



December 2015 News from the International Biochar Initiative

2015 in Review

As IBI's General Manager, I'm pleased to share a recap of our work over the last year. It's been another very impactful year, a busy year, and a year full of transitions for us as an organization. For our Board and Staff, as the funding environment has become more challenging and crowded for IBI, we have had to adjust to the inherent challenges of running a non-profit organization that is entirely supported by our membership. To those of you who are dues-paying members—you are truly the lifeblood of our organization and have allowed us to achieve much this year—I thank you for your support. If you are not a member and wish to support IBI and allow us to continue to serve the biochar community (and take advantage of the many member benefits I'll highlight below), please join us at <http://www.biochar-international.org/join>.

This year saw an expansion of our programs—with much specifically targeted toward the feedback we have been hearing from our members. The [IBI Webinar Series](#) continued due to the overwhelmingly positive feedback we received from many of you, offering monthly presentations by key industry, research and thought leaders in the biochar community. In addition, [the IBI membership portal](#) now contains four peer-reviewed white papers published this year which provide in-depth research reviews on different aspects of biochar. In May, we published our 2014 [State of the Biochar Industry](#) Report and are working now to analyze data from 2015 which we collected from the biochar industry. With much dedication and time on the part of our Board and Staff, we introduced the first ever online biochar course, [Biochar Training for Environmental Sustainability and Economic Development](#), intending to provide the masses with an in-depth understanding of biochar on a wide range of topics.

We also continued to enhance the utility and accessibility of the *IBI Biochar Certification Program*, based on the *IBI Biochar Standards*—including publication of the [Standards Vol 2.1](#) and the [Certification Program Manual Vol 2.1](#). We had our first biochar certification renewal in 2015 [by the KARR Group](#). It is our continued belief that the *IBI Biochar Standards* and *IBI Biochar Certification Program* will add necessary certainty and credibility to the marketplace, and help to remove some of the critical barriers to commercialization of sustainable biochar systems. This year, members from the IBI Board of Directors and staff developed the [IBI Biochar Classification Tool](#) which allows users to classify biochars based on a set of physicochemical properties. In addition, the tool provides the fertilizer grade for six plant nutrients (N, P, K, S, Ca and Mg).

We worked with multiple biochar-related regulatory agencies to ensure they have an understanding of biochar and its relevance in their areas of regulation, and to promote support of biochar within their respective organizations. We thank these organizations for their willingness to work with us; they include: Placer County, California (for work in support of the Biochar Greenhouse Gas Quantification Protocol—which, as of September 2015, is being used for projects in Placer County), the Association of American Plant Food Control Officials (AAPFCO) which is voting in early 2016 to finalize a definition of biochar for

all US State Regulatory Agencies, Organic Materials Review Institute (OMRI), European Biochar Certificate (EBC), United States Department of Agriculture National Organics Program (USDA NOP), and the United States Composting Council.

We thank you for your support of biochar and IBI in 2015 and look forward to your continued support in 2016. All of us at IBI wish you a happy and healthy start to a wonderful new year.

Warm regards,

Shiva Scotti, IBI General Manager

COP 21 Concludes with an Agreement

Earlier this month, delegates from around the world met in Paris France for the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change to draft and agree to a new international agreement on climate change. The text coming out of the meeting is available in full at <http://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>; an excellent snapshot of [outcomes is available here](#). Reporter Albert Bates, author of *The Biochar Solution*, attended the full COP21 and has already [published a book on the COP21](#) as well as the year of meetings leading up to Paris; it also contains timely information on climate change and Albert brings the potential of biochar fully into the discussion. In addition, [ALL Power Labs](#) was in attendance in Paris showcasing their gasification/biochar production units to highlight opportunities to generate power while drawing down atmospheric CO₂ levels.

IBI Board Member Johannes Lehmann [produced a short video highlighting the role of soil carbon sequestration and science](#) for the event and stated “Soils and agriculture are important emitters of greenhouse gases that we have to reduce, but can also be tremendous sinks. Soils contain much more carbon than the entire vegetation of the planet and atmosphere, combined. Small changes in soil carbon can have large effects on the greenhouse gas balance. And soils are the safest and most productive way of stashing away atmospheric carbon. Maybe it is the only way of drawing carbon dioxide from the atmosphere that has only positive outcomes.” Additionally, IBI Board Member Guy Reinaud, President of ProNatura International, was in attendance in Paris and will bring lessons learned and opportunities for the future of biochar for carbon sequestration to his work with the IBI Board. IBI will continue reporting on opportunities for biochar to play a larger role in carbon sequestration.

