



3rd International Training Course on Biochar Production, Testing and Application



The Third International Training Course on Biochar Production, Testing and Application

16-21 April, 2015

**Nanjing Agricultural University
The University of Newcastle of Australia**

Following the success of the first and the second Biochar Training Course, The Biochar and Green Agriculture Center of Nanjing Agriculture University in collaboration with the University of Newcastle and University of NSW of Australia is announcing a third course to be held starting 16th April 2015. China now leads the world in the commercial production of both biochar and biochar technology. It has pioneered the development of combine NPK biochar granulated fertilizers.

Your participation will benefit both education and technology development of biochar in agriculture as well as benefit mutual exchanges between your nation and China.



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Aims

- To provide a world wide overview of the biochar industry, research and development and policy setting.
- To provide an overview of what is known and what is not known about: properties of biochars and wood vinegar as a function of feedstock, process conditions and technology and crop responses of different biochars, incorporated at different application rates and different pre and post treatments in different eco-systems.
- To provide an understanding of the principles and practice of pyrolysis and biochar production and application.
- To provide tools that allows participants to develop enhanced biochars to match local soil requirements and meet plant nutrient needs.
- To explore the use of biochar in land remediation, waste management and animal health.
- To provide a framework that allows the development and implementation of sustainable and self sustaining biochar projects and/or establish biochar businesses.
- To provide an interactive environment where participants can exchange information and experiences.





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Location



The 3rd International Biochar Training Course will be based on the campus of **Nanjing Agricultural University** (NAU), which is nestled against the foothills of the Zijin Mountain on the eastern of Nanjing.

Number of Participants

Maximum number: 30

Course Structure (16-21 April, 2015)

➤ **16th April: Registration**

➤ **17th April: Field trip**

One day field trip to a biochar plant using a business-scale pyrolyser and producing large amount of biochar products, in the vicinity of Nanjing City; And a field trial using different biochar for crop production in a farm near Nanjing.

➤ **18th -20th April:**

Morning Sessions: Lectures and Discussions

Afternoon Sessions: Testing and Practical Course

➤ **21th April: Departure**

Welcome to attend 2nd International Conference on Biochar and Green Agriculture (BioGra 2015) from 14th-18th April, 2015!

Please find more information about BioGra 2015 in the “BioGra2015 1st circular”.



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Registration fee

➤ For Biochar Training Course (16-21 April)

1. Participants from developing countries (excluding China) will not be charged a tuition fee but will need to pay a small charge of \$100 to cover lunch, morning and afternoon tea.
2. Participants from developed countries are requested to pay a registration fee of €350 .
3. Participants from China are requested to pay RMB 1500.

The registration fee covers the lectures, testing and practical, lunch, field trip costs as well as transportation and communications costs for organization affairs. All the participants are responsible for your own airfare, accommodations and dinner. Registration fee would be waived for invited speakers.

Lodging

Hanyuan Hotel, Main Campus of Nanjing Agricultural University, 20 Tongwei Road, Nanjing, China.

At present the price is around RMB 320/night for standard double room.



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How to Apply for a Position

Please provide the following information when sending your expression of interest in the course:

- Registration Form
- A curriculum vitae (CV)
- Expressions of Interest in a word document
 - a) Why do you want to come to the course?
 - b) What do you expect to get from the course?
 - c) How will you use the information and experience that you gain?

Please send this information to

Professor Stephen Joseph: joey.stephen@gmail.com

Ms Fengfeng Sui (Secretary): suiff1991@163.com



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Registration Form

Please complete the contact information below (copy and fill in individually) . Return this form no later than **31st December 2014** to us. Email at: suiff1991@163.com

Given Name		Family Name	
Title		Email	
Date of Birth		Gender	
Passport Number		Tel/Fax	
Affiliation			
Address			
Lodging(please click)	<input type="checkbox"/> Yes, I need to book a room in Hanyuan Hotel: Not share <input type="checkbox"/> Share <input type="checkbox"/> <input type="checkbox"/> No, I will arrange accommodation by myself.		
Any comments (Diet etc)			



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Introduction of Lecturers

Johannes Lehmann



Johannes Lehmann is a leading biochar scientist from the department of Plant and Soils at Cornell University, USA. Prior to his appointment at Cornell, he coordinated a research project on nutrient and carbon management in the central Amazon where he started work on Terra Preta soils. During the past 10 years, he has focused on nano-scale investigations of soil organic matter, the biogeochemistry of black carbon and the development of biochar and bioenergy systems. Dr. Lehmann is a co-founder and Chair of the Board of the International Biochar Initiative, and member of the editorial boards of Nutrient Cycling in Agroecosystems and Plant and Soil.

