Recap of this Month’s News

In this month’s newsletter, we note ideas and trends that you won’t want to miss, including information about:

- **The nation which now leads the biochar industry**
- **The intersection of atomic science and biochar**
- **Giving new life to old and damaged trees; Saving forests**
- **Getting government’s attention**
- **Preventing wildfires**

Biochar-related stories sometimes do miss our attention if they are not prominent on the world wide web or do not explicitly refer to “biochar”. If you would like to share such news with the thousands around the world who receive this newsletter, please email me a lead, link, or paragraph. Useful and concise compositions with links to more details may be given a byline. - *IBI Newsletter Editor, Robert Gillett*

Biochar related jobs, scholarships, and volunteer opportunities

**GRADUATE RESEARCH ASSISTANT**, University of Illinois at Urbana-Champaign, Urbana, IL for students interested in pursuing a Master’s or a Ph.D. degree in the Department of Agricultural and Biological Engineering at UIUC. Two projects currently available: (1) a project that focuses on the technical, environmental, and economic impacts of biochar use in livestock waste management, and (2) an integrated study which aims to develop a biosecure composting system that eliminates transmission of pathogens and antibiotic resistant genes.

The International Potato Center (CIP), La Molina, Peru is looking for a **JUNIOR RESEARCH ASSISTANT**. One of the duties of the permanent position will be to support the establishment of a controlled experiment to evaluate the effect of commercial mycorrhizae and biochar on the accumulation of Cd in soils with different levels of Cd.

The Institute of Agrophysics of Polish Academy of Sciences in Lublin, Poland is looking for a full time **RESEARCH ASSISTANT** to support a project for satellite monitoring and improving soil water retention using biochar.
**PHD STUDENTSHIP:** Modelling and Simulation of Pyrolysis and Gasification of Biomass and Waste Plastic at University of Sheffield, UK. This project will investigate, through process modelling and simulation, the technical routes and operating conditions to produce energy and valued chemicals.

**WANTED - STORYTELLER**

Can you tell potential donors the IBI story to help grow the organization? IBI is looking to appoint an experienced Board Member (at large) that is interested in spearheading its fundraising efforts. For those interested in this volunteer position, please send a letter of interest as well as an outline of relevant experience to info@biochar-international.org.

**Attention! Commercial Laboratories**

IBI is updating our list of labs that perform biochar analysis. If you would like your lab to be included in this list, please contact IBI (info@biochar-international.org) with sample reports for the biochar analyses that you currently perform along with the testing protocols and pricing. The [IBI website’s current listing](#) includes five labs and several tables displaying their testing methods and capabilities.

**Regional Updates**

**People’s Republic of China**

*China Surges into an Astonishing Global Lead in Biochar Deployment*  
By IBI Chairman Tom Miles

China has invested in many biochar plants in Northern China, primarily to reduce air pollution, improve yields and soil fertility, and sequester carbon. They are currently building about 50 biochar plants, located in each of several provinces. They have tested the biochar fertilizer products in the field at more than 300 sites with impressive results and have set up farmer coops and businesses to collect and densify crop residues at harvest. Pelletizing allows storage of the feedstock and facilitates biochar production along with oil and vinegar extraction. With biochar, they grow more food using less fertilizer while reducing air pollution and sequestering carbon, which they track using standardized methods. Last year they converted 200,000 tons of crop residues to biochar. This year they expect to convert 800,000 tons. That is expected to grow up to three million tons within five years. It is profitable for the farmers and for the biochar fertilizer companies.

**Australia and The Pacific**

A series of biochar workshop tours beginning in May 2018 is being planned in New Zealand. Five venues are proposed for the initial round of tours spanning the length of NZ. The focus of these workshops will be on horticulture (vineyards, kiwifruit, orchards, trees and other perennial crops). A public event or meeting is also proposed near each venue. Venues may include: Otago; Marlborough/Nelson/Tasman; BoP/Gisborne/Hawkes Bay; Waikato; and Northland. Trevor Richards welcomes help with planning.

**Caribbean and Central America**

Costa Rica is testing the greenhouse gas emissions from soils amended with biochar made from pineapple residue. The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture is assisting with isotopic techniques used to trace carbon and nitrogen emissions. Sugarcane bagasse has been used to make biochar in Costa Rica for over twenty years in conjunction with bokashi composting, but pineapple
residue could be an even more abundant feedstock in Costa Rica, the largest source of pineapples in the world.

Europe
The Finnish Biochar Association could not wait a full year to hold their second workshop, organized in cooperation with the Forest Biochar Research group of the University of Helsinki. Selected presentation materials are available on the association’s website.

Landmark trees require special care, like treating them with biochar. Carbon Gold’s enriched biochar is being applied through high pressure air injection in a two-year effort to preserve the Charter Oak in Bexley, England.

United States
Trees with damaged roots also need special care. Tree Stewards in Roanoke, Virginia are seeing if application of biochar and compost in a sunburst pattern around a highly damaged sycamore will restore it to health.

NRCS is announcing the availability of Conservation Innovation Grants (CIG) for 2018 to stimulate the development and adoption of innovative conservation approaches and technologies focusing on grazing lands, organic farming, and soil health. A total of up to $10 million is available for CIG in FY 2018. All U.S.-based non-Federal entities (NFE) and individuals are invited to apply. Projects may be between 1 and 3 years in duration. The maximum amount for a single award in FY 2018 is $2 million. Applications are due by Feb 26, 2018.

