

Bioenergy, Sustainability, and Land-Use Change Report Oak Ridge National Laboratory (ORNL) January 2015

Publications

Kang S., D. Wang, J.A. Nichols, J. Schuchart, K.L. Kline, Yaxing Wei, D.M. Ricciuto, S.D. Wullschleger, W.M. Post, R.C. Izaurralde. 2015. Development of mpi_EPIC model for global agroecosystem modeling. *Computers and Electronics in Agriculture* 111:48–54.

ORNL Presentations:



January 17-23 – Keith Kline and Maggie Davis attended the International Organization for Standardization (ISO) PC 248 Plenary as U.S. delegates to review comments and prepare revisions to the draft ISO 13065, “Sustainability Criteria for Bioenergy.”

January 26-Feb 01 – Keith Kline participated in meetings for NSF PIRE Project, “Sustainability, Ecosystem Services, and Bioenergy Development across the Americas” to share experience with sustainability indicators among interdisciplinary teams in Tabasco, Mexico. Dr. Kline also presented a talk titled *Bioenergy sustainability criteria and oil palm*



Checking soil type at oil palm plantation

CBES FORUM



January 6-7– Hans Langeveld of Biomass Research (a research organization in The Netherlands focused on sustainable production of biomass for food, feed, biofuels and biobased products) visited ORNL and presented a talk titled: ***Harvesting more from less land: Changes in land use intensity and its impact on the food vs. fuel debate*** His presentation is posted on the CBES website: <http://web.ornl.gov/sci/ees/cbes/forums.shtml>

Other ORNL Activities:

January 8 – Keith Kline and Virginia Dale participated in a conference call of the Southern Bioenergy Working Group Partners.

Other ORNL Activities: (cont.)

January 14-15 – Esther Parish attended a multi-lab meeting at the National Renewable Energy Lab (NREL) in Denver, Colorado with Budhendra Bhaduri and Brennan Smith in order to discuss potential for better coordination of research and projects related to the energy-water nexus (EWN). Several of ORNL's bioenergy-related projects (including Sustainability, the Billion Ton Update for 2016, and the Bioenergy KDF) were highlighted during ORNL's briefing to the other DOE Labs.

January 20 – Esther Parish and Virginia Dale submitted a summary of their work on assessing sustainability of switchgrass in east TN to the International Energy Agency (IEA) Task 43 for inclusion in its report on bioenergy case studies focused on lignocellulosic plants in agriculture landscapes. Virginia also commented on the IEA Task43 work plan for 2016-18.

January 26 – Virginia Dale participated in the international call of DOE's Bioenergy Technologies Office (BETO).

January 26 - ORNL contributed to several proposals being developed in response to the Landscape Design Funding Opportunity Announcement (FOA) of the Bioenergy Technology Office.

Upcoming ORNL Visits/Events:

February 2-4 – Esther Parish will participate in the SunGrant Initiative Regional conference entitled *Southern Crossroads: Progress in Biomass Production, Processing and Use*. She will give three presentations covering the work on sustainability of switchgrass production in East Tennessee, pellet production in the southeast (for Virginia Dale), and the Billion Ton Update planned for 2016 (for Laurence Eaton).

February 9 - Jenny Sabin will visit ORNL on February 9th, hosted by Virginia Dale. Jenny Sabin is the Principal of Jenny Sabin Studio; the Director of Sabin Design Lab and an Assistant Professor at Cornell University in the area of Design and Emerging Technologies in the Department of Architecture. She is currently involved in work that bridges between architecture and science. She is scheduled to give a seminar at 10:00am in the 5100 Bldg. (JCS) auditorium. The title of her lecture is: *Between Architecture & Science: Elasticity and Networks*.

