

Bioenergy and Sustainable Agriculture: Perennial Biomass Crops for Multiple Benefits

Pre-conference field tours – Tuesday, November 18

A menu of pre-conference tours has been arranged to showcase a variety of Continuous Living Cover (CLC) types. There is no additional fee for conference registrants to attend these field tours. Participants will drive themselves or carpool from Decatur to the tour sites. AWI will help arrange carpools for participants traveling by air. Tour times shown are for the tours themselves and do not include driving time to the tour location. Maps and directions will be provided.

- **Decatur area tour – Demonstration plots and on-farm warm season grasses**

Hosts: AWI staff and cooperating producers CLC types: Biomass & Forage

The AWI—Caterpillar Prairie for Bioenergy site includes farm scale (5 to 30 acre) plots of native warm season grasses and forbs grown for forage and bioenergy and single species demo plots (1/4 to 1 acre). AWI and the University of Illinois have small plots of bioenergy grasses on the grounds of Progress City, Illinois site of the Farm Progress Show (alternating with a site in Boone, Iowa). Also visit on-farm plots with prairie grasses grown as organic field borders and small-scale densification and heating equipment.

This tour starts and ends at the conference site Tour: 10:00 to 11:30 am

Participants on this tour will have time to drive to one of the afternoon tours: Goldmine Farm, U of I, or EIU.

- **Rund Farm – near Pesotum**

Host: Eric Rund CLC types: Biomass (Miscanthus)

Learn how Miscanthus fits in to his operation, including the economics. A prairie grass buffer between a stream and the miscanthus provides wildlife habitat. Observe the results of inter-planting corn into a new or weak miscanthus stand.

Driving time from Decatur: 1 hour Tour: 11:00 to 12:30

Participants on this tour will have a box lunch at the Rund Farm and will have time to drive to either the U of I or EIU tour.

- **Goldmine Farm – near Pana**

Host: Jack Erisman CLC types: Forage/Grazing, Cover Crops, Perennial Grain

Jack Erisman's Goldmine Farm is over 2,000 acres and 100% certified organic. He has developed a long rotation that features high value specialty food grade corn, pastures for his cow/calf herd, and cover crops. He also has the first on-farm planting of Kernza intermediate wheatgrass in Illinois. Agronomist Lee DeHaan of The Land Institute, the developer of Kernza, will be on hand.

Driving time from Decatur to farm: 40 minutes Goldmine Farm tour: Between 1:00 and 4:00 PM

- **University of Illinois – Energy Biosciences Institute Energy Farm & Woody Perennial Polyculture Site – Urbana**

Hosts: Tim Mies, Energy Farm; Kevin Wolz, WPP Research Site
CLC types: Biomass and Agroforestry

The 320-acre EBI Energy Farm features bioenergy-crop research and production plantings, including sustainable perennial grasses and broadleaved plants, woody feedstocks, and state-of-the-art environmental monitoring equipment. The structure of the Woody Perennial Polyculture system put in place at the research site is the Midwestern Oak Savanna. This structure entails an herbaceous understory, scattered canopy trees, and a variety of shrub layers scattered throughout.

Driving time from Decatur to U of I: 50 minutes Tours: Energy farm, 1:00 to 3:00 – WPP Research Site, 3:00 to 4:00

- **Eastern Illinois University – Renewable Energy Center, Bioenergy Plots, and Lumpkin Farm – Charleston**

Host: Tom Canam, Eastern Illinois University CLC types: Biomass, including a biomass-fueled steam plant

EIU replaced its old coal-fired steam plant with a Renewable Energy Center (REC) that houses four boilers. Two boilers burn biomass, initially wood chips but they may burn grass in the future; the others burn natural gas with a fuel oil backup. EIU professors have established grass and tree bioenergy plots on campus plus a 100-acre research / production plot on the Lumpkin Family Farm located a few miles from campus. EIU conducts wildlife studies on its plots and the Lumpkin and Rund farms. **NOTE: The REC tour will be capped at 10 participants.**

Driving time from Decatur to EIU: 1 hour, 15 minutes Tour: REC, 1:00 to 2:30 – Plots, 2:30 to 4:00

Conference Agenda (May be subject to change)

