



December 21, 2011

## [2011 In Review: IBI's Progress in Putting the Earth Back in the Black!](#)

As we wrap up 2011 and look to another New Year with our friends in biochar, I wanted to once again thank the international biochar community for supporting IBI and helping to build and grow a strong, vibrant biochar movement. We've seen continued amazing growth and participation in IBI over the past 12 months, which is both gratifying and humbling, particularly thinking back to 2006 when we first discussed starting an international organization devoted to this emerging field. It is with great excitement that I want to share some of the strides we've taken in the past year – due, in large part, [to the support that you have given our organization](#).

During 2011, we've been tracking some figures that speak to the growing global interest in biochar – one that we are so pleased to be a part of. IBI currently has over 4,250 newsletter subscribers and a growing number of dues-paying members. We tracked nearly 74,000 unique visits to our website in the past 6 month period, coming from 197 countries and territories. We have 39 affiliated [regional and national biochar groups around the world](#), including in China, India, Malaysia, Japan, Europe, and the US. In short, IBI is large and growing rapidly.

With our membership support and the generous support of our funders, we have a great deal of progress to report from 2011. We heartily thank those [members who have joined and renewed their membership in 2011](#). And we especially wish to thank our funders who have generously supported us this year and in the past, including: the David and Lucile Packard Foundation, the blue moon fund, the Putnam Foundation, and the Wellspring Foundation.

[Please click here to read the remainder of this letter.](#)

## [IBI Guidelines for Specifications of Biochars: December 2011 Update](#)

For the past year, IBI has been leading the international biochar community in the process of drafting Guidelines for Specifications of Biochars. We are nearing the end of a very constructive process that has been transparent, open to the public, and global in scope. Biochar experts, entrepreneurs, and practitioners from around the world have engaged in this process by participating in working groups and by providing comments and suggestions throughout the process. IBI wishes to thank all who have given their time and attention to building this set of Guidelines.

As a result of input received during the most recent public comment period, we are now in the process of producing a stronger set of Guidelines. We will be asking the public to review and make comments on this revised document during a 30-day comment period beginning on January 10th, 2012. We will hold an informational webinar open to the public on January 11th, which will be repeated on January 19th. We will send out an announcement early in January with the times and registration information for the webinars.

Following the completion of the comment period on February 10th, we may make further revisions based on comments received. The final Guidelines document will then be submitted for a legal review. We anticipate submitting the completed document to the IBI membership for a week-long balloting period to vote on their adoption, beginning on March 5th, 2012. If approved, the Guidelines will be published on March 12th.

The latest information on the Guidelines and a history of the process and relevant documents are all posted on the IBI website at <http://www.biochar-international.org/characterizationstandard>. Please make sure that you can participate in the balloting by ensuring that your IBI membership dues are up to date <http://www.biochar-international.org/join>. If you have any questions about your membership, please contact Lourdes Haro at [Lourdes@biochar-international.org](mailto:Lourdes@biochar-international.org).

## IBI Announces New Advisory Committee Members

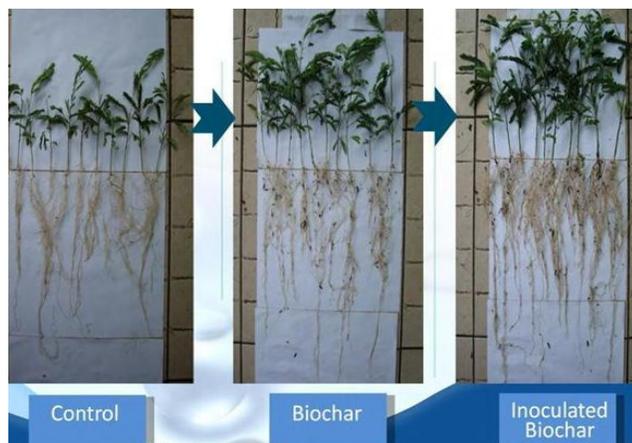
IBI is pleased to announce the members of our next Advisory Committee. The 28 members collectively speak seventeen languages and hail from twelve different countries including Australia, Austria, Brazil, Canada, China, India, Kenya, Mongolia, Paraguay, the Philippines, the United Kingdom, and the United States. They represent a wide range of institutions and organizations including the academia/research community, small businesses, large corporations, non-profit organizations, and on-the-ground practitioners/farmers.

