

**2nd China-Asian Workshop on Biochar Production and
Application for Green Agriculture**

---from Technology to Viable Systems

Nanjing, China, November 18-21, 2017

Conference Guide

**第二届中国东盟生物质炭生产与绿色农
业应用国际交流培训会**

---从技术到模式

会议手册

Institute of Resource, Ecosystem and Environment of Agriculture

Sanju-NJAU Center of Biomass Green Technology

Nanjing Agricultural University

November 10, 2017

Introduction

Biochar from biowastes has been increasingly advocated as a “Black for Green” solution both of waste treatment and sustainable soil management. Researches have shown multiple benefits from pyrolyzing biowastes into biochar, and biochar production and application in agriculture (That is “Agri-Char) has been tested globally. There is an emerging trend to develop a new sector of bio-economy by shifting biowaste treatment and biochar use for green production of agro-products worldwide. Particularly in China, pyrolysing crop residue into biochar and use for improving soil, reducing agrochemicals and enhancing bioenergy in agriculture has been adopted in April 2017 into national implementation as a key pathway to solve the crop residue recycling. A new industry of crop residue pyrolysis and biochar-based soil conditioner and fertilizers is being developed across China since 2016. Therefore, biochar production and use in agriculture has the great potential to evolve into a new green revolution for modern agriculture in the mid-21 century.

Following a successful meeting of the 1st China- Asian Biochar Workshop in October 2016, the 2nd China- Asian Biochar Workshop is scheduled to take place during November 18-21, 2017. The theme of the workshop will be Biochar Production and Application for Green Agriculture--from Technology to Viable Systems. The workshop is aimed to enhance a joint exchange and sharing of the biochar developments between China and Asian countries and beyond, and an access to novel biochar technologies and viable systems for safe recycling of biowastes for green development. The workshop will be organized in alignment with an IBI board meeting, a training and exhibition of biochar production from straw, green waste, municipal sewage sludge and livestock manure and biochar products of novel biochar-based soil conditioner/ameliorator, bio-medium for flower/vegetable nursery as well as novel organic/inorganic biochar compound fertilizers. A number of internationally well-known biochar experts will be invited to give keynote speeches for emerging trends in biochar science, technology and applications. Together with these, a joint exchange and discussion will be arranged between the scientists, engineers and business people both from China and Asian countries and beyond.



Key events

- (1) IBI Board meeting, Nov. 18, 2017. IBI board Interim meeting
- (2) Plenary session: Biochar Science and Technology Today.
Nov 19, 2017. Speakers: Lehmann J, Miles T, Joseph J, Graber E, etc
- (3) Field Tour: Biochar Technologies in China. Nov 20, 2017
- (4) Biochar development dialog: between scientists, engineers and business.
Nov 21, 2017

Organization

- ❖ Co-Chairs: Dr Genxing Pan, Dr Lianiqng Li
- ❖ International advisors:
 - ❖ Lehmann J, Cornell University, USA
 - ❖ Miles T, IBI chairman, Tom Miles Consultancy, USA
 - ❖ Joseph S, New South Wales University, Australia
 - ❖ Draper K, Ithaca Carbon Intelligence Institute, USA
 - ❖ Graber E, Volcano Institute, Agricultural Science Academy, Israel
 - ❖ van Zweitten L, Primary Industry Department, New South Wales, Australia
 - ❖ Wei Wei, Nanjing Agricultural University, China

Sponsors

- ❖ Nanjing Agricultural University, China
- ❖ China Asian cooperation project
- ❖ State Agency of Foreign Expert Affairs
- ❖ Asian Hub of Michigan State University/Nanjing Agricultural University

Co/sponsors

- ❖ Center of Biomass and Biochar Green Technology, NJAU, China.
- ❖ Nanjing Sanju Biochar & Novel Bio-material Technology Co Ltd, China
- ❖ Jinhua Institute of Bioeconomy Technology, Zhejiang, China
- ❖ Zhejiang FANLIBO Building Material Co Ltd.,China



Message from the host

Dear participants,

We are so pleased to host 2nd China-Asian Workshop on Biochar Production and Application for Green Agriculture---from Technology to Viable Systems in Nanjing, China. The workshop and training are aimed to enhance a joint exchange and sharing biochar technology for sustainable crop straw treatment and soil management in agriculture between China and ASEAN countries and beyond.

