

**Bioenergy, Sustainability, and Land-Use Change Report
Oak Ridge National Laboratory (ORNL) January 2012**

ORNL Publications

Parish, ES, Hilliard M, LM Baskaran, VH Dale, NA Griffiths, PJ Mulholland, A Sorokine, ME Downing, R Middleton, NA Thomas. 2012. Multimetric Spatial Optimization of Switchgrass Plantings Across a Watershed. *Biofuels, Bioprod. Bioref.* 6(1):58-72.

ORNL Presentations:

January 6 – Paul Leiby gave a presentation on “Tradable Credits System Design and Cost Savings for a National Low Carbon Fuel Standard,” Jonathan Rubin and Paul N. Leiby, Association of Environmental and Resource Economists, ASSA Conference, Chicago, IL.

January 23 – Paul Leiby and Jonathan Rubin presented “Biofuel Supply & Energy Security” at the Transportation Research Board Annual Meeting, TRB Annual Meeting: Session 387.

January 24 – Paul Leiby and Rocio Uria-Martinez presented a poster “Over The Blend Wall: E85 Retailing Costs and Constraints” at the Transportation Research Board Annual Conference.

January 24 – Paul Leiby and Jonathan Rubin presented a poster on “Energy Security Implications of a National Low-Carbon Fuel Standard” at the Transportation Research Board Annual Conference.

January 27 - Paul Leiby and Jonathan Rubin presented “Renewable and Low-Carbon Fuel Standards for Motor Fuels: Regional and National Initiatives to Address Global Carbon Emissions and Energy Security” at the 2012 SAE Government/Industry Meeting, Washington, D.C.

January 30 – Virginia Dale gave a presentation on “The Potential for Sustainable Deployment of Biofuels Under EISA” at the American Chemical Society (ACS) Science and the Congress briefing on Cellulosic biofuels on Capitol Hill in Washington, DC.

ORNL CBES Forum:

January 19 – Scott Curran from NTRC presented “Performance of Advanced Combustion Modes with Alternative Fuels: Reactivity Controlled compression Ignition Case Study. This presentation can be accessed at the CBES website under forums:

<http://www.ornl.gov/sci/ees/cbes/forums.shtml>

Other ORNL Activities:

January 10, 17, 24 and 31 –Keith Kline and Maggie Davis contributed to the planning and implementation of four webinars for ISO PC 248 (Bioenergy Sustainability) Working Group (WG) 4 – Indirect Effects. Efforts focused on completing a final section of the draft report on the state of science of indirect effects related to food security, land-use change, and other sectors. The WG4 report will be shared for review and comment by the broader PC next month.

Jan 11 – Matt Langholtz and Virginia Dale joined a conference call organized by Ken Skog on a potential workshop regarding fire/ecosystem/carbon biomass. This conference call grew out of

discussions at the September 2011 workshop on Sustainability Implications of the Billion Ton Update.

Jan 19 – Rebecca Efroymsen, Debo Oladosu and Virginia Dale joined a conference call with Ranyee Chiang, Kristen Johnson and Alicia Lindauer-Thompson to discuss the planned workshop on Socioeconomic Indicators planned for April 24 in Washington, DC.

Jan 20 - Virginia Dale provided comments to the National Research Council on their report *Advancing Strategic Science: A Spatial Data Infrastructure Roadmap for the U.S. Geological Survey* from National Research Council's Board on Earth Sciences and Resources.

Jan 25 – ORNL staff including Budhu Bahaduri and Keith Kline discussed ORNL capabilities and opportunities to collaborate on sustainability with Molly Jahn, Special Advisor to the Chancellor & Provost for Sustainability Sciences Laboratory of Genetics at University of Wisconsin's Center for Sustainability and the Global Environment.

Jan 30 – Debo Oladosu collaborated with energy analyst Martin Bo Hansen of Copenhagen-Economics (Denmark), to help with the evaluation of potential availability of biofuel feedstock for meeting EU biofuel directives. ORNL provided the data used to generate supply curves and links to the final report, "Biofuel Feedstock Assessment for Selected Countries" (Kline KL, Oladosu GA, et al. 2008. ORNL/TM-2007/224; http://apps.ornl.gov/~pts/prod/pubs/ldoc10201_ornl_feedstock_potential_final_feb18.pdf

Upcoming ORNL Visits/Events:

February 5-8 – Virginia Dale and Keith Kline will give presentations at the 2012 National Biodiesel Conference & Expo in Orlando, FL.

<http://www.biodieselconference.com/2012/sustainability.aspx?AspxAutoDetectCookieSupport=1>

February 22-24, 2012 – Virginia Dale and Matt Langholtz are preparing a paper on "Environmental and socioeconomic indicators for bioenergy sustainability as applied to Eucalyptus" at symposium on "Assessment and Management of Environmental Issues Related to Eucalyptus Culture in the Southern United States". The symposium is being organized by the USDA Forest Service and the National Council for Air and Stream Improvement, Inc. (NCASI) in Charleston, SC. Matt Langholtz is assisting in the preparation of this paper.

March 28—Esther Parish will present her research on "Estimating future global per capita water availability based on changes in climate and population" at the American Water Resources Association (AWRA) 2012 Spring Specialty Conference on GIS and Water Resources VII, "Managing Climate Change Impacts on Water Resources: Adaptation Issues, Options and Strategies" in New Orleans, LA.

April 8-12, 2012 – Peter Schweizer will present "Monetizing fish richness at spatial scales relevant to ecology and resource management" at the 2012 US-IALE Annual meeting to be held in Newport, RI. Co-authors are Laurence Eaton, Yetta Jager and Rebecca Efroymsen.

April 10 – Matt Langholtz has been invited to speak at the 2012 Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR) Annual State Conference on Bioenergy

in Stillwater, Oklahoma. <http://www.okepscor.org/public-outreach/news/save-date-2012-oklahoma-epscor-annual-state-conference>

August 5-10, 2012 - A Special Session proposal, "A Debate on the Sustainability of Biomass Production for Energy", has been selected for presentation at the 2012 Ecological Society of America's Annual Meeting in Portland, Oregon. Focused on the proposition, "Producing bioenergy can be sustainable for habitat availability and biodiversity, and can eschew the risk of new invaders", this formal debate will allow opening statements by each of six experts, followed by rebuttals, with audience questions entertained during the final 30 minutes. The audience will be polled before and after to determine the winners. H. Jager is an organizer and R. Efrogmson will represent the "for" position.

October 2012 - Virginia Dale will serve as a member of the Conference Programming Committee for the "Science for Biomass Feedstock Production and Utilization National Conference" to be held in October 2012 in New Orleans and sponsored by the Sun Grant Initiative. <http://www.sungrant.org/News+and+Events/2012+National+Conference.htm>