



## 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**

**June 22, 2012**

### [Announcing Call for Nominations to Join the Expert Panel to Develop a Stable Biochar Carbon Test Methodology for a Carbon Market Protocol](#)

In continuation of IBI's efforts to advance the deployment of successful commercial biochar systems, the International Biochar Initiative is pleased to announce the formation of an Expert Panel to Develop a Stable Biochar Carbon Test Methodology for a Biochar Offset Protocol.

IBI is leading this project as part of a larger effort, the Biochar Offset Protocol Development project, with our partners The Climate and the Prasino Group, that aims to allow biochar projects to receive greenhouse gas offset credits in voluntary or compliance carbon markets, as a source of carbon financing. We believe this is a critical step in the path towards the successful deployment of biochar projects that can provide needed solutions to help address climate change. Participation of biochar projects in international carbon markets can provide valuable financing, while the projects themselves will help to deliver greenhouse gas emissions reductions to aid in the mitigation of climate change.

An important step in the initial phase of this effort is to identify the most appropriate test methodology to measure the long-term stable portion of carbon contained in biochar when applied to soil. This is one of IBI's primary roles in the Biochar Protocol project. To reach this goal, IBI will convene an international group of experts that have relevant experience in the specific topic of developing methodologies to demonstrate carbon stability of biochar in soil. The Expert Group will meet for this task from June through September 2012, with one scheduled online meeting per month, and periodic guidance and feedback on this process. We anticipate this voluntary work will take approximately 3 to 5 hours per week for each person who participates in the panel.

If you have experience in this topic and are interested in joining the panel (or if you wish to nominate a colleague), please send the following information to Miguel Rodríguez who is leading this project for IBI at [Miguel@biochar-international.org](mailto:Miguel@biochar-international.org) **by Thursday June 28th**. Please contact Miguel if you have any questions.

- Name
- Association/Organization
- Position
- Preferred Email

- Country
- Short Bio highlighting your past experience with the topic

## Introducing Miguel Rodríguez, IBI's new Project Manager

IBI is pleased to introduce Miguel Rodríguez Tejerina, who will serve as a Project Manager for the development of a methodology for testing the permanence of carbon sequestration in biochar. Miguel is assisting in the development of a Biochar Protocol in order to provide access to carbon financing for biochar projects.



Miguel is of Bolivian and Mexican nationalities, and is now residing in Bolivia. He holds an MSc in Environment and Resource Management from the Vrije Universiteit, Amsterdam, where he studied biochar as strategy for sustainable land management, poverty reduction, and [climate change mitigation and adaptation](#), while doing research at the Energy Research Centre of the Netherlands. He holds a BSc in Industrial and Systems Engineering from Instituto Tecnológico de Monterrey, and has worked as an industrial plant manager, before working as a project manager for an environmental consultancy in Bolivia, on topics such as CDM, carbon footprint and water pollution control projects. He currently performs monitoring and evaluation tasks for a seven year community-based forest program in the Bolivian Amazon, in addition to his work with IBI.

For more information on IBI's staff and contact information, please see: <http://www.biochar-international.org/about/staff>.

## IBI Hosting a Study Tour of the United States for Representatives from China

From July 24 – August 1, IBI will be hosting a group of 15 representatives from China for a study tour to learn about biochar technologies in the United States and visit with biochar institutions, companies, and attend the upcoming US Biochar Conference. The tour, funded by the blue moon foundation, is intended to promote the development of appropriate biochar systems in China and to increase partnerships and collaboration between the United States and China. IBI staff will accompany representatives from the China National Development and Reform Commission (NDRC), the Ministry of Finance, the Ministry of Agriculture, GEI China, as well as regional government officials and academics on the tour, which will begin in Ames, Iowa. From there, the participants will visit facilities in Denver and Pueblo, CO, before traveling to the US Conference in Sonoma, CA. At the conference, four of the Chinese study tour representatives will present on biochar and fertilizer production and use in China. We look forward to an exciting 10 days with our Chinese guests.

