



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.

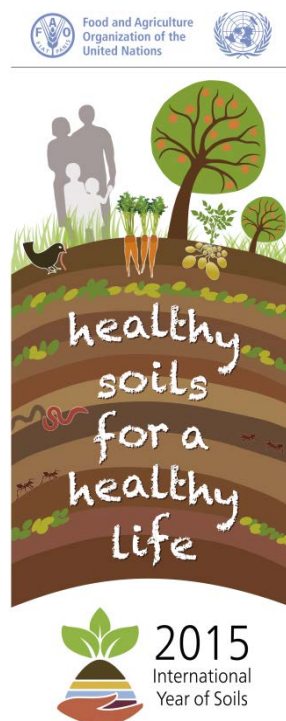
Help put the Earth **Back in the Black**

January 2015 News from the International Biochar Initiative

2015 is the United Nations International Year of Soils

The International Year of Soils (IYS) 2015 is a year-long effort to highlight the importance of healthy soils and to advocate for sustainable soil management. The Food and Agriculture Organization (FAO) of the United Nations is implementing the IYS 2015 within the framework of the Global Soil Partnership and in collaboration with governments and the United Nations Convention to Combat Desertification. The IYS 2015 goal is to raise awareness among civil society and decision makers and educate the public about the crucial role soils play in food security, climate change adaptation and mitigation, essential ecosystem services, poverty alleviation, and sustainable development.

Many country-specific soil science societies will implement activities in their communities in support of the IYS 2015. Although biochar is not specifically named as part of the objectives of the IYS 2015, this year provides the biochar community a good opportunity to highlight biochar's potential role in creating and maintaining healthy soils. IBI encourages regional biochar groups and biochar supporters to host local talks on biochar and soils and to reach out to media to highlight the role of biochar in sustaining soil health. We invite you to send us any information on your work in relation to the IYS 2015 for posting on our website. For more information on the IYS 2015, please see: <http://www.fao.org/soils-2015/en>.



IBI Welcomes Two New Board Members

IBI is pleased to announce that Dr. Annette Cowie and Tom Miles have [joined the IBI Board](#) for three year appointments. IBI thanks departing board members Dr. Andreas Hornung and Sununtar Setboonsarng for their service.

Dr. Cowie has a background in soil science and plant nutrition, with particular interest in sustainable resource management. She is a Principal Research Scientist in Climate at the Australian New South Wales (NSW) Department of Primary Industries. Her current research focuses on sustainability assessment and greenhouse gas accounting in agriculture and forestry; investigating key aspects of soil carbon dynamics and biochar processes; and life cycle assessment of forestry, bioenergy and biochar systems.

Mr. Miles of T.R. Miles Technical Consultants is interested in the thermal conversion of biomass for beneficial use and has expertise in the transformation of ash in wood, straws, stalks, and manures. He designs systems for biomass processing and



handling including densification, carbonization, gasification, power generation, and residue and nutrient management including biochar and composting. Mr. Miles sponsors and hosts internet discussions which focus on biomass energy and biochar.

February IBI Webinar Series Event: Jonah Levine, EcoChar Manager at Confluence Energy LLC presents, *Biochar Production and Utilization: Data, Photos and Opportunity for Real World Dialogue*

Are you interested in getting an inside look at two different biochar production methods? On February 12, 2015 IBI welcomes Jonah Levine, EcoChar Manager at Confluence Energy LLC, to give a presentation titled, "*Biochar Production and Utilization: Data, Photos and Opportunity for Real World Dialogue*". This talk will include two production examples: 1) a large integrated plant that drives conversion with pyrolysis and delivers the gas to a heating application; and 2) a stand-alone carbon-optimized gasification system that flares post-production gas. The presentation will also include photos and data from reclamation applications in Colorado, USA. [Registration is now](#) open for the webinar, which will be held on Thursday, February 12th at 1:00 pm Eastern Time. Note: Please convert the 1:00 pm ET start time to your local time by using this [time converter tool](#). You must be a dues-paying member to participate in these special events. If you are not an IBI member and would like to join, [please click here](#).



For more information on this webinar program, including links to past 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), and Dr. Andreas Hornung (Fraunhofer Institute for Environmental, Safety, and Energy Technology (UMSICHT) leader), please see http://www.biochar-international.org/webinar_series.

New IBI Business Member: Antaeus International Pty Ltd

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.

