



Ethanol Production from Softwood Increased

A joint research effort among USDA Forest Service, Forest Products Laboratory (FPL), the University of Wisconsin-Madison, and USDA Agricultural Research Service has produced an ethanol yield of 276 liters/metric ton of wood from lodgepole pine thinnings. Moreover, net ethanol energy (lignin energy not included) output before distillation was 4.55 GJ/ton wood based on preliminary energy balance analysis. This research, published online by *Applied Microbiology and Biotechnology*, employed a novel pretreatment process called SPORL, or Sulfite Pretreatment to Overcome Recalcitrance of Lignocellulose, which was developed by FPL and the University of Wisconsin-Madison to address several key process barriers for commercialization of generating cellulosic ethanol from wood. The online journal article is available at <http://springerlink.com/content/c31106217872vv57/>.

FPL and Haywood Community College Break Ground on Demo House

In cooperation with the Forest Products Laboratory, Haywood Community College students in Clyde, North Carolina, are constructing a Research Demonstration House to be a model of sustainable building practices and low-impact site development. The house will be constructed by Haywood students training in the building, construction, electrical, and plumbing practices, and will feature energy-efficient technologies and underutilized eastern forest products. Upon completion, this Research Demonstration house will continue to serve as an educational tool for students, local builders, and the surrounding community, as well as a test facility for FPL researchers to study moisture management in a warm, humid climate as it relates to window installation methods.

FPL Partner Awarded \$20.4 Million Department Of Energy Grant

The U.S. Department of Energy awarded EdeniQ a \$20.4 million commercialization grant to pursue biomass pilot work and process development. The grant will be used to modify and operate a pilot-scale bio-refinery plant to produce low-cost ethanol biofuel from cellulosic feedstock, such as corn stover and switch grass. The Forest Products Laboratory has a Cooperative Research and Development Agreement with EdeniQ to develop yeast strains for pentose fermentation, and FPL's research into improved pentose and cellbiose fermenting yeasts was a major part of EdeniQ's application.

USDA Forest Service and College of Menominee Nation Sign Partnership Agreement

Four units of the USDA Forest Service signed a second five-year Memorandum of Understanding (MOU) with the College of Menominee Nation (CMN) in Keshena, Wisconsin, on November 13, 2009. The agreement pledges the Forest Service and the CMN "to cooperate in synthesizing best practices of forest management, ecology, utilization and Native American expertise and applying this knowledge to sustainable forestry practices and sustainable development."

The formal partnership between the Forest Service and the CMN dates back to 2003 when the first MOU was signed to facilitate the development of the Center for First Americans Forestlands, an educational research center focused on sustainable forestry practices and sustainable forest products utilization on American Indian forestlands.

The 2009 MOU continues to focus partnership projects on education, research, technical assistance, and Indigenous wisdom for sustainable forestry and sustainable forest products. It also expands the partnership to focus on cross-boundary natural and cultural resource management, to expand the

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engagement of tribal communities in forest management, and to recruit a diverse and skilled workforce for the tribes and the Forest Service.

The four Forest Service units represented in the MOU include the Forest Products Laboratory, Northern Research Station, Eastern Region of the National Forest System, and Northeast Area State and Private Forestry. The CMN serves more than 600 undergraduate and technical/trade students on campuses in Keshena and Green Bay, Wisconsin.

Patent Awarded to FPL Team

JunYong Zhu, Freya Tan, and Roland Gleisner were awarded U.S. Patent No. 7,618,517. Titled "Method and Apparatus for Monitoring Liquid and Solid Contents in a Froth", this invention describes a technique for measuring fiber loss during froth flotation, a process used to remove contaminants from recovered paper during recycling. Minimizing fiber loss during this process may increase paper recycling productivity while decreasing the costs of recycling.

Forest Products Society's 64th International Convention

The Forest Products Society's 64th International Convention will be held June 20-22, 2010, at the Monona Terrace Community and Convention Center in Madison, Wisconsin. The conference will feature industry, university, trade association, and government leaders speaking on the future direction of forest products research and development. This stimulating forum will highlight creative contributions by the research and development community and lay out plans for new and emerging technological advances. The concurrent technical sessions offer great opportunities for industry, academic, and government professionals to network and learn about the latest research results. For more information visit www.forestprod.org/.

And finally...

Forest Products Laboratory Celebrates 100 Years of Research

FPL will officially celebrate its centennial on June 4, 2010. Notices about special events and products will be distributed throughout this year to commemorate our many scientific achievements. We will also be sharing noteworthy historical accomplishments and items of interest in both FPL News and NewsLine, our lengthier quarterly newsletter.

Did you know the first all-wood prefabricated house was built at the Forest Products Laboratory in 1937? Eleanor Roosevelt attended the dedication and was excited by the possibilities the FPL-designed housing system presented. Shortly thereafter, more than 300,000 prefabricated homes were needed to house war workers at production centers.



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