

## **Bioenergy, Sustainability, and Land-Use Change Report Oak Ridge National Laboratory (ORNL) September 2014**

### **Publications:**

Efroymsen RA, Dale VH. 2015 (online 2014) Environmental indicators for sustainable production of algal biofuels. Ecological Indicators 49:1-13 10.1016/j.ecolind.2014.09.028

### **ORNL Presentations:**

September 29-30 – Nate Pollesch gave a poster presentation on “Bioenergy sustainability assessment: Mathematical approaches to protocol development” at the conference Mathematics for Planet Earth 2013+: Data Aware Energy Use in San Diego, California

### **CBES Forum:**

September 19 – Tim Theiss presented "The Role of Biofuels in the US Sustainable Transportation Challenge"

### **Other ORNL Activities:**

September 2 – A conference call was held to help build understandings about U.S. wood pellets being supplied to the EU and how that industry could be a part of a sustainable landscape designs. The forest sector representatives included Bob Emory (Weyerhaeuser), Mike Jostrom (PlumCreek) and Ben Wigley, Reid Miner and Eric Vance of the National Council for Air and Stream Improvement (NCASI). ORNL participants included Virginia Dale, Keith Kline, and Mithun Saha.

September 5 – Esther Parish and Virginia Dale meet with colleagues from the University of Tennessee (Burt English, Don Tyler, and Jamey Menard) and Sam Jackson (Genera Energy) to discuss application of a multi-attribute decision support system (MADSS) model to evaluate the sustainability potential of the Vonore, Tennessee, switchgrass relative to two alternative business-as-usual scenarios for East Tennessee.

Mithun Saha joined Virginia Dale’s team to help explore ways to incorporate bioenergy into sustainable landscape designs. Mithun is a PhD student in Civil and Environmental Engineering at Northeastern University in Boston, Massachusetts.

September 8 – Rebecca Efroymsen, Keith Kline, and Nagendra Singh summarized the causal analysis task of the Land-use Change Data and Causal Analysis project via webinar at the monthly BETO sustainability conference call.

September 18 – Maggie Davis gave a presentation on “Opportunities in Research” to the Senior Colloquium Class in the University of Tennessee’s Geography Department

September 29 – Kline and Davis submitted comments on the ISO Draft International Standard 13065, Sustainability Criteria for Bioenergy, and participated in the U.S. Technical Advisory Group conference call.

### **Upcoming ORNL Visits/Events:**

October 5-11 – Virginia Dale will speak on “Opportunities to Design Sustainable Bioenergy Systems” at the International Union of Forest Research Organization World Congress in Salt Lake City, Utah. A side meeting will occur with IEA collaborators on landscape design for sustainable bioenergy and potential contributions to the IEA case studies.

October 8-10 – The 3<sup>rd</sup> Annual Meeting of the Southeastern Partnership for Integrated Biomass Supply Systems (IBSS) will take place at the University of Tennessee Institute of Agriculture (UTIA) campus in Knoxville. Virginia Dale and Esther Parish will give a presentation on “Bioenergy Sustainability: How to Define and Measure It.” Posters will be presented by Nate Pollesch, Mike Hilliard, and Esther Parish.

October 9-17 – Keith Kline will serve as invited lecturer in the “São Paulo Advanced School on the Present and Future of Bioenergy” at University of Campinas (<http://www.nipe.unicamp.br/espca/>)

October 19-23 – Kline and Davis plan to participate in the 2nd Brazilian Bioenergy Science and Technology Conference in Campos do Jordão (<http://bbest.org.br/>) making invited presentations on “Incorporating bioenergy into sustainable landscape design,” and “Brazil-U.S. Collaborations on Sustainability.” Davis will also present in the poster sessions on “Indirect effects of bioenergy” and “Soil organic carbon measurement protocols.”

October 20-24 – Virginia Dale will attend the International Energy Agency (IEA) Bioenergy workshop and Task 43 Meeting in Brussels, Belgium.

October 22 – National Bioenergy Day will be celebrated at ORNL. Events will include an information booth at the ORNL Cafeteria during lunchtime (10 a.m.-2 p.m.) with pop-up displays highlighting ongoing collaboration with the Southeastern Partnership for Integrated Biomass Supply Systems (IBSS) and the University of Tennessee’s Center for Renewable Carbon (CRC). At 3:30 p.m., Esther Parish will present a CBES seminar entitled, “Assessing Bioenergy Sustainability: Application of a Suite of Environmental and Socioeconomic Indicators to a Cellulosic Biofuel Production System in East Tennessee.”

November 2-5 – Esther Parish will speak on “Designing Bioenergy Systems for Multiple Environmental Services and Socioeconomic Benefits” at the symposium on “Plants Helping Plants: Bioenergy Feedstock Based Systems for Sustainable Production Environments” at the American Society of Agronomy International Annual Meeting held in Long Beach, California.

November 19-20 – Workshop on Biofuels and Food Security Interactions, at the International Food Policy Research Institute (IFPRI), Washington DC. Keith Kline is serving on the workshop Science Committee. The workshop aims to examine current and future interactions between biofuels and food security and elaborate learnings from analysis and field experience relevant for project developers, researchers, and policy-makers.

December 2-5 – Virginia Dale will participate in the Advisory Committee review of the Energy Biosciences Institute (EBI) in California.

December 15-19 – Natalie Griffiths will present a poster titled “Water quality response after two years of short-rotation pine management for bioenergy in the southeastern U.S.” with co-authors C.R. Jackson, J.J. McDonnell, M. Bitew, E. Du, and J. Klaus at the AGU fall meeting.