For access to most updated knowledge and experinece in biochar science and technology around the world, we invited a number of well known international experts to give lectures in a plenary session and arrange as many as possible presentations from the participants in the following voluntary oral sessions. In addition, a number of engineers from Chinese biochar sector will introduce their progress in biomass treatment and biochar production technology. Also, tours are scheduled to our biochar demosntration center nearby Nanjing and to an innovation center of carbonization machine. We hope all the participants will enjoy these activities, with your best to keep order the presentations and dicussion in a friendly atmosphere.

For carbon saving, we try to keep most of conference documents least printed. Meanwhile, photographs during the conference, taken by the host, will be uploaded to the website for sharing and downloading as well as sending by email contacts.

For your convenience, here are some kind notes:

- Please upload your presentation 2 hrs in advance and keep your speech in time;
- Please hand over your passport or ID card to the conference organziers before the opening of the session on Nov 19th so that train ticcects for 20th Nov tour can be purchased;
- Please do not copy any presentation as will be posted on the website for downloading;
- Please do not photograph the presentations during the meeting;
- Please keep your cellphone switched or in silence. Never speak on your phone while in a meeting.

We thank for all of you for your contribution to the meeting. We look forward to meeting you soon and a pleasant stay in the golden autumn in Nanjing.

Genxing Pan



On behalf of the local organizers

Agenda

Conference room: Ground floor, Building of the College of Resource and Environment of Agriculture, NJAU Campus

Date	Time	Presentation/Activity	Convener/Speaker
18thNov.	8:00-17:00	Registration and reception (Hanyuan Hotel)	
	17:00-18:00	Welcome reception dinner (3rd Floor, South Campus Cafeteria; Islamic diet available)	Prof Xu, the Dean/Pan G
Plenary Session, 19th Nov. Chair: Joseph.S.	8:30-8:40	Opening remarks	Genxing Pan
	8:40-9:10	Trends of global biochar science and technology	Johannes Lehmann
	9:10-9:40	Biochar and Biology: what is between them	Ellen Graber
	9:40-10:10	Global biochar developments and the role of IBI	Tom Miles
	10:10-10:30	Group photo, Coffee/Tea break	
Plenary Session, 19th Nov. Chair: Graber E.	10:30-11:00	Green application of biochar for community developments	Kathleen Draper
	11:00-11:30	Biochar compound fertilizer: a shifting paradigm of fertilizers	Stephen joseph
	11:30-12:00	Biochar for soil improvements	Paz-Ferreiro
	12:00-12:30	Biochar from crop straw to biochar fertilizer for soil and ecological agriculture of China	Genxing Pan
	12:30-13:30	Lunch time (Snack lunch available)	

<p style="text-align: center;">Voluntary oral session, 19thNov</p> <p style="text-align: center;">Chair: Paz-Ferreiro/Zhang AF.,</p>	13:30-13:45	The role of biochar fertilizer in green agriculture: lessons from field demonstrations	Lianqing Li
	13:45-14:00	Warm Heart biochar projects in Thailand	Michael Schafer
	14:00-14:15	Biochar-Based Technologies for Enhanced Agricultural Productivity and Soil Fertility Management in Degraded Uplands in the Philippines	Marilou M. Sarong,
	14:15-14:30	Effect of biochar application on sugarcane growth and nitrogen use efficiency	Liu Yang
	14:30-14:45	Co-composting amendment derived of agricultural wastes and biochar affects wheat roots performance, nutrient uptake and soil properties.	Gustavo A C Fuentes
	14:45-15:00	Biochar from green wastes and the potential for city environment management	Yanyan Ju
	15:00-15:15	Effect of rice straw derived biochar and different rates of Nitrogen fertilizer on rice growth, seed yield and soil fertility	LaiLai
	15:15-15:35	Coffee/Tea break	
<p style="text-align: center;">Voluntary oral session, 19thNov</p> <p style="text-align: center;">Chair: Li L/Shafer M.,</p>	15:35-15:50	Biochar from animal wastes and the environmental risks	Zhi Lin
	15:50-16:05	Effect of biochar type on anaerobic digester treating palm oil mill effluent	Darus Bin Ishak
	16:05-16:20	Biochar in dry land agriculture of China	Afeng Zhang
	16:20-16:35	Role of Biochar production in the current condition of saline and metals contaminated fields	Mubasher Nasir
	16:35-16:50	Straw resource and biochar production potential in Philippines	Jessie M. Manalili
	16:50-17:05	The effect of biochar in combination with compost on nutrient retention and the growth of Chinese cabbage in Hawaiian acid soils	Arnoldus Klau Berek
	17:05-17:20	Biochar: An innovative approach for carbon sequestration and soil quality in semiarid agriculture	Muhammad Riaz