## IBI Biochar Certification Program Announcements

IBI has recently completed initial legal reviews of the IBI Biochar Certification Program, which is based on the [IBI Biochar Standards and Guidelines](#), and is ramping up development of program materials. Join us for informational webinars on July 9th and July 12th to learn about the program, IBI's implementation schedule, how to participate in the program, and what it means to carry the IBI-Certified label. Webinar participants will come away with a good understanding of the overall certification process for producers and be able to ask questions regarding the Certification Program and its roll-out. Details on how to sign up for the July webinars will be distributed by email and will also be posted on the IBI website soon.

### New IBI Business Members:

#### **Asian Development Bank (ADB)**

ADB, based in Manila, is dedicated to reducing poverty in Asia and the Pacific through inclusive economic growth, environmentally sustainable growth and regional integration. Established in 1966, it is owned by 67 members—48 from the region. In 2011, ADB approvals including co-financing totaled \$21.7 billion.



Asian Development Bank

Since its founding in 1966, ADB has been driven by an inspiration and dedication to improving people's lives in Asia and the Pacific. By targeting investments wisely, in partnership with developing member countries and other stakeholders, ADB can alleviate poverty and help create a world in which everyone can share in the benefits of sustained and inclusive growth.

Whether it be through investment in infrastructure, health care services, financial and public administration systems, or helping nations prepare for the impact of climate change or better manage their natural resources, ADB is committed to helping developing member countries evolve into thriving, modern economies that are well integrated with each other and the world. For more information, please see: <http://www.adb.org/>.

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#### **Basques Hardwood Charcoal**

Basques Hardwood Charcoal has been manufacturing and selling horticultural and agricultural grade charcoal and biochar for the past ten years. The Canadian company prides themselves on offering a product made from hardwood logs which are unfit for sawmills. Throughout those years, they have offered custom sized product in order to fill the needs of clients.



Basques is now proud to supply a Forest Stewardship Council (FSC) certified product. By choosing this objective, they know their biochar comes from a healthy forest and supports strong communities. They can supply the market with small, medium to large size orders throughout North America and the product can be filtered in various sizes to bring the benefits of biochar and enhance soil structure.

For more information, see <http://www.basquescharcoal.com/horticulture.php> or contact Jean-Claude Bacle at [jeanclaudeb@charbonbasques.com](mailto:jeanclaudeb@charbonbasques.com) or at 800-463-0909, ext 102.

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### **PROININSO**

PROININSO is a Spanish SME that is committed to developing sustainable, social, and environmental friendly initiatives. PROININSO develops and promotes projects with renewable resources in the Brazilian Amazon. There they own and manage a private forest of more than 25 thousand acres, and preserve more than 10 million mature native Amazonian trees to keep a natural sink of more of 16 million tons of CO<sub>2</sub>.



PIROECO is the division of PROININSO which is responsible for manufacturing pyrolysis equipment such as kilns for eco-carbonization, furnaces for coal activation, and reactors for producing biochar from forest wastes. Their mission is to offer products with higher performance and lower environmental impact.

BIOCHAR PIROECO is obtained by pyrolysis of selected biomass from sustainable and renewable sources, without chemical additives. It is suitable for agri-forestry and organic and intensive farming including under plastic, in greenhouses and orchards, and for other horticultural soil improvement uses such as ornamental plants, bonsai, and lawns. For more information, please see <http://www.proininsoc.com/biochar-biocarbon.html> or contact Antonio Quero Alba at [antonio@proininsoc.com](mailto:antonio@proininsoc.com).

A listing of all current IBI Business Members can be found on our website at: <http://www.biochar-international.org/IBI-business-members>. For more information on a membership or to join, please see: <http://www.biochar-international.org/join>.

