



*A workshop to create regionally specific roadmaps for feedstock supply chains.*

September 28-30, 2010

Embassy Suites, Centennial Olympic Park ♦ Atlanta, GA

9/28 - Tue.	Session Description	Writing Team & Presenter*
8:00 (10 min)	Workshop Welcome — Goals & Desired Outcomes	Doug Karlen, USDA-ARS Jeff Steiner, USDA-ARS Jim Gulliford, SWCS
8:10 (35 min)	Landscape Management and Sustainable Feedstock Production: Enhancing Net Regional Primary Productivity while Minimizing Externalities	Timothy C. Strickland, USDA-ARS* Richard Lowrance, USDA-ARS Fernando Miguez, Iowa State University Bill Anderson, USDA-ARS
8:45 (35 min)	Bioenergy Sustainability at the Regional-Scale	Richard Lowrance, USDA-ARS* Virginia Dale, Oakridge National Lab Patrick Mulholland, Oakridge National Lab Phil Robertson, Michigan State University
9:20 Table Discussion (40 min)	<p><b>Table Discussion:</b> Each Table (grouped by geographic region) will have a facilitator and recorder. The facilitator will distribute the "Roadmap Templates" and guide the discussion to answer two questions:</p> <ul style="list-style-type: none"> <li>• What points in these two presentations do you agree or disagree with?</li> <li>• Based on NPP (natural or manipulated), what are the three most promising biofuel feedstocks for your region?</li> </ul>	
10:00 (15 min)	<b>Break</b>	
10:15 (30 min)	Feedstock & Conversion Platform Interactions Identifying Industry Needs	Corey Radtke, Shell* Evan DeLucia, University of Illinois* Michael Desmond, BP Mike Ladisch, Purdue David Agneta, Verenium Robert Brown, ISU
10:45 (30 min)	Water Resource Impacts of Feedstock Production and Conversion	Jerad Bales, USGS* Carl Bernacchi, USDA-ARS Noel Gollehon, NRCS
11:15 (45 min)	<p><b>Table Discussion:</b> Facilitated "Template" discussion on these two questions:</p> <ul style="list-style-type: none"> <li>• What points in these two presentations do you agree or disagree with?</li> <li>• Based on the most probable conversion platforms and potential water resource limits, have the top three feedstocks changed within your region? If so, how?</li> </ul>	
Noon (60 min)	Lunch (Provided)	Informal discussions
<p>More information on this workshop can be found on the Soil and Water Conservation Society website at <a href="http://www.swcs.org/roadmap">www.swcs.org/roadmap</a></p>		

9/28 - Tue.	Session Description	Writing Team & Presenter*
<b>OUR FEEDSTOCK KNOWLEDGE BASE</b>		
1:00 (25 min)	Crop Residues – Balancing feedstock and soil carbon needs by enhancing productivity with conservation tillage, cover crops, and biochar.	Jane Johnson, USDA-ARS – MN* Rattan Lal, The Ohio State Univ. Gary Banowetz, USDA-ARS – OR David Laird, USDA-ARS – IA Francisco Arriaga, USDA-ARS – AL Dave Huggins, USDA-ARS – WA
1:25 (25 min)	Herbaceous Perennials – Where should they be placed, what are their benefits, and what are the challenges of incorporating them into diversified landscapes? How do these factors differ among geographic regions?	Rob Mitchell, USDA-ARS – NE* Vance Owens, SDSU Neal Gutterson, Mendle Biotech Joe DiTomaso, University of California Edward Richard, USDA-ARS
1:50 (25 min)	Woody Feedstocks – What do we know about their management and how will the different sources vary regionally?	Tim Volk, SUNY* Jim Perdue, FS Marilyn Buford, FS Brian Stanton, Greenwood Res. Ron Saranich, FS Leroy Reitsma, Pinnacle Pellet
2:15 (25 min)	Lipid-Based Oilseed and Algal Feedstocks – What do we know about their management and how will their roles vary regionally?	John Gardner, Washington State Univ.* Nigel Quinn, Berkeley National Lab Joelle Simonpietri, PACOM – Dept. Defense Pearl Harbor John Van Gerpen, Univ. Idaho
2:40 (30 min)	<b>Table Discussion:</b> Facilitators will continue “Template Discussion” focusing on: <ul style="list-style-type: none"> <li>• What points in these presentations do you agree or disagree with?</li> <li>• For your geographic region, how does our existing knowledge base affect your selection of the three most promising biofuel feedstocks?</li> </ul>	
3:00 (20 min)	<b>Break</b>	
3:20 (25 min)	Where will N, P, and K come from to support a 32 billion gal biofuel industry?	Scott Murrell, IPNI* Paul Fixen, IPNI John Kovar, USDA-ARS Paul White, USDA-ARS
3:45 (25 min)	Economics of Feedstock Production, Harvest, Storage, and Transport	John Miranowski, ISU* Madahu Khanna, EBI – UIUC Mike Ladisch, Purdue Richard Hess, INL
4:10 (25 min)	Balancing Feedstock Economics & Ecosystem Services	Dave Archer, USDA-ARS* Mike Boland, KSU
4:35 (25 min)	<b>Table Discussion:</b> Facilitators will continue “Template Discussion” focusing on: <ul style="list-style-type: none"> <li>• What points in these three presentations do you agree or disagree with?</li> <li>• How will fertilizer nutrient, harvest, storage, transport and other economic or environmental factors affect your three most promising biofuel feedstocks?</li> </ul>	
5:00 – 7:30	<b>Cash Bar &amp; Review of Poster Presentations</b>	