To see a full list of members, please go to: <http://www.biochar-international.org/board/advisorycommittee>. We look forward to working with our Advisory Committee over the next 18 months to release new biochar materials and research papers and get their input on all things biochar.

## Profile: Profile: Using Bamboo for Stoves in Uganda

Uganda is Africa's second largest producer of coffee and has the largest agricultural sector in the East African region. However, soils in parts of the country are nutrient poor which can lead to poor harvests and potential food shortages. This poor soil translates into subsistence farmers having less income and looking towards other means for income generation.

To help create alternative sources of



income for the population and spur new industry, the Uganda Industrial Research Institute (UIRI), which is the Ugandan Government's lead agency for industrialization and the country's main vehicle for implementing strategies and measures aimed at transforming industry in Uganda, created a bamboo program to train people in the production of consumer goods such as furniture, blinds, woven baskets, and other handicrafts. With the unused material left from these production activities, UIRI is training individuals to produce matchsticks, toothpicks, as well as a biochar feedstock. Bamboo is widely used in rural communities in western Uganda and is easily available throughout the area.

This idea was conceived when Mr. Julius Turyamwijuka, a product manager at the UIRI, met Mr. Robert Flanagan in 2010 at the China Bamboo Research Center (CBRC) where both had gone to conduct research in China. It was at this meeting that the two exchanged ideas on biochar production and the UIRI program was developed. Since June 2009, Turyamwijuka has been working on a bamboo/biochar research project with Flanagan—by developing a stove prototype that can utilize the unused bamboo by-product to produce biochar. This stove can also utilize sticks from agricultural waste which the rural population uses where bamboo is less common.

[Click here for the remainder of the story.](#)

Photo: Initial plant trials with bamboo biochar produced from the stoves.

## [Biochar Briefs: News Roundup for December](#)

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

### **Australia**

[The Australian Bureau of Agricultural and Resource Economics and Sciences \(ABARES\)](#), has issued a report, titled 'Biochar—Implications for agricultural productivity', which examines the potential applications, benefits, and risks of biochar as well as the research required to determine its productivity and sustainability potential.

[The Australian Government has announced a \\$2 million competitive grant program](#) for biochar research. The Biochar Capacity Building Program is a key part of the Australian Government's \$45.6 million Carbon Farming Initiative. The funding will support biochar research and the development of biochar offset methodologies that will enable land managers to participate in carbon markets.

[The Alcoa Foundation has been providing funding for Greening Australia's Biochar and Energy from Trees Research \(BETR\)](#) project. Project managers say the program has begun to produce impressive results in re-vegetating landscapes with native species.

### **Brazil**

[A program examining the impact of hydroelectric dams in the Amazon](#) looks at the natural and human history, including Terra Preta sites, which would be lost if the dam were constructed.

[Researchers working in the Brazilian State of Rondonia have discovered many new archeological sites](#) with Terra Preta, pottery, and the earth formations known as geoglyphs.

### **Germany**

[The impoverishment, erosion, and contamination of agricultural land resources](#) is one of the most serious problems facing humanity. Is Terra Preta the answer? Scientists at the Free University of Berlin are investigating biochar with a variety of projects.

[Archeologists are discovering that the Amazon before Columbus was densely populated.](#)

Researcher Bruno Glaser describes how modern communities could recycle waste into biochar and fertilizer using the Amazonian Terra Preta as a model.

### **New Zealand**

[The University of Waikato in New Zealand](#) is bringing together renowned coastal and marine scientists for a day-long public symposium in January where biochar will be one topic of discussion.

### **United States**

[USDA researchers in the Agricultural Research Service \(ARS\)](#) have published new results on the impact of biochar on gaseous emissions from soil.

[Dale and Sharon Borgford have turned an old lumber mill in Washington State](#) in the US into a combined heat and power plant. A biochar co-product will be sold as a soil amendment.

[Former US Ambassador Robin Renee Sanders discusses the potential of agreements at the Durban Climate](#) meeting to help increase food security in Africa. Biochar is one tool that could be enabled.

## Opportunities in Biochar

Opportunities in Biochar showcases announcements for the public to apply for funding, jobs, publications, conferences, etc. These announcements are also posted on the IBI website in two places: Biochar Updates and the Member Bulletin Board.