Day 1 – Wednesday, Nov 19

Morning plenary session: Registration/continental breakfast 8-9 AM

- 9:00 – 9:20 **GLBW vision and strategies**
Richard Warner, Green Lands Blue Waters, University of Minnesota
- 9:20 – 9:40 **Kernza: Perennial grains are coming to farms and tables**
Lee DeHaan, The Land Institute
- 9:40 – 10:10 **Perennial biomass for a new agricultural paradigm**
Steve John, Agricultural Watershed Institute
- 10:10 – 10:45 **An Illinois farmer's experience promoting energy grass in the Corn Belt**
Eric Rund, Rund Farms – Green Flame Energy
- 10:45 – 11:00 **Break**
- 11:00 – 11:30 **DOE Perspective on Sustainable Bioenergy Landscapes**
Kristen Johnson, US Department of Energy, Bioenergy Technologies Office
- 11:30 – 11:45 **Introduction to the Watersheds and Landscapes session**
George Boody, Land Stewardship Project
- 11:45 – 12:00 **Introduction to the Technologies and Markets session**
Fred Iutzi, Illinois Institute for Rural Affairs, Western Illinois University
- 12:00–1:00 **Networking lunch – Exhibits open**

Afternoon Concurrent Session A: Watersheds and Landscapes – Moderator: George Boody

- 1:00 – 2:30 **GLBW watershed case studies**
- 2:30 – 3:00 **Networking break – Exhibits open**
- 3:00 – 4:30 **Multifunctional Perennial Cropping Systems Design Charette**
Charette leader: Sarah Taylor Lovell, University of Illinois at Urbana-Champaign

Afternoon Concurrent Session B: Technologies and Markets – Moderator: Fred Iutzi

- 1:00 – 1:30 **Home—farm—school heating with grass biomass**
Bob Thomas, Hudson Valley Grass Energy
- 1:30 – 2:00 **Modular Biomass Pre-processing/Densification Facility**
Paul Wever, Chip Energy LLC
- 2:00 – 2:30 **The University of Iowa Biomass Fuel Project**
Benjamin Anderson, University of Iowa
- 2:30 – 3:00 **Networking break – Exhibits open**
- 3:00 – 3:30 **Processing Methods to improve the Feed Value of Perennial Grasses**
Michael Cecava, Archer Daniels Midland Company
- 3:30 – 4:00 **Micro-refineries for Drop-in fuel and CoolTerra™ production**
Wes Bolsen, Cool Planet Energy Systems
- 4:00 – 4:30 **Anaerobic digestion of grass & manure**
Tom Elgin, Roeslein Alternative Energy

November 19 evening program – Sangamon Watershed Celebration

The Sangamon Watershed Celebration is an annual AWI event. GLBW Conference registrants will join local watershed stakeholders for an evening of great food and music and to learn about the resources entrusted to our care, close to home and far downstream.

- 5:30 pm **Reception – Exhibits open**
- 6:30 **Cajun-theme dinner**
- 7:00 **Keynote presentation: Louisiana Shrimp and Corn Soup**
Dr. Nancy Rabalais, Executive Director and Professor, Louisiana Universities Marine Consortium
- 8:00 **Concert by Tee Chaoui Social Club featuring Alan Lafleur**

Day 2 – Thursday, November 20

- 7:30 – 8:30 am **Continental breakfast**
- 8:30 – 8:45 **Recap of Watersheds and Landscapes session – George Boody**
- 8:45 – 9:00 **Recap of Technologies and Markets session – Fred Iutzi**
- 9:00 – 9:30 **Case Studies of Grass Biomass for Institutional Heating plus Wildlife**
Tom Schwartz, FDC Enterprises, and Tom Canam, Eastern Illinois University
- 9:30 – 10:15 **Native Warm Season Grasses for Forage and Bioenergy**
Laura Paine, Southwest Badger RC&D, and Roger Staff, NRCS
- 10:15 – 10:30 **Break**
- 10:30 – 11:00 **Nutrient and Sediment Loss Reduction by Perennial & Cover Crops**
Greg McIsaac, AWI
- 11:00 – 11:30 **Bioenergy Landscapes for Water Quality and Greenhouse Gas Reduction**
M. Cristina Negri, Argonne National Laboratory
- 11:30 – 12:00 **Wildlife and Conservation Biomass: The MCBA Vision**
Carol Williams, University of Wisconsin, and Susan Rupp, Enviroscapes Ecological Consulting
- 12:00 – 1:00 **Lunch – Presentation: Transforming Midwestern Agriculture with Continuous Living Cover**
Richard Cruse, Professor of Agronomy and Director of the Iowa Water Center, Iowa State University
- 1:00 – 1:15 **Closing Comments – Conference Adjourns**

1:30 – 4:00 **Post-conference roundtable discussion / strategic planning session**

After the conference adjourns, the GLBW Perennial Biomass Working Group and the Midwest Conservation Biomass Alliance will host a structured discussion of challenges and opportunities for scaling up production of, and markets for, perennial biomass crops. This meeting is intended to provide input for a Perennial Biomass Initiative, including experimental watersheds in which perennial grasses are grown for co-production of harvested biomass and ecosystem services and energy conversion technologies are demonstrated. Conference attendees interested in participating in this effort are welcome to stay for this meeting. If you expect to participate, please contact AWI before the conference to ensure that seating and handouts are available.