9/29 – Wed.	Session Description	Writing Team & Presenter*
8:00 (10 min)	Review of Workshop Goals & Desired Outcomes	Doug Karlen & Jeff Steiner
8:10 (65 min)	<b>Table Discussion REPORT:</b> Table Facilitators will report out on (1) agreements and/or disagreements with first day presentations and (2) the three primary feedstocks for their region. The entire Group will participate in a discussion of Poster presentations or other questions from Day 1. Note – writing teams will be asked to consider pertinent questions in the final draft of their chapter.	
<b>SELECTED FEEDSTOCK CASE STUDIES</b>		
9:20 (40 min)	Challenges and opportunities with implementing commercial lignocelulosic biofuel plants	Thomas Robb, Abengoa* Mike Roth, POET
10:00 (20 min)	<b>Break</b>	
10:20 (25 min)	Experiences with co-Mingling Municipal Solid Waste and Herbaceous Feedstock	Donna Perla, EPA* Bill Orts, USDA-ARS
10:45 (25 min)	The DAM Stover Removal Project	Mike Edgerton, Monsanto* Pradip Das, Monsanto John Hickman, John Deere
11:10 (25 min)	Pyrolysis and biochar – opportunities for distributed production and enhanced soil quality	David Laird, USDA-ARS* Hal Collins, USDA-ARS – WA Ian Purtle, Cargill Danny Day, Eprida Johannes Lehmann, Cornell
11:35 (25 min)	Practical experiences with Woody Feedstock Production	Bill Berguson, University of Minnesota* Jake Eaton, GWR Brian Stanton, Greenwood Resources Tim Eggeman, ZeaChem Carrie Atiyeh, ZeaChem
Noon (60 min) Working lunch	Biomass Sustainability Standards: Can Existing Agricultural Conservation Programs Provide a Foundation for Planning, Measurement, and Verification of Renewability?	Jody Endres, Energy Biosciences Institute
1:00 (30 min)	<b>Table Discussion:</b> Table Facilitators will continue “Roadmap Discussions” focusing on how the Case Studies or Policy Considerations may have affected feedstock priorities or raised important research questions.	
<b>TOOLS FOR ENSURING SUSTAINABLE FEEDSTOCK SUPPLIES</b>		
1:30 (45 min)	Sustainable solutions from field to fuel for advanced biofuel production	Kyle Althoff, DuPont Danisco Cellulosic Ethanol, LLC (DDCE)* Robin Jenkins, DuPont* Jennifer Hutchins, DDCE Christopher Johnas, DuPont Carina Alles, DuPont Doug Haefele, Pioneer

