

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

ORNL Publications:

Kline KL, Singh N, Dale VH. In press. Cultivated hay and fallow/idle cropland confound analysis of grassland conversion in the Western Corn Belt. Proceedings of the National Academy of Sciences

ORNL Presentations:

May 7-8 - Laurence Eaton and Matt Langholtz attended the energy cane Sun Grant Initiative (SGI) meeting in Raymond, MS.

May 7 - Keith Kline and Debo Oladosu gave presentations to participants in the "Biofuels Land-Use Change Modeling Meeting" at ORNL providing an "Overview of Issues related to Bioenergy Policy and Land-Use Change."

May 13 – Virginia Dale was the keynote speaker at the University of Georgia's Bioenergy Systems Research Institute (BSRI) retreat that focused on "Sustainability and Bioenergy Systems."

May 20-24– Several ORNL scientists presented an overview of their projects at the BETO Peer Review in Alexandria, Virginia. The peer review documentation and corresponding presentations are available to the public at the DOE Biomass Technologies website:

https://www2.eere.energy.gov/biomass/peer_review2013/Portal/portal.html

ORNL Center for BioEnergy Sustainability (CBES) Forums:

May 8 – Daniel Inman from the National Bioenergy Centre at the National Renewable Energy Laboratory presented "Bio Land Use Change (Bio-LUC) Overview". This presentation can be accessed at the CBES website under forums: <http://www.ornl.gov/sci/ees/cbes/forums.shtml>

May 17 – Dev Shrestha from the University of Idaho presented "Renewable Fuel Standard and Future of biofuels" at the National Transport Research Centre (NTRC). This presentation can be accessed at the CBES website under forums: <http://www.ornl.gov/sci/ees/cbes/forums.shtml>

Other ORNL Activities:

ORNL worked with collaborators in the Global Sustainable Bioenergy Project to organize a workshop that will be held 12-13 June involving 2 representatives from UK, 4 from Penn State, 1 from University of Minnesota, 6 representatives from 4 institutions in Brazil, 1 representative from Dartmouth and others who will be connective via video conference to discuss ongoing collaborations on bioenergy sustainability, land-use, and joint proposals related to third country partnerships in Latin America, Caribbean and Africa.

May 7-8 – ORNL hosted the "Biofuels Land-Use Change (Bio-luc) Modeling Meeting" involving the National Energy Renewable Energy Laboratory (NREL), Biomass Technologies Office (BETO), and ORNL staff to review the Bio-Luc Systems Dynamics Model and consider how it relates to GTAP-DEPS, DOE goals and other bioenergy-and land-related project activities.

May 23 – Virginia Dale participated in the White House Women's Leadership Summit on Climate and Energy, Washington, D.C.

May 26-31 – Keith Kline and Maggie Davis participated in meetings in Buenos Aires on sustainable biofuels organized under two National Science Foundation (NSF) projects [the Pan American Research Coordination Network (RCN) and the Program for International Research and Education (PIRE)] hosted by Argentina and implemented through Michigan Technology University.

May 29-30 - Matt Langholtz and Laurence Eaton attended the switchgrass Sun Grant Initiative (SGI) meeting in Corvallis, OR.

Upcoming ORNL Visits/Events:

June 3 – Laurence Eaton will be hosting 2 summer students. Sharon Smith from Walters State community college who will be collecting data for the sun Grant Initiative Regional Feedstock Partnerships field. Justin Judy from Bluegrass Community & Technical College who will analyze ORNL's Biomass library of field trial and agricultural statistics to access the challenges facing growers and biomass facility challenges from extreme weather events.

June 3 – Latha Baskaran will host Josh Monroe from UT who will help study the response of aquatic species to land-use change in the Tennessee River Basin (TRB).

June 3 - Jamie Smedsmo is PhD student at the University of North Carolina. As a DOE Krell Computational Sciences fellow, Jamie is conducting a summer internship with Yetta Jager as a mentor. Jamie will use the SWAT model to quantify the sustainability benefits (including production and water quality) of replacing winter wheat with a perennial grass harvested for bioenergy under future, more extreme climate conditions.

June 4-6 - Mark Downing will be attending the Renewable Low cost Carbon Fiber for Lightweight Vehicles workshop in Romulus, MI.

June 21 – Virginia Dale will present “Environmental and Socioeconomic Indicators for Sustainability of Energy Innovation” at the Association for Environmental Studies and Sciences (AESS) conference in the session on "Energy Poverty, Disruption and Scarcity" in Pittsburg, PA.

June 25-28 - Virginia Dale and Richard Mills will attend a workshop at The Socio-Ecological SYNthesis Center) in Annapolis, Maryland (<http://www.sesync.org>), on “Using Human Interactions with Games to Value Ecosystem Services.”

June 27-28 – Laurence Eaton will be hosting a group of agronomists from the Sun Grant Regional Feedstock Partnership Sorghum team.

July 31-Aug 1 – Mark Downing will be attending the U.S. Department of Energy Biomass 2013 Conference in Washington, D.C.

July 22 – Shahab Sokhansanj will be awarded the 2013 Standards Developer Award of the American Society of Agricultural and Biological Engineers (ASABE). This award is given specifically in recognition of his exemplary leadership and work in revision of ASAE S269.5, Densified Products for Bulk Handling – Definitions and Methods.

August 13-15 – Martin Schweitzer will be attending the International Energy Program Evaluation Conference in Chicago, IL.

Aug 21 - Matt Langholtz and Laurence Eaton will lead a webinar with North Carolina State University Forestry Extension on the topic of Projections of Agricultural Land Use for Bioenergy Production. The webinar will be hosted at <http://www.forestrywebinars.net/>. The audience will be natural resource professionals, private landowners, and the general public.

Sept 17-18 – Virginia Dale has been invited to attend a sustainable biofuels forum at the University of Minnesota.

Sept 25-27 – Virginia Dale has been invited to the China-US Joint Workshop on “Land Use Change: Turning challenges into Opportunities for Agricultural Sustainability” hosted by the Shenyang Agricultural University, Shenyang, China.

Sept 30-Oct 4 – Keith Kline and Maggie Davis will attend the International Organization for Standardization (ISO) PC 248 Plenary to review second committee draft of ISO 13065, Sustainability Criteria for Bioenergy.

November 18, 2013 - 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."