- Call for Tender: Research Competition for Project: Biochar in Growing Media: A Sustainability and Feasibility Assessment (DEFRA) (CTE1128); **due 11 January 2012**. For more information, please see: <http://www.biochar-international.org/node/2986>.
- Submit Abstract for Conference: 20th European Biomass Conference and Exhibition (June 2012, Milan Italy): **Paper submission deadline Jan 30, 2012**. For more information, please see: <http://www.biochar-international.org/node/2953>
- Submit Grant Application: The Australian Government is seeking Grant Applications for Carbon Farming; **Application Period Closes February 8, 2012**. For more information, please see: <http://www.biochar-international.org/node/2988>
- Submit Abstract for Conference: 4th International Biochar Congress Beijing China 2012 Announces call for Presentation Abstracts: **due March 31, 2012**. For more information,

please see:

<http://www.biochar-international.org/node/2985>.

- Submit Abstract for Conference: The European Geosciences Union General Assembly 2012 will have a session on biochar for soil remediation and global warming mitigation (Vienna, Austria from 22 – 27 April 2012). For more information, see: <http://www.biochar-international.org/node/2904>.

New job opportunities and PhD postings are updated at:

<http://www.biochar-international.org/network/jobs>

## Upcoming Calendar Events

- January 16 – 18, 2012: Pacific West Biomass Conference & Trade Show, San Francisco, CA, United States; more information: <http://www.biochar-international.org/node/2691>.
- February 1, 2012: Biochar in Canada: Agricultural and Environmental Perspectives, Montreal, Quebec; more information: <http://www.biochar-international.org/node/3012>.
- February 3, 2012: Biochar Colloquium, Biochar: Silver Bullet or Carbon Hype?; Chestnut Ridge, NY, United States; more information: <http://www.biochar-international.org/node/3017>.
- February 9 – 10, 2012: 2012 Biochar Workshop: from Science to Stakeholders; location Massey University Palmerston North, New Zealand; more information: <http://www.biochar-international.org/node/2905>.
- April 16 – 19, 2012: International Biomass Conference & Expo; location Denver, CO, United States; more information: <http://www.biochar-international.org/node/2690>.
- April 22 – 27, 2012: Biochar for Soil Remediation and Global Warming Mitigation at European Geosciences Union General Assembly 2012; location Vienna, Austria; more information: <http://www.biochar-international.org/node/2903>.

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 Biochar Group Updates

To read more on regional and national biochar groups, please see IBI's website at: [www.biochar-international.org/network/communities](http://www.biochar-international.org/network/communities). This month includes updates from the China Agricultural University-Biochar group (CAU-Biochar), the Israel Biochar Researchers Network (iBRN), and SeaChar (United States).

### **CAU-Biochar (China)**

CAU-Biochar announces the 4th International Biochar Congress which will be held September 16 – 20, 2012 in Beijing China at the Friendship Hotel. The event, entitled Biochar: The Road to Richer Food and a Safer Environment, has issued a call for abstracts due March 31, 2012 on the following topics: biochar production and characteristics, biochar and plant/food production, biochar and soil physical processes, biochar and soil chemical processes, biochar and soil biological processes, biochar and environmental quality, biochar and climate change, biochar and

policy, and a special theme on biochar producing equipment. For more information, including registration dates, sponsors, and other information, please see:

<http://www.biochar-international.org/node/2985>.

### **iBRN (Israel)**

The iBRN is launching a new, improved website which will be updated with all the latest iBRN news and activities and includes a photo gallery. For now, the link remains:

<http://www.agri.gov.il/en/pages/788.aspx>.

The group has two new biochar research projects: A study examining the impact of biochar on plant resistance to abiotic stresses, funded by the Israel Chief Scientist of the Agriculture Ministry; and a bi-national Italy-Israel study of co-amended compost and biochar aimed at improving intensive agricultural sustainability in a semi-arid climate, funded by the Italian Ministry of Science and the Israel Chief Scientist of the Agriculture Ministry.

The group's biochar/pyrolysis platform was selected as one of 11 subjects to be presented to the President of Israel, Shimon Peres, as part of Volcani's 90th anniversary celebrations. Photos will be uploaded to the new iBRN site as soon as they are available.

