



**News from the International Biochar Initiative**

IBI is a non-profit organization supporting researchers, commercial entities, policy makers, farmers & gardeners, development agents and others committed to sustainable biochar production and use.

Help put the Earth **Back in the Black**

## February 2015 News from the International Biochar Initiative

### New Biochar Publications Available on the IBI Website

IBI and the Ithaca Institute for Carbon Intelligence announce the joint publication of a new paper on the *Potential for Biochar to Deliver Greater Sustainability for Coffee Cultivation and Processing*. This paper reviews methods for biochar incorporation into coffee production and processing systems to improve their overall economic and environmental impacts, with a focus on those processes typically performed at or near the site of coffee cultivation. The methodology used in this paper combines a synopsis of relevant peer-reviewed literature with the identification and analysis of historical, current, and planned coffee and biochar demonstration projects in various coffee growing regions around the world. The authors interviewed selected project teams and include project descriptions which outline results to date and other details. To read more on this effort, please see: [www.biochar-international.org/crop\\_report\\_coffee](http://www.biochar-international.org/crop_report_coffee).

Additionally, IBI has published a research summary highlighting recent studies on biochar use in composting operations. Although both biochar and compost use organic wastes as feedstocks, the two operations do not have to be an either/or option; instead, they can be combined for synergistic production and utilization. The paper examines the potential benefits of including biochar in composting operations including shorter compost times; reduced rates of GHG emissions (such as methane and nitrous oxide); reduced ammonia losses; the ability to serve as a bulking agent for compost; and reduced odor. Undergoing composting helps charge biochar with nutrients without breaking down the biochar in the process. To read more and download the summary, see <http://www.biochar-international.org/compost>

### March IBI Webinar Series Event: Greening Australia presents, “Driving Positive Landscape Change with Biochar and Bioenergy”

If you're interested in bioenergy, landscape restoration, the Australian biochar space, or how to fund your biochar projects, this webinar is for you! In March, IBI welcomes Doug Phillips, Anna Carrucan, and David Warne, all of Greening Australia, to give a presentation titled, “Driving Positive Landscape Change with Biochar and Bioenergy”. Greening Australia’s mission is to conserve and restore landscapes at scale through collaborative, science-based and innovative conservation programs. Their webinar will explore how current funding pathways for addressing landscape biodiversity loss and land degradation fall significantly short of what is required due to the scale of the issue in Australia. They will outline the Biochar and Energy from Trees Research (BETR) project funded by the Alcoa Foundation and conducted by Greening Australia, which investigated the feasibility of integrating short rotation bioenergy plantations on farms in Australia using mixed native tree species to provide environmental and economic benefits.



[Registration is open now at https://attendee.gotowebinar.com/register/8883253872695402242](https://attendee.gotowebinar.com/register/8883253872695402242). The webinar will be held on Tuesday, March 17th at 6:00 pm Eastern Time. Note: Please convert the 6:00 pm ET start time to your local time by using a time converter tool. You must be a dues-paying member to participate in these special events.

For more information on this webinar program, including links to prior presentations by Dr. Steven McGreevy (Research Institute for Humanity and Nature, Kyoto, Japan), Dr. Johannes Lehmann (Cornell University, USA), Dr. Isabel Lima (US Department of Agriculture), Art Donnelly (Estufa Finca Project Director & Seachar), Dr. Andreas Hornung (Fraunhofer Institute for Environmental, Safety, and Energy Technology (UMSICHT) leader), and Jonah Levine (Manager at Confluence Energy LLC), please see: [http://www.biochar-international.org/webinar\\_series](http://www.biochar-international.org/webinar_series).

## **New and Renewing IBI Business Members**

A listing of all current IBI [Business](#) and [Organization](#) Members can be found on our website. For more information on membership opportunities and benefits, or to join, please see: <http://www.biochar-international.org/join>. Please note, Business and Organization descriptions are submitted by each individual entity, and are not developed or written by IBI.

### **New Business Member: Charborn LLC**

Charborn began as a master's thesis project at the University of California Santa Barbara's Bren School of Environmental Science and Management. Together, our team has over 10 years of experience in the biochar and agriculture industries. We are focused on the accessibility and affordability of biochar for farmers. We want biochar to be an investment that every farmer can make, if they so choose. In order to do this, we work with farmers to ensure the ease and precision of their biochar application.



We aim to resolve any confusion about biochar by conducting and monitoring field trials through the provision of reduced-cost biochar to growers interested in conducting trials on their farms. By monitoring the effects of biochar in different soils and with different crops we are gaining a comprehensive understanding of the large scale effects of biochar.

By integrating biochar into agriculture, we are utilizing forestry waste, sequestering carbon back into soils, and increasing water and nutrient use efficiency while boosting yields. We're working to help the environment—by helping farmers profit. For more information, see <http://www.charborn.com> or contact Debbie at [debbie@charborn.com](mailto:debbie@charborn.com).