### Profile: A Nepali Villager's Tradition of Making Low Temperature Biochar

By: S. Joseph, C. Chia, S. Campbell, P. Munroe, and



N. Dahal

Nepal is a dynamic country with harsh environmental and geographical extremes—from the cold high mountains in the north to the hot low plains in the south. For those communities living in the mountainous regions, farming is a challenge. The soils are often poor and the fields are carefully managed terraces on steep mountainsides. In March 2012, a team from Australia, the Philippines, and Nepal visited the Dhand Chaur village in the mountainous Dholakha District of Nepal and found a farmer there had been producing and utilizing biochar for at least two generations as part of her regular farming routine. The team was part of a fact finding mission for a proposed Asian Development Bank Project and was visiting Tamang households in the region to study ecological approaches to the issues of food security and climate change adaptation in Nepal. To read the remainder of this story, please see: [http://www.biochar-international.org/profile/Nepal\\_biochar\\_use](http://www.biochar-international.org/profile/Nepal_biochar_use).

Photo: Bhakta Kumari Tamang, showing the traditional method of making biochar in a mound; courtesy of the authors

### [Profile: Biochar at Leibniz Institute of Agricultural Engineering \(ATB\) in Potsdam, Germany](#)

Researchers at the Leibniz Institute of Agricultural Engineering (ATB) have one explanation for the rapid growth of their biochar research program: Biochar is viral. As researcher Jan Mumme tells it: “Biochar is contagious and self-spreading. At ATB we became infected in 2008. Interestingly, the black stuff almost simultaneously arrived from three very different angles. While a biogas researcher was looking for a way to upgrade the remaining digestate, a biogeochemist was eager for knowledge about the emission behavior of terra preta and an economist was interested in cost-efficient greenhouse gas mitigation.”



In 2009, driven by the idea of integrated biochar production and in continuation of the ATB's long history in anaerobic digestion, Jan Mumme formed a new research group called APECS - Anaerobic Pathways to Renewable Energies and Carbon Sinks. Meanwhile, his colleague Jürgen Kern initiated a European Biochar Network and, in 2012, another colleague Andreas Meyer-Aurich created the German-Malaysian network project “Biochar in Agriculture”. Today the Biochar team at ATB counts 10 researchers and follows a highly interdisciplinary approach. This approach highlights the different aspects of biochar and the accompanying research networks. The ATB team works with the following initiatives which are profiled as part of the ATB story:

- APECS – Anaerobic Pathways to Renewable Energies and Carbon Sinks
- European Biochar Research Network
- Biochar in Agriculture Network Project- Perspectives for Germany and Malaysia
- 1st International Biochar Summer School

To read the remainder of this story, please see:  
[http://www.biochar-international.org/profile/ATB\\_Germany](http://www.biochar-international.org/profile/ATB_Germany).

Photo: Biochar-soil-aggregates at a sandy soil test site at ATB in Germany, courtesy of ATB

## Additional European Biochar Project Updates

In addition to the research activities highlighted in the above profile on the Leibniz Institute of Agricultural Engineering (ATB) in Potsdam, biochar research in Europe is taking off with several additional cooperative research programs designed to bring scientific advancement in biochar characterization and use and also to look more closely at the sustainability of biochar systems.

- In the UK, the Biochar Risk Assessment Framework (BRAf) has begun with input and funding from multiple partners. The project will seek to understand the possible hazards and risks associated with biochar production and deployment from different types of feedstock. Outcomes expected are guidance and standard operating procedures on feedstock sustainability, consistent analytical methods for monitoring contaminants in feedstocks and biochar, minimum quality characteristics of the biochar produced and acceptable concentrations of organic contaminants and heavy metals in biochar. For more information on the project go to [www.biocharbraf.wordpress.com](http://www.biocharbraf.wordpress.com) and [www.biochar.org.uk](http://www.biochar.org.uk)
- Biochar as an Option for Sustainable Resource Management is an intergovernmental COST (European Cooperation in Science and Technology) Action recently approved that will allow the coordination of nationally-funded biochar research on a European level. COST does not fund research itself but provides a platform for European scientists to cooperate. The economic dimension of the activities carried out under the Action has been estimated at 60 million euros. Four working groups will focus on (i) Biochar production and characterization, (ii) land use implementation, (iii) economic analysis including life cycle assessment and (iv) environmental impact assessment. For more specifics on this program, visit [www.cost.eu/domains\\_actions/fa/Actions/TD1107](http://www.cost.eu/domains_actions/fa/Actions/TD1107).
- The REFERTIL consortium, funded under FP7, the European Seventh Framework Programme for Research and Technological Development, is holding a Biochar Best Available Technology Earth Challenge. Letters of intent to enter the contest are being accepted throughout 2012. For more information, please see [www.refertil.info](http://www.refertil.info)

## Biochar Briefs: News Roundup for June

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

### **Australia**

[A biochar and waste-to-energy project sponsored by the Ballina Shire Council](#) will receive \$4.3 million from Round Two of the Regional Development Australia Fund.

