



## ***Denman Forestry Issues Series presents:***

Fall 2007

### **Bioenergy and Biofuels in Washington**

November 13, 2007, 1-5 p.m.  
NHS Hall, Center for Urban Horticulture  
College of Forest Resources  
University of Washington

*Attendance at the recording session is free and open to the public, but seating is limited and reservations are required. Contact [Ellen Matheny](#) for information.*

### **Program Agenda**

*Introduction – **Bruce Bare, Dean, UW College of Forest Resources***

*Moderator – **Kevin Hodgson, Professor, UW College of Forest Resources***

#### **Session 1: An Overview of Bioenergy and Biofuels Production**

*"Biofuels Basics " **Rick Gustafson***

*"The Washington State Perspective on Bioenergy and Biofuels " **Tim Stearns***

*"Life-cycle Assessment and Bioenergy" **Joyce Cooper***

#### **Session 2: The Biomass Resource in Washington**

*"An Overview of Agricultural Biomass Resources for Biofuel Production in Washington State" **Craig Frear***

*"Forests as a Source of Raw Material for Biofuels Production " **Larry Mason***

*"A Logical Energy Solution: Linking biomass to biofuels" **Kristiina Vogt***

*"Assessing the Future Potential of Producing Bio-fuels from Sustainable Tree Farms" **Jake Eaton***

## Session 3: Biomass Processing for Bioenergy and Biofuels

*"Technologies and Processes for Cost-effective Utilization of Crops and Agricultural Residues for Chemicals, Fuels, Biogas, and Other Value-added Products"* **Shulin Chen**

*"Bioconversion of Lignocellulosic Biomass to Ethanol"* **Renata Bura**

*"Enhancing the Efficiency of Biofuel Production Using Endophytic Microorganisms"* **Sharon Doty**

*"Biofuels Combustion"* **Phil Malte**

## Panel Discussion

## Speakers

**Renata Bura**, Assistant Professor, UW College of Forest Resources. She has a MASc in chemical engineering and applied chemistry, from the University of Toronto and a PhD in forest products biotechnology from the University of British Columbia. Her research interests are bioconversion of lignocellulosic biomass, and production of biomaterials from lignin and plant components.

**Shulin Chen**, Professor, WSU Department of Biological Systems Engineering. He is the Interim Director of the WSU Center for Bioproducts and Bioenergy. He received his BS and MS degrees in agricultural engineering in China and his PhD in biological and environmental engineering from Cornell University. His research interests are industrial biosystems engineering with applications in biofuel, biochemicals, and biogas production, with specific research involving microbial processes, process modeling, and system integration.

**Joyce Cooper**, Associate Professor, UW College of Engineering, Department of Mechanical Engineering. She is also Director of the Design for the Environment Laboratory. She has a PhD from Duke University and her research interests include life-cycle assessment and environmental performance measurement, industrial ecology and design enhancement for environment methodologies, and models for sustainable technology development.

**Sharon Doty**, Assistant Professor, UW College of Forest Resources. She has a BS in genetics from the University of California Davis and a PhD in microbiology from the UW. Her research interests are in plant-microbe interactions, bioenergy, and phytoremediation.

**Jake Eaton**, Director of Research and Resource Planning, Greenwood Resources, Portland, OR. He has a BS in forest management and forest harvesting from Oregon State University and an MS in silviculture and genetics from the University of Montana and has more than 25 years of experience in traditional forestry and short-rotation, high-yield tree farming. He came to Greenwood Resources from Potlatch Corporation where he initiated field research on short-rotation poplar tree farming on traditional agricultural sites. At Greenwood his responsibilities include applying intensive silvicultural concepts to the global tree farm assets and tree farm acquisition and development.

**Craig Frear**, Research Associate and PhD student, WSU Department of Biological Systems Engineering. His PhD studies and research interests are the application of biochemistry to biological systems such as algal fermentation and anaerobic digestion. He has a BS in chemistry, an MA in science education administration, and experience as a science teacher.

**Rick Gustafson**, Professor, UW College of Forest Resources. He has a PhD in chemical engineering

from the UW. His research interests are in process simulation, process control, and instrument development.

**Philip Malte**, Professor, UW College of Engineering, Department of Mechanical Engineering. He has a PhD from the University of Michigan. He conducts research on energy and environmental combustion and his studies on renewable energy and energy sustainability include design and application of renewable energy systems for the National Parks and the Puget Sound region and laboratory, modeling, and systems studies on wood combustion and thermo-chemical conversion.

**Larry Mason**, Research Scientist, UW College of Forest Resources. He is a project coordinator for the Rural Technology Initiative. He has an MS in forest resources in silviculture and forest protection from the UW and has worked for more than 30 years in the Washington forest industry.

**Tim Stearns**, Senior Energy Policy Specialist, WA Department of Trade, Community, and Economic Development. His primary focus is working with emerging energy technologies, market expansion for energy companies, and modernization of the Northwest power system; he has worked on Northwest regional energy policy and other natural resource issues since 1980. He studied finance, marketing, history, and international business at the Universities of Montana, Oregon, and Washington.

**Kristiina Vogt**, Professor, UW College of Forest Resources. She has a PhD in ecosystem sciences from New Mexico State University . Her research interests include bionergy, ecosystem management, and conservation, and linking the social and natural sciences. She has conducted research in many ecosystems throughout the world.

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Olympic Natural Resources Center  
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