

Bioenergy, Sustainability, and Land-Use Change Report Oak Ridge National Laboratory (ORNL) November 2013

Publications and Reports:

November 27th 2012: "The Updated Billion-Ton Resource Assessment Biomass and Bioenergy" by Turhollow, A., Perlack, B., Eaton, L., Downing, M., Wright, L., Hellwinckel, C., Skog, K., Stokes, B., Langholtz, M., accepted in Biomass and Bioenergy.

ORNL Presentations:

Nov 1-2 – Keith Kline was an invited speaker at the 34th Agricultural Law Symposium of the American Agricultural Law Association (AALA) annual meeting in Madison, WI. He participated on the panel titled "Certifying Bioenergy Products for Market Access: Developments in Sustainable Law and Policy."

Nov 6th – Kline gave an invited presentation for the "LCA Harmonization/Standardization Session" at the American Institute of Chemical Engineers (AIChE) Annual Meeting, San Francisco. The talk reviewed motivation for ISO 13065 "Sustainability Criteria for Bioenergy," mandate, status and key issues including US efforts to promote science-based approaches.

November 11th 2013: Natalie Griffiths participated in a conference call with Kristen Johnson and short-rotation woody biomass sustainability collaborators Kellie Vache (Oregon State University) and John Blake (USFS-Savannah River) where Kellie Vache presented updates on the watershed-scale modeling aspects of the project.

Nov 12-14 – Kline, Dale and Davis participated in the Global Sustainable Bioenergy (GSB) and Latin America Caribbean and Africa (LACAf) projects joint-meeting in Atibaia, Brazil. Dale spoke on "Assessing bioenergy sustainability using measurable and meaningful indicators," Kline gave an "Overview of bioenergy crop modeling" including global disturbances that affect outcomes. Davis presented on "Integrated analysis: metrics, best practices, and food security."

Nov 18 - Virginia Dale presented "Risks and Opportunities Related to Energy Use and Development in Tennessee" at the North American meeting of the Society of Environmental Toxicology and Chemistry (SETAC) in a session on "Ecological Risk and Impacts Relevant to Tennessee and the Region" in Nashville, TN.

Nov 19 – Virginia Dale spoke on "Bioenergy Sustainability: Research Needs and Deployment Possibilities" at the 2013 China-US Ecopartnership Annual Conference in Gatlinburg, TN.

Nov. 20 – Virginia Dale gave a presentation on "Environmental Effects of Climate Change in Tennessee" to the Environmental Law Seminar at Oak Ridge Institute for Continued Learning

Forum of the Center for Bioenergy Sustainability (CBES)

Nov 21: – Rebecca Efrogmson gave the CBES Forum on the topic of "Review of Best Management Practices Relevant to Bioenergy Production."

Other ORNL Activities:

Nov. 4-6—Zachariah Seiden and Jordan Hayes attended the TN-AWRA conference in Nashville, TN.

Nov. 11 – Dale and Kline met with Carlos Joly, Glaucia Souza, Jem Woods and (via phone) with Luciano Verdade about the chapter on bioenergy and biodiversity being prepared for the forthcoming book from the Scientific Committee on Problems of the Environment (SCOPE), on which Dale is an author.

Nov. 18-20: Kline and Davis met with researchers from the Brazilian Bioethanol Science and Technology Laboratory (CTBE) and the Universidade Estadual de Campinas (UNICAMP) on common indicators for sustainable biofuel initiatives. ~~They developed a~~ path forward for a manuscript on how differences in measurement protocols for soil organic carbon affect indicator values was defined. Potential topics for subsequent research, papers and meetings were discussed including landscape designs and assessments, in Brazil and the US, and contributions to the ISO-13065 draft standard.

Nov 19 – Natalie Griffiths participated in a conference call with May Wu (ANL) and short-rotation collaborators Rhett Jackson [University of Georgia (UGA)], Menberu Bitew (UGA), and John Blake (USFS-SR) to discuss application of the water footprint analysis to the short-rotation field site.

Nov. 25 – Dale participated in a conference call with Kristen Johnston, Allison Goss Eng, and others at DOE HQ) as well as Cristina Negri (Argonne National Lab) on planning for the workshops on “Landscape Design.” Dale also had a related conference call with Jami Nettles (Weyerhaeuser) and Al Lucier [National Council for Air and Stream Improvement (NCASI)].

Nov. 15-29 – Davis and Kline participated in 8 webinars ~~and 6 conference calls related~~ to address comments from the US and other countries on ISO 13065. The next draft is due March 2014. After editing, this third draft will be circulated ~~for~~ as a “pre-enquiry” vote to determine if there is sufficient support to transition to a Draft International Standard. If not, the document will be proposed for review and approval, as a provisional ISO Technical Specification.

Upcoming ORNL Visits/Events:

Dec 2-6 – Virginia Dale will attend The Australian Centre for Ecological Analysis and Synthesis (ACEAS) workshop on “Interactive Games to Value and Manage Ecosystem Services” in Brisbane, Australia.

Dec 11-16 – Virginia Dale has been invited to co-chair the China-US Workshop on “Land Use Change: Turning challenges into Opportunities for Agricultural Sustainability” hosted by the Shenyang Agricultural University, Shenyang, China.

March 4-6 – Tentative date for Sustainable Landscape Design Workshop in New Bern, NC.

March 17-21 – Kline and Davis have been invited to participate in the WG3 meeting in Berlin Germany for developing the next iteration of the draft standard for ISO PC248.

May - Zachariah Seiden will speak on using SWAT to compare pine and switchgrass at the EWRI 2014 conference