of biochar in green roofs and outlines a project completed at the University of Nebraska - Lincoln. Learning level: Intermediate

Combined Heat and Biochar Technology Assessment for a Composting Operation - This USBI White Paper by Kelpie Wilson and Tom Miles compares several different technologies currently available from vendors that can provide heat energy and biochar for a hypothetical vermicompost operation. Learning level: Intermediate



The 3R Principles for Applying Biochar to Improve Soil Health This open source paper proposes the 3R principles for applying biochar to soils: right biochar source, right application rate, and right placement in soil. Learning level: Advanced

MEET BIOCHAR PRACTITIONER JACK HOECK, REXIUS

Each month we will be interviewing biochar practitioners from North America to hear about their challenges and successes with biochar. Jack Hoeck is the composting expert at Rexius – an organic waste recycling company based in Oregon’s Willamette Valley. Jack has been with the company for 45 years and also serves on the board of the US Composting Council, which presented him with a Lifetime Achievement Award this year.



How did you get started with biochar?

I first heard about Terra Preta about 15 years ago. It was a fascinating idea. I kept my ear to the ground to learn more, but the information was scattered and not that convincing for a long time. Eventually, I connected with John Miedema of BioLogical Carbon, and he helped me give it a try in our composting operation. We composted two windrows, side by side, one with 5% by volume biochar added. The biochar pile was slower to heat up initially, but then it caught up and when we analyzed it 14 weeks later, it had more moisture, nitrates and other nutrients, and better quality overall, than the pile without biochar.

What are you doing now?

We use the biochar activated compost in about 8 different soil products that we make, as well as custom soil blends. We would use biochar in all of our products if we could afford it and if customers demanded it. Feedback we get from customers is that they like the biochar compost products, but the price is too high for some of them.

How can we improve the economics of biochar?

It would really help if some of the other benefits were monetized. Biochar reduces odors and greenhouse gas emissions from the composting process. We need to educate people about the benefits, but our company does not have money to fund an ad campaign for our biochar products. One difficulty is that early on, biochar was overhyped and there was misinformation about it that we have to overcome now. But we will get there. Biochar reminds me of the early days of the compost

industry. We didn't know much about compost 40 years ago. We know a lot more now. We do what we do with biochar and compost because we are confident of our claims. It takes time to develop a new industry. Bottom line, biochar is a very interesting material. Just like the extremely productive Terra Preta soils, all we need to do is put the right ingredients together and let time and Nature do the work.

BIOCHAR EVENTS CALENDAR

September 24, 2020 [USFS Free Monthly Biochar Webinar](#): Biochar Production from Forest Residues -Technoeconomics and Life Cycle Assessments 11 am ET

October TBA Burn Boss Demo

November 16-20, 2020 [National Biochar Week](#): Register for virtual seminars on biochar production, markets, types, education, benefits, and current and past projects.

BIOCHAR NEWSLINKS

[Council of Western State Foresters](#) >

A new publication highlights biochar and other innovative forest product success stories.

[Lower Thames Valley Conservation Authority](#) >

In Ontario Canada, experiments with biochar are removing phosphorus in tile drainage from a farm field. What worked well in lab experiments seemed not so effective in the field where other factors may come into play.

[Vancouver Island in British Columbia](#) >

Perhaps it will work better on [Vancouver Island in British Columbia](#) where the town of Cumberland has been struggling with wastewater treatment compliance for some years now. Can biochar solve their problems? Improvements to the lagoon and a reed bed with biochar are in the works. At stake are major fines for non-compliance.

[Hoosier National Forest](#) >

In Indiana, contractors are making biochar from forest slash to benefit soils in the [Hoosier National Forest](#). Hydrologist Chad Menke said, "This is an experimental project for the Hoosier and K&K Dirtworks to see where the production pitfalls are and the quality of the product that can be produced. We were fortunate to award this project to a knowledgeable contractor who specializes in producing soil amendment products such as compost. It was a perfect fit to ensure this project was a success."

[Hoosiers Are in the News](#) >

You must check out what Jason Mauck is doing in Indiana! This innovative young farmer is stacking functions sky high with companion planting, relay cropping, animal grazing and biochar all on one field. His goal is to "help a young farmer make a great living off of 40 acres." Plus, it keeps him from getting bored.

University of Nebraska ▶

Low carbon, sandy, sloping soils prone to leaching, droughts, and degradation will get help from biochar in a newly funded project.

University of Florida ▶

In Florida, another region with sandy soils, researchers are applying biochar to help citrus trees survive the deadly huanglongbing or citrus greening disease.

Doctors Support Biochar Use to Protect People's Health ▶

A pair of clinicians share their opinion about “black snow” – the noxious particulate pollution that harms the health of people living near burning sugar cane fields. The good doctors point out that nearly every other sugar cane growing region in the world has switched to collecting this trash and using it to produce electricity, biochar, and other useful products in clean, industrial processes.

Biocycle, the compost industry journal ▶

[Biocycle, the compost industry journal](#), features an in-depth report from independent researcher José M. Álvarez de la Puente on the use of biochar and vermicompost as substitutes for peat in growing media. The carbon sequestration impact of the substitution could be substantial.

"Biochar: The Permanent Compost" ▶

In this *Organic Farming Magazine* article, USBI board member Kelpie Wilson describes results of a NRCS Conservation Innovation grant that led to the development of on-farm biochar production and composting techniques now gaining wider adoption.

If you are looking for the latest biochar basic research, check out the International Biochar Initiative. IBI Members have access to a monthly summary of biochar research papers.

advertisement

WILSON BIOCHAR ANNOUNCES THE RING OF FIRE KILN

As forests go up in smoke, we are experiencing the loss of one of our most important natural carbon sinks. This is a tragic development that we must try to reverse by massively increasing fuel treatment programs, especially around our towns and cities.



The truth is that gathering, handling and transporting woody debris is labor and resource intensive. Often, the best solution is to treat it in place, especially if it can be converted to biochar and applied to forest soils to promote forest health and soil carbon sequestration. The *Ring of Fire Kiln* is an ideal technology for this purpose.

We have been affected by the current climate fire catastrophe on the west coast but our business is up and running and we are now taking orders for this innovative Flame Cap Kiln. Please visit WilsonBiochar.com for more information.