KARR Group Renews its IBI Biochar Certification

IBI is pleased to announce that the KARR Group has received a renewal of its IBI certification for their biochar product, KGC Standard, under the *IBI Biochar Certification Program*.

KARR GROUP

To achieve IBI certification, the KARR Group submitted a renewal application that met all of the conditions of the *IBI Biochar Certification Program*, including passing all of the physicochemical testing requirements specified by the [IBI Biochar Standards](#)—the foundation for *IBI Biochar Certification Program*. This marks the first producer who has had their product certified through IBI’s program for more than one year. For further information on the *IBI Biochar Certification Program* and to view a list of IBI certified biochar manufacturers please see: http://www.biochar-international.org/certification/manufacturer_directory

For further information on the KARR Group, please see: <http://karrgroupco.com/technology> or contact Mahesh Talwar at maheshstalwar@gmail.com.

IBI publishes a new white paper for members: Biochar for Mitigation of Soil Greenhouse Gas Emissions from Agriculture

This white paper, *Biochar for Mitigation of Soil Greenhouse Gas Emissions from Agriculture*, focuses on the impact that the application of biochar has on greenhouse gas (GHG) emissions from soil. Since 2009, there has been a strong interest in utilizing biochar for either mitigating emissions of N₂O, or increasing soil consumption of CH₄. In a recent analysis using 56 published articles (including field, glasshouse, and incubation experiments), N₂O emissions were on average found to be lowered by 49% following biochar amendments. The white paper was written by Maria Luz Cayuela (CEBAS-CSIC, Spain), Lukas Van Zwieten (New South Wales Department of Primary Industries, Australia), and Claudia Kammann (Geisenheim University, Germany) and was reviewed by Johannes Lehmann (Cornell University) and Marta Camps Arbestain (Massey University). This paper is only available to IBI dues-paying members at <https://ibi.memberclicks.net/login>

January 2016 IBI Webinar Series Event: Dr. David Laird presents "Frontiers in Biochar Science"

IBI is excited to welcome Dr. David Laird, professor in the Department of Agronomy at Iowa State University (United States), for our January IBI Webinar Series event. Dr. Laird will discuss how complex biochar-by-soil-by-crop-by-climate-by-management interactions currently limit our ability to predict soil property and crop yield responses to biochar applications. This problem is further complicated by the diversity of biochar properties, which are highly dependent on both feedstock properties and pyrolysis/gasification conditions, and by the weathering (aging) of biochars in soil environments. In this webinar, Dr. Laird will report on progress being made by his group in understanding biochar diversity, biochar aging, and the complex interactions that influence soil and crop response to biochar applications.



[Registration is open now](#). The webinar will be held on Tuesday, January 12th at 23:00 GMT (which is 6:00p.m. Eastern Time or the time in New York City). Note: Please convert the 6:00p.m.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](#).

IBI members can view this and all prior *IBI Webinar Series* presentations by logging into the IBI member's site at <https://ibi.memberclicks.net/login>. If you are not an IBI member and would like to join in order to view presentations, [please click here](#). For more information on *IBI's Webinar Series*, please see: http://www.biochar-international.org/webinar_series.

New Business Member: Henan Bene-Ecolife Agricultural Science and Technology Company

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:

international.org/join. Please note, Business and Organization descriptions are submitted by each individual entity, and are not developed or written by IBI.

Henan Bene-Ecolife Agricultural Science and Technology Company

Henan Bene-Ecolife Agricultural Science and Technology Company is a comprehensive enterprise integrating technology, development, application, sales and service. The company is committed to soil health, fast recovery technology and product development, eco-agricultural/green technology, services and product development, and other fields. The company's primary technical team is professional, creative, and has participated in a scientific research project with Henan Agricultural University, Henan Agricultural Government, Institution of Pomology of CAAS, and several tobacco companies in China. This work culminated in many new scientific findings, published six papers in core journals, and applied for nine patents.



The company produces a new type of eco-char based fertilizer, which is very effective for improving soil and preventing plant soil-borne disease. The production technology and the eco-char products have been extensively used in farming—with application to more than 14,000ha since 2012.

The company created a “three-trapping technique” green prevention and control system, which achieved significant prevention and control of aphids, soil insects, Lepidoptera pests, viruses and many other pests and diseases. This technique has reduced chemical usage for pest control by 30%, and is environmental, safe, zero discharge, low-energy, also high price/performance ratio. From 2014, the total application of this system has covered more than 1400ha. For more information on the company, please visit: <http://www.hnyhik.com> or contact Huanhuan Liu at liuhuanhuan304@163.com.