Stephen Joseph



Stephen Joseph is a Fellow of the Australian Institute of Energy, a chartered engineer and has been a senior adviser to commercial, government and non government organizations, in renewable energy, biofuels, and sustainable agriculture and forestry. Dr. Joseph has extensive experience world wide developing processes and technologies that convert waste into energy and value added products. These include biodiesel, and other biofuels, oil from algae, biomass combustion, pyrolysis and gasification plant, biochar, plastic wood composite, additives for high strength concretes. He is now a visiting professor at Center of Biochar & Green Agriculture in Nanjing Agricultural University, China.



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Saran Sohi



Saran Sohi is a professor at University of Edinburgh. He was recruited to lead soil science research in the UK Biochar Research Centre, Edinburgh, at its inception in late 2008 (www.biochar.org.uk). The purpose of his work is to establish a sound understanding of biochar function in soil, providing the predictive capacity required to 'prescribe' biochar in ways that firstly are safe, and secondly offer the best possible results in terms of soil and crop performance in diverse situations. He is now leading a UK-Sino group on biochar application in China's agriculture.

Genxing Pan



Genxing Pan is Science Leader in the study of biochar in Nanjing Agricultural University, China. He is the director of Institute of Resource, Ecosystem and Environment of Agriculture, Center of Climate Change and Agriculture, and Center of Biochar & Green Agriculture in NAU.

Prof. Pan's primary specialty has been ranged from understanding of carbon sequestration and greenhouse gas mitigation potential, carbon footprint accounting and reduction options and technologies, to innovating new agro-resources including new green energy, green fertilizers as well as environmental materials from biochar via crop straw pyrolysis, with sound and feasible.

science, technological and management solutions relevant to policy decision of sustainable crop production, greenhouse gas reduction and safe food in agriculture



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Ellen R. Graber



Professor Ellen R. Graber is a Principal Scientist of Institute of Soil, Water and Environmental Sciences, The Volcani Center, Agricultural Research Organization. Her major current research activities are directed towards biochar use in agriculture, and involve understanding the mechanisms responsible for plant growth promotion and improved plant resistance to disease under biochar addition. Other focuses of biochar research include its effect on the fate of other soil-applied agrochemicals and on soil contaminants, use during composting and poultry houses for reducing ammonia emissions, and potential for soil remediation.

Scott Donne



Professor Donne obtained his PhD in Chemistry from the University of Newcastle, Australia, in 1996, after which he completed a two-year postdoctoral appointment at the University of California, Santa Barbara, USA. He then spent four years as a Staff Technology Engineer with Eveready Battery Company, Inc. (Energizer; USA), before returning back to the University of Newcastle in 2001. Currently Professor Donne leads the Applied Electrochemistry group at the University of Newcastle, which is a key component of both the Priority Research Centre for Energy and the Newcastle Institute for Energy and Resources. His research is focussed primarily on the development of materials for energy storage applications, in which role he has established numerous industrial and academic collaborations around the world. He has published a book, 6 book chapters, over 70 peer reviewed journal articles, 7 patents and made over 100 invited and submitted conference presentations.



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Lianqing Li



Professor Lianqing Li is a soil scientist at Institute of Resource, Ecosystem and Environment of Agriculture, Center of Climate Change and Agriculture, and Center of Biochar & Green Agriculture in Nanjing Agricultural University. She has been served for teaching and research on soil quality and fertility in the soil science department of the university, and been a member of Chinese Society of Soil Science for a decade. She has particular experience with biochar effects on soil fertility, crop appearance and productivity from the experiments since 2010.





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The Series of International Training Course on Biochar Production, Testing and Application

- The first biochar training course was held in Nanjing Agricultural University from 10-15 September, 2012. There are totally 22 participants from 13 countries.
- The second biochar training course was held in Zhejiang A&F University from 25 October-1 November, 2013. There are totally 40 participants from 24 countries.





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Course Structure

- Lectures and Discussions
- Practical courses
- Field Trips

Field Trips

- 1st Biochar Training Course: Go to Henan Province to visit Sanli biochar Factory for one day. A visit to a field trial was undertaken and participants had an opportunity to meet people from the local village.
- 2nd Biochar Training Course: Visit Yixing Biochar factory and Yixing field test site.





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Practical Courses

- Characterization and testing of biochar.
- How to operate biochar stoves, ovens and kilns safely.





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Discussion

- Following the field trip participants spent an afternoon developing an outline business plan in groups of five people. The outline plan was presented in a group session.
- Presentation of participants, experiences in either developing and field testing biochar production technology and the biochar that was produced using it, or producing a fuel charcoal from briquette.
- Developing integrated biochar projects. Participants split into groups and developed 5 different projects. Individuals were then going to write specific project proposals when they returned home.
- Presentation and discussions of the work being undertaken by participants.





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Contacts

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