### 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, 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](#).

- Bruun, Esben W., Ambus Per, Egsgaard Helge, and Hauggaard-Nielsen Henrik (2012). Effects of slow and fast pyrolysis biochar on soil C and N turnover dynamics. *Soil Biology and Biochemistry*. 03/2012. Volume 46, p.73-79.
- Cantrell, Keri B., Hunt Patrick G., Uchimiya Minori, Novak Jeffrey M., and Ro Kyoung S. (2011). Impact of Pyrolysis Temperature and Manure Source on Physicochemical Characteristics of Biochar. *Bioresource Technology*. 12/2011.
- Chai, Yunzhou "Joe", Currie Rebecca J., Davis John, Wilken Michael, Martin Greg D., Fishman Slava, and Ghosh Upal (2011). Effectiveness of Activated Carbon and Biochar in Reducing the Availability of Polychlorinated Dibenzo-p-dioxins/dibenzofurans in Soils. *Environ. Sci. Technol.* 12/2011.
- Dempster, D. N., Gleeson D. B., Solaiman Z. M., Jones D. L., and Murphy D. V. (2011). Decreased soil microbial biomass and nitrogen mineralisation with Eucalyptus biochar addition to a coarse textured soil. *Plant and Soil*. 12/2011.
- Downie, Adriana, Munroe Paul, Cowie Annette, Zwieten Lukas Van, and Lau David M. S. (2012). Biochar as a Geoengineering Climate Solution: Hazard Identification and Risk Management. *Critical Reviews in Environmental Science and Technology*. Volume 42, Number 3, p.225-250.
- Elad, Y., Cytryn, E., Meller Harel, Y., Lew, B., Graber, E.R. (2012). The Biochar Effect: Plant resistance to biotic stresses. *Phytopathologia Mediterranea*.

- Feng, Youzhi, Xu Yanping, Yu Yongchang, Xie Zubin, and Lin Xiangui (2011). Mechanisms of biochar decreasing methane emission from Chinese paddy soils. *Soil Biology and Biochemistry*. 12/2011.
- Hamilton, Liz (2011). Latest research on the magic pudding of biochar; *Australian Forest Grower*, 12/2011, Volume 34, Number 3, p.40-41.
- Ibarrola, Rodrigo, Shackley Simon, and Hammond James (2011). Pyrolysis biochar systems for recovering biodegradable materials: A life cycle carbon assessment. *Waste Management*. 11/2011.
- Lu, Huanliang, Yang Weihua Zhang Yuxi, Huang Xiongfei, Wang Shizhong, and Qiu Rongliang (2011). Relative distribution of Pb<sup>2+</sup> sorption mechanisms by sludge-derived biochar. *Water Research*. 12/2011.
- McHenry, M. P. (2012). Sensitive variables for applying biochar as a fertiliser substitute and a method to sequester carbon in soils: a wheat crop scenario. *Carbon Sequestration: Technology, Measurement Technologies and Environmental Effects*.
- Olivier, Charl Francois (2011). An investigation into the degradation of biochar and its interactions with plants and soil microbial community. MS Soil Science, Faculty of AgriSciences, 12/2011.
- Qayyum M., Steffens D., Reisenauer H. P., and Schubert S. (2011). Kinetics of Carbon Mineralization of Biochars Compared with Wheat Straw in Three Soils. *Journal of Environmental Quality*.
- Shackley, Simon, Carter Sarah, Knowles Tony, Middelink Erik, Haefele Stephan, Sohi Saran, Cross Andrew, and Haszeldine Stuart (2011). Sustainable gasification–biochar systems? A case-study of rice-husk gasification in Cambodia, Part I: Context, chemical properties, environmental and health and safety issues. *Energy Policy*.
- Shackley, Simon, Carter Sarah, Knowles Tony, Middelink Erik, Haefele Stephan, and Haszeldine Stuart (2011). Sustainable gasification–biochar systems? A case-study of rice-husk gasification in Cambodia, Part II: Field trial results, carbon abatement, economic assessment and conclusions. *Energy Policy*.
- Sparkes, Jessica, and Stoutjesdijk Peter (2011). Biochar: implications for agricultural productivity. TECHNICAL REPORT 11.06; [http://adl.brs.gov.au/data/warehouse/biochar9abcm001/biochar9abcm00101/TR.2011.06\\_Biochar\\_v1.0.0.pdf](http://adl.brs.gov.au/data/warehouse/biochar9abcm001/biochar9abcm00101/TR.2011.06_Biochar_v1.0.0.pdf).
- Xu, Gang, Sun Jun Na, Chu Li Ye, and Shao Hong Bo (2011). Impacts of Biochar on Agriculture Soils and Environmental Implications. *Journal Advanced Materials Research*. Volumes 391 - 392: Chemical Engineering and Material Properties, p.1055-1058.
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