### **Renewing Business Member: Wakefield Agricultural Carbon LLC**

Wakefield Agricultural Carbon is a U.S. based company, focusing on the application of biochar for retail and industrial markets. Its work is devoted to finding innovative ways through biochar to improve the abundance of great organically grown food, beautiful garden flowers, and a healthier environment for everyone to enjoy. The founder of Wakefield, Dr. Thomas R. Marrero P.E., continues his research on the optimization of biochar based products. Additionally, Wakefield is identifying ways to educate the public of its use and establishing a clear plan for the distribution of biochar. Visit [www.wakefieldbiochar.com](http://www.wakefieldbiochar.com) to watch us grow!

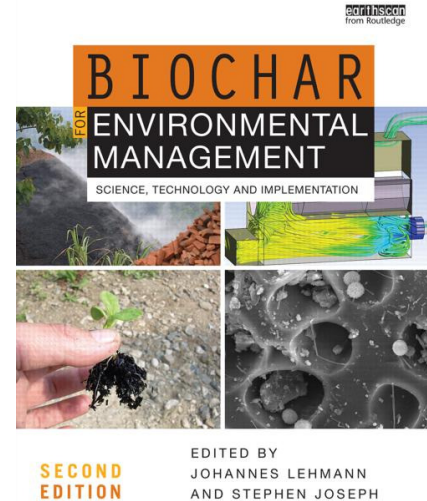


## **2<sup>nd</sup> Edition of Biochar for Environmental Management Published**

The second edition of *Biochar for Environmental Management: Science, Technology and Implementation*, is now available for pre-order. Since the first edition of this biochar text was published in 2009, the biochar community has seen numerous biochar-specific conferences, a significant increase in biochar research and publications, in-depth news coverage, and a growing commercial industry.

The second edition of the text includes 31 chapters; not only substantially updated chapters based on information in the first edition, but also additional chapters on environmental risk assessments; new uses of biochar in composting and potting mixes; the effects of biochar on soil carbon cycles; changes in water availability and soil water dynamics; recent discoveries on historical biochar use in the Amazon, Africa and Asia; and sustainability and certification. The book continues to represent the most comprehensive compilation of current knowledge on all aspects of biochar.

The publisher, Earthscan, is offering IBI dues-paying members a 20% discount off the purchase price as well as access to a digital version of the preliminary pages and the first chapter. This offer will be sent to IBI dues-paying members in the next two weeks. To read more about the publication and order a copy, see <http://www.routledge.com/u/routledge/Biochar>.



## Biochar Briefs: News Roundup for February

We update the website weekly with new articles on biochar. For more information, please see: <http://www.biochar-international.org/newsbriefs>.

### Malaysia

Palm oil is the biggest industry in Malaysia and producers are looking at strategies to more effectively utilize biomass residues from oil processing. The empty fruit bunches (EFB) from oil palm are a waste management issue, so researchers at the Universiti Putra Malaysia (UPM Group EB), chaired by Prof Dr Mohd Ali Hassan, have been investigating turning those EFB into biochar and compost. They have been conducting research on the effectiveness of this feedstock for biochar since 2011 in cooperation with other academic institutes as well as companies in the sector. The results of the research to date have been incorporated into the National Biomass Strategy 2020 of Malaysia. Additionally, new companies are looking into how to market the EFB biochar/compost products to a growing marketplace for soil amendments. (<http://www.sinarharian.com.my/bisnes/biochar-penyubur-tanah-1.355809>)

### Mexico

Bob Cirano, aka Biochar Bob, visited an educational farm called Via Organica outside San Miguel de Allende to highlight how biochar is impacting the viability of farming for local people. As part of the trip, he and his crew interviewed local farmers and produced a short video on the use of biochar in the area. (<https://www.youtube.com/watch?v=iy3cZS0b69Y>).

### United States

A recently installed storm water treatment project in Port Townsend, WA, US, is using softwood biochar (produced at the local paper mill) to filter heavy metals from storm water runoff at the Port of Port Townsend (PoPT) Boat Haven facility. This will help the site meet storm water discharge benchmarks for copper and zinc set by the Washington State Department of Ecology. A successful pilot project to test the performance of the biochar filtration blend was installed in April 2014 and was followed up with a larger installation in November 2014. The project began with a research and development (R&D) program

conceived and conducted by researchers at Oregon State University and BioLogical Carbon LLC. (<http://www.estormwater.com/port-storm>)

New IBI Business member, Charborn LLC, recently won first place in the National Forest Foundation 2014 Barrett Foundation Business Concept Challenge. The goal of the challenge is to create a viable market for small-diameter woody biomass resulting from forest restoration. Through their project, Charborn will utilize the biomass as a biochar feedstock for use in agriculture. The US Department of Agriculture Under Secretary for Natural Resources and the Environment Robert Bonnie stated: "Building markets for small diameter trees can substantially boost our ability to restore National Forests so that they are more resilient to wildfire and a variety of threats. The Barrett Award recipients demonstrate that with creative and innovative ideas, there are business opportunities that benefit both the environment and rural economies." (<http://biomassmagazine.com/articles/11537/nff-recognizes-biochar-biochemical-business-ideas>)