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2:15 (45 min)	Modeling tools and strategies for developing sustainable feedstock supplies.	Fernando Miguez, Iowa State University* Mike Dietze, University of Illinois, Urbana-Champaign Armen Kemanian, Penn State University
3:00 (20 min)	<b>Break</b>	
3:20 (30 min)	Are Local, State, and Federal Biofuel Efforts Synchronized?	Steve Kaffka, UC Davis* Ward Lenz, NC State Energy Office Kelly Tiller, Genera Energy, LLC Lloyd Ritter, Green Capitol Michael McAdams, Brownstein Hyatt Farber Schreck
3:50 (40 min)	<b>Table Discussion:</b> Facilitators will continue “Template Discussion” focusing on: <ul style="list-style-type: none"> <li>How might the spatial or modeling tools be used to improve or guide development of feedstock materials in your region?</li> <li>Do you agree or disagree with concerns regarding coordination of local, state, and federal bioenergy policies?</li> </ul>	
4:30	<b>Adjourn for day.</b> <b>Evening on your own – identify gaps in your regional roadmap</b>	

9/30 - Thu.	Session Description	Writing Team & Presenter*
8:00 (10 min)	Review of Workshop Goals & Desired Outcomes	Doug Karlen & Jeff Steiner
8:10 (30 min)	<b>Group Discussion</b> – Table Facilitators will lead discussion identifying unanswered feedstock questions for each of the regions	
8:40 (30 min)	Climate Change – What to Expect and How Will it Affect Feedstock Production Options?	Jerry Hatfield, USDA-ARS*
9:10 (30 min)	Can the U.S. really meet emerging food, feed, fiber, fuel, and export demands – all at the same time?	Harry Baumes, OCE – Office of Energy Policy & New Uses* Chris Field, Stanford
9:40 (20 min)	<b>Break</b>	
10:00 (45 min)	The President’s Interagency Working Group Biofuel Strategy – The importance of sustainable feedstock production	Jeff Steiner, USDA-ARS*
10:45 (45 min)	<b>Table Discussion:</b> Group Discussion and finalization of Regional Roadmaps. Identification of research gaps for which we currently lack answers.	
11:30	Workshop Wrap-Up – Chapter & Roadmap publication timelines.	Doug Karlen & Jeff Steiner

**Poster Presentations & Technology Demonstrations**

<b>Economic and Social Impact</b>	
1. Comparison of Ownership Cost for Round vs. Square Baler for Harvesting Perennial Grasses in the Upper Southeast	J. Fike, Virginia Tech
2. Valuing Environmental Assets Derived from Sustainable Biofuel Lifecycles	Rory Gopaul, Carbon Solutions Group
3. Producer Perspectives and Needs in Bioenergy Crop Production: Attracting and Sustaining Commitment to Biomass Supply Chains	Joseph J. Molnar, Auburn University
4. Biofuel Feedstock from Claypan Soils for Annual Grain and Perennial Switchgrass	Gregory W. Landers, Univ. of Missouri
5. A WEB-BASED BIOMASS SITE ASSESSMENT TOOL (BIOSAT)	Timothy M. Young, University of Tennessee
<b>Ecosystem Service Impact</b>	
6. Cover Crop Biomass Harvest for Bioenergy: Implications for Crop Productivity	Francisco J. Arriaga, USDA-ARS
7. Will the Non-native Biofuel Switchgrass Be Invasive In California? A Case Study	Jacob Barney, Virginia Tech
8. Impact of second-generation biofuel agriculture on greenhouse gas emissions in the corn-growing regions of the US	Evan H. DeLucia, University of Illinois
9. Development and optimization of an Agro-BGC ecosystem model for C4 perennial grasses	Alan Di Vittorio, Energy Biosciences Institute, University of California at Berkeley
10. Sustainable Bioenergy Feedstock Production in the Southeastern Coastal Plain	George Vellidis, University of Georgia
11. Role of corn cob residue fraction in carbon and nutrient dynamics	Brian J. Wienhold, USDA-ARS
12. USDA/ARS REAP Data to Support National Impact on Soil	Greg Wilson, USDA-ARS
<b>Harvest-Storage-Transport (HST)</b>	
13. In Search of an Advanced Biofuel Technology that is Profitable at a Small Scale	David Bransby, Auburn University
14. Drying Sorghum Biomass for Advanced Biofuels Production in Southeastern U.S.	Alexandre Caldeira Rocateli, Department of Agronomy and Soils, Auburn University
<b>Production</b>	
15. Biomass Production of Perennial Grasses Under No Inputs in South Georgia	William F. Anderson, USDA-ARS, Tifton, GA
16. Inorganic and Organic Nitrogen Sources for Optimal Rye Cover Crop Biomass Production	Kip Balkcom, USDA-ARS
17. Bio-fiber Feedstock Production Model	Donald L. Cordes, Ph.D., CEO IABF
18. Biofuels Research Program at Tennessee State University	Jason P. de Koff, Tennessee State University
19. Biofuel Potential of Cellulosic Double Crops across the U.S. Corn-Soybean Belt	Gary W. Feyereisen, USDA-ARS