[A \\$300,000 Federal Government grant will support research into a "whole integrated system"](#) of biochar development and perform a cost benefit analysis on the use of biochar in two different farming systems—irrigated pasture and cropping.

[Energy Farmers in Western Australia are conducting biochar trials](#) designed to build the knowledge base of biochar in the broad scale cropping systems of Western Australia.

### **Brazil**

[Agronomists and archeologists work side by side at ancient terra preta sites in the Amazon basin](#) to learn more about ancient cultures and their legacy of techniques for creating more fertile soils.

### **Germany**

[The Berlin Botanical Museum exhibition "Nature knows no waste: Terra Preta - a chance for sustainability"](#), highlights biochar experiments at the Botanic Garden and research on terra preta sanitation using biochar and lactic acid fermentation.

[A new association is helping Ethiopians develop biomass pellets from crop residues](#) and miscanthus to substitute for kerosene fuel while providing biochar for soils.

### **Philippines**

[The Philippine Biochar Association \(PBiA\) and the Federation of Irrigators Association](#) – Bucao River Irrigation System (FIA-BRIS) are conducting training programs to help people start their own biochar businesses.

### **United Kingdom**

[The British science journal Nature reports on new ecological methods for sanitation](#). Ralf Otterpohl of the Institute of Wastewater Management and Water Protection, Hamburg University of Technology, Germany is developing biochar sanitation methods using lactic-acid fermentation.

[The UK's Centre for Process Innovation and steel manufacturer Tata Steel](#) have opened a £5 million (\$7.7 million) Thermal Technologies Center in Middlesbrough in Teeside, northeast England. The facility will offer access to those developing new ways to transform biomass into high-grade fuels and energy.

### **United States**

[Reporters at the San Francisco Chronicle are working with a master gardener to test biochar](#) in the newspaper's rooftop garden.

[Manuel Garcia-Perez, a scientist in the Washington State University](#) Department of Biological Systems Engineering, recently received a \$400,000 National Science Foundation grant for work on pyrolysis reactors to produce bio-oil and biochar.

[Cleantech Transit Inc. announces that it is now producing biochar](#) from the gasification process at its 500 KW Merced County power plant in California.

[Students and professors at University of Washington have developed](#) a blanket made from a heat-resistant laminate that's also impermeable to air that can be used to convert forest slash piles to biochar.

## US Biochar Conference Schedule Announced

The 2012 US Biochar Conference is designed to advance the understanding of the economic, science and policy issues related to biochar as both an amendment for soils as well as an agent to sequester carbon. California's reputation for progressive policy and venture capital resources provides an excellent setting to showcase new innovative technologies like biochar. The conference is focused on practical results, especially regarding biochar use in agriculture.



The USBI conference organizers are receiving a constant stream of registrations and the conference is on track to be the best attended biochar conference yet, featuring over 100 plenary and breakout presentations, four FarmOut Tours, and a fabulous Gala Dinner showcasing local and sustainably grown food.

The tentative program schedule is now online along with registration at: <http://2012.biochar.us.com/>. Register by July 7 for a discounted price.