Antaeus International Pty Ltd, established in Canberra Australia in 2013, operates in the environmental asset and project management sectors. Antaeus is a special purpose holding company which brings together a consortium of technologists, technologies, and methodologies (some of which are patented) to develop a vertically integrated carbon negative set of projects into an amorphous whole (which Antaeus is calling Green Valley Projects – GVP). These projects relate to renewable fuels, renewable/sustainable energy, the development of the biochar industry, and agricultural initiatives to improve not only the return on investment on herds (e.g. improvement in body mass for beef cattle) to the extra butter fat produced by dairy cows, but an improvement/reduction in the methane production of the same herds. All of these issues and more are the mainstream of Antaeus research, development, project development, and growth. For more information, please see www.antaeusinternational.com.



Biochar Briefs: News Roundup for January

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

Germany

[In an industrial area in eastern Berlin, Dennis Raetzel and his project partner, Gregor Pieplow](#), make their own *Terra Preta* soil for their garden using collected kitchen waste in buckets. Once a bucket is filled, they layer organic material and charcoal and let it sit in a warm, airtight container for about a month. The mixture is then brought to the garden, and with the help of worms and other organisms, it's converted into *Terra Preta* soil.

Nepal

[Based on the high amount of *Kalimati* \(black soil\) in low lying lands of the Kathmandu valley](#), researchers are investigating whether inhabitants may have been purposefully producing and using biochar for centuries to increase productivity, with the added benefit of decreasing methane emissions, from rice farming.

Philippines

[The Clean River Zone Biochar Community initiative is a consortium of partners](#) working to clean up an estuary using bokashi balls (made from dried mud and other organic materials, including biochar) to filter polluted water. Part of the project entails project volunteers interacting with local community members through education and water testing. The project submerged 2000 bokashi balls in the estuary water over a nine-month period (February to October 2014) and tested the water throughout the time period; by October the water quality was showing signs of improvement.

United Kingdom/United States

[The Bartlett Tree Research Laboratory, part of Reading University, found that biochar can reduce](#) tree stress from transplanting and drought. The trials showed that “young horse chestnut trees replanted in poor clay soil showed higher leaf chlorophyll content and improved photosynthetic efficiency of up to 12.5% over two growing seasons, with superior results from a more granular biochar compared to a powdered form”.

United States

[An article on Nature.com, quoting many leading researchers in the biochar field](#), highlights recent research on biochar and its potential as a soil amendment as well as for soil reclamation, water filtration, and other uses.

Biochar Adsorption Reference Database

Aqueous Solutions announces a free, open-access resource for the biochar research/implementation and low-cost water and wastewater treatment sectors. This is a periodically updated bibliographic reference database of peer-reviewed studies quantifying organic compound adsorption by biochars, broken down into compound categories such as “pesticides,” “industrial compounds,” “pharmaceuticals,” and “natural compounds.” For more information please see http://www.aqsolutions.org/?page_id=1430. Additionally, Josh Kearns of Aqueous Solutions recently presented a plenary, *Removing toxic chemicals from drinking water using biochar*, at the ECHO International Agriculture Conference in Fort Myers, Florida, USA in November 2014. To watch his presentation, see <https://www.youtube.com/watch?v=YfaokPPH29o>.

Biochar as a Home-Site Water Purification System report wins at regional science fairs in the Philippines

A project team from Vinzons Pilot High School, IV-Ampere in the Philippines composed of Mirasol M. Guinto, Mavy Ngo, Xeneth Avellana, Geraldine Ivy Ibasco, and Belle Gail Gan won first place at the Division and Regional Science and Technology Fair in October 2014 for their research paper entitled: *Pili (Canarium ovatum) Shells Biochar as Home-Site Water Purification System for Water Contaminated with Insecticide (Malathion)*. Then in November 2014, the research again won first place at the Regional Contest held in Legazpi City. Their paper is now qualified to be an entry in a national science contest.

The project team used only locally available materials to produce the biochar, and found that the biochar eliminated, through filtration, 99.9% of the Malathion insecticide residue from water. They hope their work will enable poor families to create their own water purification systems using local materials. To read more about their research and download the report, please see <http://www.biochar-international.org/teachers/schools#pili>.

Opportunities in Biochar

- 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

- February 6: Conservation burn demonstration and Biochar workshop. Location: Sonoma, CA, USA. For more Information: <http://www.biochar-international.org/node/5989>
- February 25 – 26: 2015 Ecological Landscaping Association (ELA) Conference. Location: Springfield, MA, USA. For more information: <http://www.biochar-international.org/node/5518>
- March 7 – 14: George Mason University Permaculture Design Certification Course. Location: VA, USA. For more information: <http://www.biochar-international.org/node/5561>
- 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 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
- 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.

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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