20th Nov: Field tour to Zhejiang (Biochar technology and industry)

Depart in morning and back at night, travel with high speed train, lunch in local city (Islamic food prepared)

- (1) Sewage sludge biochar and potential use for eco-building (Zhejiang Vanlibo Building Material Co Ltd.);
- (2) Animal waste carbonization: technology and biochar products (Jinhua BioEconomy Technology Institute)

Date	Time	Activity
Field tour, 20 th Nov. Tour guide: Li I/ Blan R.	6:00AM	Bus departure to Nanjing South Railway Station at South Campus Gate (南京农业大学南大门)
	7:00AM	Depart, travel to Quzhou, Zhejiang. High speed train number G1667.
	10:00AM	Pickup with a local bus at the Quzhou East Station.
	10:30AM	Visit to a sewage sludge biochar plant
	11:30AM	Lunch in Quzhou (Cooked food in a local restranut)
	13:00PM	Bus depart to Jinhua, Zhejiang
	14:30PM	Visit to a pig manure biochar project (manure biochar and the products)
	17:30PM	Working dinner in Jinhua (Islamic food prepared)
	18:30PM	Bus to Jinhua Railway Station
	19:48PM	Travel back to Nanjing ,a high-speed train G1504
Conference, 21 th Nov.	9:00-10:30	Challenges of biochar science and technology (Convener: Graber E, & Filley T)
	10:50-12:10	Dialog on biochar developments between Sci/Tech and engineers, and between developed and developing countries.
Training	14:00-17:30	Biochar technology and products training (Demonstration center of China's biochar industry in Liuhe, Nanjing. Profs Pan and Li.)
	17:30	Depart, Chinese delegates
22 th Nov.	Depart, all delegates	

Conference room

Conference hall, Ground Floor, Building of the College of Resource and Environment Sciences (red circle in the map below), main campus of Nanjing Agricultural University, 1 Weigang, Nanjing City, Jiangsu, China.



Building of the College of Resource and Environment Sciences (red circle in the map left)



Accommodation

(1) For invited foreign experts and domestic academicians (Non-Islamic diet): Hanyuan Hotel, Main Campus of Nanjing Agricultural University, 20 Tongwei Road, Nanjing, China. Tel: (86) 25 84393988



(2) For registered students and other foreign attendee. MoTai 168 Inns, 98 Houbiaoying Road, Qinhuai District, Nanjing City, Jiangsu, China. The hotel is just opposite to the south gate of the main campus of the Nanjing Agricultural University. Tel: (025)8428 6888.



Snack lunch will be provided (Islamic food separately) during conference while dinner only for reception.

Registration

(1) Normal registration: 400 USD; (2) Student registration (certificate needed): 250 USD .

For normal registration, the registration fee covers conference proceedings, presentations, lunch and conference reception dinner as well as field trip. Student registration fee does not cover conference reception or banquet. Registration fee would be waived for invited speakers, participants from ASEAN countries. Payment accepted with cash or card, at the registration desk.

Any cancellation of participation should be received by October 31, 2017.

Transportation and weather/sports

Transportation

(1) Subway available at the airport of Nanjing Lukou and at the Nanjing South high Speed railway Station(interchange at XinJieKou of Subway No 1 to Subway No 2, then exit No 3 at XiaMaFang station, 50M on the left, to the North gate of the NJAU campus;

(2) Taxi to the South Gate of the NJAU campus (close to both the MoTai 168 Inn and the Hanyuan Hotel). about 130 CNY from the airport and 30CNY from the Nanjing South railway station.



Weather:

Fairly cool and dry as in late autumn in Nanjing, jack dressing needed in the morning and in evening. Umbrella may be needed in case of some short and slight rains.

Access to the green zone of the city is convenient at the north gate of the campus. Enjoying walking for pleasant leisure times there.

Contacts

Local arrangements: Ms Xiarong (NJAU). Email: 965811864@qq.com; Juyanyan@aliyun.com

Local organizer:

Dr. Genxing Pan. Email: pangexing@aliyun.com. Tel: (86) 25 84396027; (86)13605172931.

For more information and for Chinese participants, pls refer to: <http://ireea.njau.edu.cn/ch/Default.asp>.

Having a pleasant stay in Nanjing and enjoy biochar green technology in China!