20. Penn Center Germplasm Switchgrass for Coastal Carolina	David N. Findley USDA-NRCS
21. Twenty-year Biomass Yields for Eight Switchgrass Cultivars in Alabama	Ping Huang, Auburn University
22. Assessing Production and Ecosystem Function for Grain and Bioenergy Feedstock Crops Across Variable Soil Landscapes	Newell Kitchen, USDA ARS Cropping Systems and Water Quality
23. Managing Nutrients for Sustainable Bio-energy Feedstock Production	J.L. Kovar, USDA-ARS-NLAE
24. Site-specific assessments of corn stover removal thresholds and environmental impacts in the Upper Mississippi River Basin	Manyowa Norman Meki, Texas AgriLife Research, Blackland Research and Extension Center
25. Fall Armyworm Resistance in Sweet Sorghum	Xinzhi Ni and Bill Anderson, USDA-ARS Crop Genetics and Breeding Research Unit, Tifton, GA
26. Determining Climate, Weather, and Soil Impact on Bioenergy Production Sustainability, An Example from the Southeastern USA	Tomas Persson, Dept Biol and Agric Engineering, The University of Georgia
27. Ethanol Production Yield of Five Warm-Season Perennial Forage Grasses	John J. Read, USDA ARS
28. Native Legumes for Advanced Biofuel Production	John Lloyd-Reilley, USDA-NRCS
29. Producing Sorghum Cellulosic Feedstock for Advanced Biofuels Production and its Impact on Soil Physical Properties	Alexandre Caldeira Rocateli, Department of Agronomy and Soils, Auburn University
30. Comparison of five sorghum cultivars for biomass and alcohol production	Carla E. Shoemaker, Auburn University
31. Biofuels Production Options and Potentials in the Southeast	Timothy C. Strickland, USDA-ARS Tifton, GA
32. What Would It Take for the US South Simultaneously to Meet Renewable Electricity and Greenhouse Gas Mandates and be a Major Producer of Biofuel?	Adaora Okwo and Seth Borin, Georgia Tech
33. Lifecycle Energy and Greenhouse Gas Emissions from an Ethanol Production Process Based on Blue-Green Algae	Dong Gu Choi, Georgia Institute of Technology
34. A Spatial Decision Support Tool to Evaluate the Environmental Impacts of Biofeedstocks	Mark A. Thomas, Purdue University
<b>Technology Demonstration</b>	
35. Development of a Generalized Sustainable Agricultural Residue Assessment Tool	David Muth, Idaho National Laboratory
36. Interactive Decision Support Tools for	Alan G. Chute, Ph.D. IABF Vice President
37. Evaluating the Location and Accessibility of Potential Biomass/Feedstock Inputs in Georgia using GIS	Tony Giarrusso, Research Scientist, Center for GIS, Georgia Institute of Technology
38. Getting it Right The First Time - Simple Approaches to Planting Native Warm Season Species in South Carolina.	David N. Findley
39. Herbaceous perennials: placement, benefits and incorporation challenges in diversified landscapes	Rob Mitchell, USDA-ARS