The Almond Board of California is funding research to investigate the use of almond shells as biochar feedstock.

Grants are available for individuals, businesses, and organizations through The Great Plains Biochar Initiative to encourage Nebraskans and Kansans to use and produce biochar from the states’ wood resources. A total of $40,000 will be awarded in 2018 to accomplish projects that meet these goals. Maximum Funding Request: $5,000. Application Deadline: February 16, 2018.

For logistics reasons, the best use of biochar is often located close to the source of feedstock. In the case of bark beetle-killed trees, the U.S. Forest Service hopes that top-dressing with biochar around nearby threatened trees may prevent forests from being wiped out by beetle infestations or drought effects. A long-term study of this approach in California’s Stanislaus National Forest is being guided by soil scientist Debbie Page-Dumroese of the Rocky Mountain Research Station. With such efforts, it may be possible to mitigate systemic tree die-off due to the climate change.

Helping to beautify the grounds of governments like the California state Capitol is a clever way to get biochar the attention it deserves. Another reason for U.S. state and local governments to pay attention comes from a new policy of Moody’s to factor vulnerability to climate-driven disasters into credit ratings. IBI Board Member Kathleen Draper has summarized a few ways that biochar might be helpful in government strategies to adapt to climate threats and mitigate their effects.
In Oregon and other western states, a record year of wildfires have prompted a surge of mitigation activity, including thinning of forests. Projects like Dreg Veg are blazing a trail that many at-risk wooded communities could emulate, reaping biochar in the process. Kelpie Wilson, who leads many such projects, advises "We have also found that, unless your material is very small and very dry, open burn piles do not work very well as a char production method. You need a container to hold the heat."

An independent panel of Kentucky business leaders awarded The Sustainable Products Company first place in the third annual Entrepreneurs Bootcamp at the University of Kentucky. The Sustainable Products Company, led by chemical engineering doctoral student Chandni Joshi, is developing wood vinegar and biochar.

Mexico

After designing and testing a bone-derived biochar filter for fluoride in drinking water, Engineers Without Borders UK is planning to provide the filters to 1,500 homes in San Miguel de Allende, Mexico. If the technology proves scalable, the open source design (which includes a ceramic element for removing arsenic) could help local entrepreneurs to provide clean, affordable, and uncontaminated water for large numbers of people with similar groundwater contamination issues in North Africa, India, and China.

South America

In the central jungle of Peru, there are over 500 farmers who have taken an interest in sustainable land management using biochar as a result of the work of Biochar for Sustainable Soils.

A Peruvian potato farmer. There are an estimated 400 million small-scale farmers around the world. Farming, ranching and land-use changes contribute 25 percent of annual greenhouse gas emissions. Photo by Richard Tito. From the Mongabay article, "Consensus grows: climate-smart agriculture key to Paris Agreement goals" by Glenn Scherer
Upcoming Calendar Events

3rd Gogreen Summit
https://bioleagues.com/conference/gogreensummit/

International Biomass Conference & Expo
April 16 – 18, Atlanta, Georgia. Billed as the World’s Largest Biomass Event, expected to draw nearly 1,200 attendees. The pre-conference on 16 April will include a Biomass Carbonization & Torrefaction Summit.
www.biomassconference.com

26th European Biomass Conference & Exhibition
EUBCE is a world leading event in the biomass sector, sharing the latest research results, latest developments and innovative bioenergy applications from industry and the policy context. 14 - 18 May 2018, Copenhagen, Denmark.
http://www.eubce.com

First International Conference on Negative CO2 Emissions
http://negativeco2emissions2018.com/

4th Korea Biochar Research Center International Biochar Conference
SMART Biochar Technology: A Shifting Paradigm Towards Advanced Materials and Healthcare Research – part of BEEM 2018, June 10 – 13, 2018
http://www.beem2018.org/sub03_04.php

Australia New Zealand Biochar Conference (ANZBC18)
14-16 August, 2018. Southern Cross University Gold Coast Campus, Bilinga, Qld, Australia. An Initiative of biochar producers & growers from Aust. & N.Z.
https://anzbc.org.au/

USBI Biochar 2018
August 20 – 23, 2018. Wilmington, Delaware. This year’s theme: “The Carbon Link in Watershed Ecosystem Services”
A Look Ahead to Tours Tentatively Coming in 2018

By Kathleen Draper

Based on the success of the first IBI Biochar Study Tour to Stockholm, Sweden, in 2017 IBI is tentatively planning at least 3 new biochar study tours for 2018. Each of these study tours will be hosted in a different country and will focus on distinct aspects of biochar production and/or uses. Current times, locations and themes for the 2018 study tours are highlighted below.

- **Summer:** Riedlingsdorf, Austria – Biochar production, soil amendments, livestock feed additive, carbon farming
- **October:** Nanjing, China – Large scale biochar production & establishing biochar field trials (for commercial, not academic purposes)
- **November:** Nepal – Funding, planting & maintaining forest gardens with biochar

As agendas are planned and dates finalized, this information will be shared. Participation may be limited for some tours. If you would like to pre-register (no financial commitment required) to receive future updates, please contact Kathleen Draper at webinars@biochar-international.org.

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