Canadian Government Approves the Use of Biochar in Soil

Announced in December 2015, the Canadian Government through its regulating agency, Canadian Food & Inspection Agency (CFIA), has approved the use of biochar in soil. This development is the result of two years of concerted work from organizations such as the Alberta Biochar Initiative (ABI), AirTerra, and other provincial biochar proponents to gain CFIA approval.

“Regulatory approval is something ABI has pursued since 2012,” said Don Harfield, who has conducted biochar research and development at Alberta Innovates – Technology Futures for more than 10 years and serves as ABI’s technical lead. “It gives ABI partners the opportunity to pursue a wide range of potential commercial applications for biochar in Alberta and other markets.”

AirTerra President and CEO Rob Lavoie considers CFIA’s approval of biochar for use in soil a game-changing moment. “Now that we’ve gained federal approval, I believe interest in biochar and its numerous commercial applications will take off with Canadian consumers and industries,” said Lavoie. “Gardeners, horticulturalists, farmers, forest products companies and industry will see biochar in a new light. Its economic and environmental potential is enormous.”

For more information, please see <http://albertabiochar.ca/news>.

2015 Biochar and Sustainable Development of Agriculture held in China



The 2015 Biochar and Sustainable Development of Agriculture conference was held November 23 – 26, in Lin'an, Hangzhou, Zhejiang Province, China, to celebrate the 2015 International Year of Soils. This conference was jointly organized by the Soil Chemistry Specialty Committee of the Soil Science Society of China, Zhejiang A & F University, and the Key Laboratory of Soil Contamination Bioremediation of Zhejiang Province. Attending the conference were more than 260 people from over 70 organizations including universities, research institutes, and commercial entities.

The 63 oral presentations highlighted activities in biochar research and development in China—focusing mainly on the rapid growth in biochar science and technology in recent years. This Conference provided a good opportunity for scientists to discuss their research and build new collaborations. To encourage more young people to participate in biochar research and development, the conference organizing committee congratulated a number of postgraduate students with excellence in oral presentation awards. Encouraged by the success of this conference, most delegates voted to make the national biochar conference an annual event. For a full report of the event, please see <http://www.biochar-international.org/conferences>.

Did you know that the IBI Online Biochar Training Course is Ongoing?

If you are interested in gaining more in-depth knowledge on biochar and biochar systems, consider registering for IBI's recently launched online course, [*Biochar Training for Environmental Sustainability and Economic Development*](#). This ten week, ongoing course provides participants an intensive training series on all aspects of biochar, presented by leading biochar experts. Participants have the opportunity to learn about best-science updates on biochar to promote the uptake of biochar production and use, and actions necessary to overcome the barriers to commercialization of the biochar industry. The course contains 19 separate lessons—each with a subject overview, a recorded audio/video presentation lasting 30 – 45 minutes (some lessons contain more than one video), and quizzes to test comprehension and retention. There is also an optional introductory presentation on the basics of biochar and the IBI so that all participants start the course with a common understanding of both. Course materials are presented in a user-friendly online format and participants can access the course at their convenience over ten weeks and will receive a certificate of completion at the conclusion of the course.

Course materials are based on presentations from the June 2014 in-person biochar training course titled, "*Biochar for Environmental Sustainability and Economic Development*," hosted by the University of Santiago de Compostela, Spain, and developed and presented by IBI and collaborators. For more information on member and non-member pricing and registration, please see www.biochar-international.org/online_course.

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 the open access biochar book: *Biochar Culture*, by Dr Sai Bhaskar Reddy Nakka. 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 30 – April 1, 2016: Northeast Biomass Heating Expo 2016. Location: Burlington, VT, USA. For more information: <http://www.biochar-international.org/node/7389>
- April 11 – 14, 2016: 9th Annual International Biomass Conference & Expo. Location: Charlotte, NC, USA. For more information: <http://www.biochar-international.org/node/7430>
- June 6 – 9, 2016: 24th European Biomass Conference and Exhibition. Location: Amsterdam, the Netherlands. For more information: <http://www.biochar-international.org/node/7651>
- Save the Date: August 2016. Biochar 2016: The Synergy of Science and Industry: Biochar's Connection to Ecology, Soil, Food, and Energy. Location: Corvallis, OR, USA. For more information: <http://usbi2016.org/>

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