

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

ORNL Presentations:

Oct 15-17 – Debo Oladosu and Keith Kline presented at the CRC Workshop on Life-Cycle Analysis of Transportation Fuels at Argonne National Laboratory, “Sustainability Standards: ISO Project Committee 248 “Sustainability Criteria for Bioenergy”

Oct 24-25 – Virginia Dale presented “Assessing bioenergy sustainability using measurable and meaningful indicators” and Keith Kline spoke on “Sustainability Criteria for Bioenergy ISO Project Committee 248” at the Transatlantic Trade in Wood for Energy: A Dialogue on Sustainability Standards and Greenhouse Gas Emissions Workshop in Savannah, Georgia, hosted by the Pinchot Institute for Conservation.

Publications and Reports:

Oct 30. Latha Baskaran and Virginia Dale submitted a milestone report to BETO on “Using an aquatic macroinvertebrate habitat model as a way to assess bioenergy effects on water quality across ecoregions”

Oct 31. Rebecca Efroymsen and Virginia Dale submitted a milestone report to BETO on “Review of Best Management Practices Relevant to Bioenergy Production”

Forum of the Center for Bioenergy Sustainability

Oct 17 was National Bioenergy Day, and Matt Rudolf from the Roundtable on Sustainable Biomaterials spoke on “Sustainability Implemented - The Birth of a Voluntary Sustainability Certification Program”

Other ORNL Activities:

Oct. 1 –4: Kline and Davis contributed to work group and plenary meetings of ISO Project Committee 248, Sustainability Criteria for Bioenergy (Stockholm, Sweden). Davis delivered a report for on the state of the science of indirect effects – referencing the annotated bibliography update from Working Group 4. ORNL supported multiple side meetings and helped prepare issues papers to compare US and other proposals on a path forward for an improved draft standard.

Oct 2 - Virginia Dale participated in a conference call of the group that is planning the next activities to follow up on the Council on Sustainable Biomass Production (CSBP).

Oct. 4 –Davis and Kline met with researchers from the Brazilian Bioethanol Science and Technology Laboratory (CTBE) and UNICAMP to discuss next steps for the FAPESP-ORNL project: investigating common indicators for sustainable bioenergy production.

Oct.21-22 – ORNL (Kline, Shujiang Kang, and Stan Wullschleger) hosted researchers from Steve Long’s EBI Project group at the University of Illinois and the Global Sustainable Bioenergy project (GSB) in a 2-day workshop at ORNL’s Climate Change Science Institute. The meeting identified opportunities for combining capabilities at ORNL and University of Illinois to improve global modeling of bioenergy crops, particularly CAM crops for arid lands, and their environmental effects.

Oct 8-30: Kline participated in a series of exchanges on planning an international workshop addressing the issue of biofuels and food security involving representatives from Denmark (Novozymes), UK (Imperial College), Brazil (USP), US (ORNL, Dartmouth), and international organizations (IFPRI and FAO). Current proposal is to plan the workshop for November 2014 in order to follow the release of the SCOPE Bioenergy study.

Oct. 30: Kline and Davis participated in the US Technical Advisory Group (TAG) to ISO Project Committee 248 discussion on strategies to resolve comments on the second committee draft (CD2) of 13065. US comments on CD2 should be addressed during WG webinars over the five months, and the US TAG is dividing responsibilities to try to improve coverage of the different sub-groups of WG3. An "intermediate draft" is due by 15 of March. After editing, this draft will be circulated with a "pre-enquiry" vote to determine if there is sufficient support to transition to a Draft International Standard; if not, the plan is to move forward as a technical specification.

Jordan Hayes, a masters student at the University of Tennessee working on the switchgrass project, is still collecting samples and completing a literature review for the curve number and c-factor. He and Zachariah Seiden will be completing the stream survey of the three stream sites once a larger storm hits. At this point, they can complete the stage-discharge calculations for total loads. They are continuing the testing on nutrients and total suspended solids.

Upcoming ORNL Visits/Events:

Nov 1-2 – Keith Kline will speak at the 34th Agricultural Law Symposium of the American Agricultural Law Association (AALA) annual meeting in Madison, WI. The panel is titled "Certifying Bioenergy Products for Market Access: Developments in Sustainable Law and Policy."

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

Nov 6th – Kline will give an invited presentation on international standards and application of LCA methods at the AIChE Annual Meeting.

Nov 10-14 – Kline, Dale and Davis have been invited to participate in the Global Sustainable Bioenergy (GSB) and Latin America Caribbean and Africa (LACAf) projects joint-meeting in Atibaia, Brazil. The team will also explore opportunities to link with landscape-scale bioenergy sustainability assessments. Following the workshop, Kline and Davis will be meeting with collaborators in Campinas on other sustainable biofuel initiatives related to common indicators, ISO follow-up and a joint manuscript.

Nov 18 - Virginia Dale will present "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 will speak on "Bioenergy Sustainability: Research Needs and Deployment Possibilities" at the 2013 China-US Ecopartnership Annual Conference in Gatlinburg.

Nov 19 – Rebecca Efroymsen will give the CBES Forum on the topic of "Review of Best Management Practices Relevant to Bioenergy Production"

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.

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