## Upcoming Calendar Events

- June 18 - 22, 2012: 20th European Biomass Conference and Exhibition; location Milan, Italy; more information: <http://www.biochar-international.org/node/2952>.
- June 26 – 27, 2012: Biomass Waste Management as a Source of Renewable Energy, Agriculture Sustainable, and Global Warming Mitigation; location East Java, Indonesia; more information: <http://www.biochar-international.org/node/3156>.
- July 2 – 6: Biochar Symposium at the EuroSoil 2012 Conference; location Bari, Italy; more information: <http://www.biochar-international.org/node/2622>.
- July 3 – 5: International Symposium on Reclamation, Restoration & Rehabilitation Towards a Greener Asia; location Kuala Lumpur, Malaysia; more information: <http://www.biochar-international.org/node/3091>.
- July 29 – August 1: United States Biochar Conference; location Sonoma, CA, United States; more information and registration: <http://2012.biochar.us.com>.
- August 5 – 10: CHAB 3<sup>rd</sup> Annual Camp (Combined Heat and Biochar); location Belchertown, MA, United States; more information at: [http://www.biochar-international.org/\\_CHAB\\_III\\_Camp](http://www.biochar-international.org/_CHAB_III_Camp).

- August 28 – 30: Farm Progress Show 2012 at Central Iowa Expo; location Boone, IA, United States; more information: [www.tradeshowz.net/trade-event-detail/farm-progress-show.html](http://www.tradeshowz.net/trade-event-detail/farm-progress-show.html).
- August 31 – September 4: CHAB Camp (Combined Heat and Biochar); location Summertown, TN, United States; more information: <http://www.biochar-international.org/node/3224>.
- September 9 – 16: 1<sup>st</sup> International Summer School on Biochar; location Potsdam, Germany; more information: <http://www.biochar-international.org/node/3179>.
- September 10 – 15<sup>th</sup>: International Training Course on Biochar Production, Testing and Utilisation; location Nanjing, China; more information: <http://www.biochar-international.org/node/3239>.
- September 16 – 20<sup>th</sup>: 4<sup>th</sup> International Biochar Congress; Biochar: The Road to Richer Food and a Safer Environment; location Beijing, China; more information: <http://www.ibi2012.org>.

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 the 44 regional and national biochar groups, please see IBI's website. This month includes a new regional group, the Saudi Biochar Initiative (SBI) and an update from the Florida Biochar Initiative (United States).

### **Saudi Biochar Initiative (SBI) and Saudi Biochar Research Group (SBRG)**

The SBI is a multidisciplinary team based in King Saud University, Saudi Arabia, devoting most of their research efforts to biochar. The group is the first research team that studies various aspects of biochar and activated carbon in Saudi Arabia and probably in the Arabic gulf region. The group welcomes local and international collaboration and knowledge exchange. The SBI mission is to excel in biochar and activated carbon related research and to observe biochar's effects on the quality of air, soil, and water resources. They subsequently provide stakeholders with guidelines and cutting edge knowledge for production and usage in different agricultural, ecological, and industrial disciplines. SBI plans to create a regional platform for the dissemination of biochar and activated carbon technologies and research in order to enlighten the Saudi and neighboring agricultural societies about their importance for climate change, soil enhancement, and water saving and remediation in arid and semi-arid regions. For more information, please see: [http://www.biochar-international.org/Saudi\\_Biochar\\_Initiative](http://www.biochar-international.org/Saudi_Biochar_Initiative).

### **The Florida Biochar Initiative (United States)**

The Florida Biochar Initiative, whose mission is to connect, educate, and enhance the activities of Florida residents interested in the use, study of, and possibilities of biochar in daily living is now on facebook at: <http://www.facebook.com/pages/Florida-biochar/438352616184448>. Representatives from the group are giving a presentation on Biochar creation and use to the Volusia County Master Gardener association in Deland Fla. on Sept. 19th at 1 pm.

## 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](#).

- Dempster, Daniel N.; Davey L. Jones and Daniel V. Murphy (2012). Clay and biochar amendments decreased inorganic but not dissolved organic nitrogen leaching in soil. Soil Research (CSIRO Publishing); <http://dx.doi.org/10.1071/SR11316>.
- Herbert, Leah; Ian Hosek; Rishi Kripalani (2012). The Characterization and Comparison of Biochar Produced from a Decentralized Reactor Using Forced Air and Natural Draft Pyrolysis. California Polytechnic State University, San Luis Obispo, Materials Engineering Department.
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