## Opportunities in Biochar

- Support a crowdfunded biochar project led by students at University of Exeter in the United Kingdom: *Empowering Ethiopian farmers to become environmental entrepreneurs*. More information is available at: <http://www.biochar-international.org/node/6341>
- Take advantage of a free subscription to Biomass Magazine. More information is available at: <http://www.biochar-international.org/node/5537>.
- Download a new open access biochar book: *Biochar Culture*, by Sai Bhaskar N Reddy. The text highlights the use of biochar in communities and its potential for increased sustainable agriculture in smaller scale farmsteads and homes, focusing on work in India. The book can be accessed at: <http://www.biocharculture.com>.
- Job postings in biochar (as well as research/educational opportunities) can be accessed at: <http://www.biochar-international.org/network/jobs>.
- Looking for potential grant funding? Check out the Terra Viva Grants Directory which develops and manages information about grants for agriculture, energy, environment, and natural resources in the world's developing countries at: <http://www.terravivagrants.org/Home>.

## Upcoming Calendar Events

- March 7 – 14: George Mason University Permaculture Design Certification Course. Location: VA, USA. For more information: <http://www.biochar-international.org/node/5561>
- March 12: Biochar presentation at Harvest Hastings. Location: Belleville, ON, Canada. For more information: <http://www.biochar-international.org/node/6340>
- March 14: Biochar Workshop by the Williams Community Forest Project. Location: Williams, OR, USA. For more information: <http://www.biochar-international.org/node/6346>
- March 16 – 18: Climate Smart Agriculture 2015 Global Science Conference. Location: Le Corum, Montpellier, France. For more information: <http://www.biochar-international.org/node/5354>
- April 4: Spiral Living Center Biochar Intensive. Location: Cave Junction, OR, USA. For more information: <http://www.biochar-international.org/node/6347>
- April 12 – 17: European Geosciences Union (EGU) General Assembly; Biochar Session: Future challenges in biochar research. Location: Vienna, Austria. For more information: <http://www.biochar-international.org/node/5513>
- April 14 – 18: 2nd International Conference on Biochar and Green Agriculture (BioGra2015). Location: Nanjing, China. For more information: <http://www.biochar-international.org/node/5988>
- April 16 – 21: 3rd International Biochar Training Course. Location: Nanjing, China. For more information: [http://www.biochar-international.org/China\\_training\\_2015](http://www.biochar-international.org/China_training_2015)

- April 20 – 22: International Biomass Conference and Expo. Location: Minneapolis, MN, USA. For more information: <http://www.biochar-international.org/node/5536>
- April 20 – 24: III International Symposium on Organic Matter Management and Compost Use in Horticulture. Location: Murcia, Spain. For more information: <http://www.biochar-international.org/node/5389>
- May 28 – 29: Biochar – Contribution to Sustainable Agriculture. Location: Potsdam, Germany. For more information: <http://www.biochar-international.org/node/5510>

See the [IBI Calendar page](#) for more events. To add an event to the calendar, send the information to [info@biochar-international.org](mailto:info@biochar-international.org).

## Regional Group Update from China

*Contributed by Jun Meng, Liaoning Biochar Engineering and Technology Research Center, Shenyang Agricultural University*

**Shenyang, China:** In December 2014, over 60 Chinese experts and/or scholars from the Ministry of Agriculture (MOA), the Chinese Academy of Science (CAS), universities, enterprises, and news media, participated in a two-day meeting to develop a national biochar industry strategy. The event, *Development Strategies of Biochar Industry – Consulting Symposium of Chinese Academy of Engineering (CAE)*, culminated with participants agreeing to set up a China Biochar Research and Industry Alliance to solicit financial and policy support from the government.

Wenfu Chen, a CAE academician and the chief professor of the biochar project, gave an introduction on the current project “*Development Strategies of Biochar Industry – Quantification of the Potential Carbon Reduction*”. More than ten invited experts presented their work on biochar and soil organic carbon, sequestering carbon in farmlands, quantification of carbon emissions and the future development of a biochar industry. During the conference discussions, Xiwen Luo, a CAE academician, exchanged his ideas with participants on issues in the biochar industry, including the need to focus on practical problems, for example, waste treatment in rural areas. The participants also highlighted the necessary development of product standards for the biochar industry in China. During the meeting, some attendees visited the Jinhefu Agricultural Development co., LTD and Liaoning Biochar Engineering and Technology Research Center at Shenyang Agricultural University.



Biochar production in the Jinhefu Agricultural Development co., LTD.



A biochar-based fertilizer produced from the Jinhefu Agricultural Development co., LTD.

## Recently Published Biochar Research

IBI tracks all published research on biochar and includes it in our [online bibliography](#). The following articles were added in the last month. Please visit the website bibliography for more information on any of these articles. Due to copyright infringement laws, we cannot provide full copies of articles unless we have permission from the publisher. If you have published work that is not included, [please email us](#).

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