

Workshop Series on Landscape Design for Sustainable Bioenergy

Two workshops exploring the science and practice of bioenergy landscape design.

History

- BETO portfolio includes work examining landscape design from the feedstocks and sustainability aspects: landscape design for bioenergy
- Many names for similar concepts? Same name for different concepts?
- Many approaches, how do we harmonize them?
- Multiple stakeholders, definitions and scale implications need to be examined
- Explore the methodologies, existing knowledge and examples, synergisms and potential collaborations
- The time is ripe for a collective discussion on this approach



Venue and Schedule

- Workshop #1- March 4-6, 2014
 - At New Bern, North Carolina
 - Focus on woody bioenergy systems

- Workshop #2- June 24-26, 2013
 - At Argonne National Laboratory
 - Focus on Midwest Agricultural Grains landscape



Two workshops exploring different landscapes and questions

- W#1: To identify principles for landscape design for bioenergy systems that, when implemented, will assist deployment and assessment of such systems across the supply chain. The workshop will focus on bioenergy systems that utilize forest biomass as feedstock.
- W#2: To develop an understanding of the state of the science, research needs, tools and methodologies for the implementation, demonstration and monitoring of landscape design for bioenergy systems across the supply chain as defined in Workshop 1. The workshop will focus on bioenergy systems in the US Midwestern Corn Belt region.
- Some overlap between workshops is welcome



Workshop structure

- Each workshop 2.5 Days:
 - Day 1 – field trip
 - Day 2 – plenary, panels and breakout sessions
 - Day 3 (0.5 day) – reconvene plenary for discussion and summary/conclusions
- Plenary presentations, panels and short presentations, and breakout groups to provide an in depth discussion on specific questions
- There will be note takers to facilitate the preparation of the proceedings
- Your input is requested for a robust discussion.



Workshop #1

Anticipated Outcome

- Principles of landscape design for sustainable bioenergy systems
- Lessons learned from past and current approaches
- Opportunities gained by using landscape designs
- Obstacles to developing and deploying landscape design
- What promotes landscape designs
- Recommended management practices that will lead to implementation of landscape design principles for sustainable woody-based bioenergy systems.
- Role that certification can play in deploying landscape design and vice versa (role that landscape design can play in certification)



Questions for the Breakout groups

Provide a list of potential opportunities to use landscape design that addresses the main sustainability concerns of forest systems supplying bioenergy

- What are the priority concerns of biomass and how can they be addressed with landscape design?
- What aspects of landscape design have been used to date to improve the sustainability of forest biomass, and what are pros and cons of these approaches?
- What steps need to be implemented to take these opportunities?

Provide a list of recommended goals and practices that support the integration of bioenergy into the sustainable design of forested landscapes.

- How could practices be implemented – what path and next steps?
- What science gaps and other obstacles prevent the broad application of landscape design approaches in systems that use woody biomass for bioenergy?
- Are there lessons learned from bioenergy systems that use woody biomass that could be offered to agricultural landscapes?



Workshop #2

Anticipated outcomes:

- State of the science in watershed/landscape research and demonstrations, bridging scales
- Guidance framework for small watershed demonstrations across supply chain
- Planning tools for landscape placement of bioenergy crops and sustainability analysis
- Discussion on Recommended Management Practices for sustainable bioenergy landscape designs in Midwestern agricultural land
- Socioeconomic implications for adopters, decision makers and the public
- Implementing the designs: strategies for engaging communities.



Outcome from the series

- Proceedings will be issued as a report, due September 2014.
- Summary from Workshop #1 will be used for context in Workshop # 2
- Proceedings as a synopsis report prepared jointly by ANL/ORNL/HQ.
- The proceedings will include presentations, a reasoned summary of the workshop and of the discussion, with any conclusions that will be emerging from the discussion.

