Oregon Wood Innovation Center

Connecting people, ideas, resources

VOLUME 1, ISSUE 3 2006

COMING OWIC EVENTS:

- **December 4-7:** How to Dry Lumber for Quality and Profit, **Corvallis, OR**
- **February 25-28, 2007:** Forest Products Management Development
- **April 26-27, 2007:** Selling Forest Products

INSIDE THIS ISSUE:

CORRIM is Seeing Green

Research overview

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Many consumers perceive wood building materials as not being environmentally friendly; this perception has permeated into new green building standards, purchasing practices, and policy making. A group of university researchers is committed to changin this perception by developing science-based data and analyses to prove wood is, in fact, one of the greenest materials available to consumers.

All materials leave an environmental footprint from their beginning with raw material extraction, product manufacture and use, to their eventual recycle or disposal at the end of their service life. A consortium of universities, CORRIM (Consortium for Research of Renewable Industrial Materials), is conducting a multi-year study to document the life-cycle performance of all wood products. Wood Science and Engineering faculty, among others, are playing an active role in this effort. CORRIM is using environmental data, recently collected, to develop life-cycle assessment studies and provide a "green" comparison of wood and other competitive materials such as steel and concrete.

OSU student dorm built in 2002—a 77,000 ft.^{2}, four-story, wood-framed and -sheathed building; built faster and at less cost than a concrete-constructed dorm. Selecting wood reduced the use of fossil fuels, used a renewable-sustainable resource, and lessened impact on global warming.

CORRIM's research shows the following environmental benefits of using wood:

- helps reduce global warming
- reduces fossil fuel use by using wood as biofuel
- uses less energy to produce a product
- reduces harmful emissions to the atmosphere, rivers, and land
- provides greater resource use efficiency
- offers a renewable, sustainable material

CORRIM is continuing its effort to document wood's environmental performance, to identify means of further enhancing its performance, to provide education on wood use, and to disseminate the findings to consumers, manufacturers, standards and guideline setting groups, and government agencies. For more information on CORRIM and its studies, go to www.corrim.org.

Oregon State University OSU College of Forestry

What's Happening at OWIC?

Scott Leavengood
OWIC Director

The OWIC monthly newsletter provides an opportunity to communicate topics of interest to a broad wood products industry audience. For example, the column highlighting specific researchers at OSU is intended to give readers an idea of what is happening in the OSU College of Forestry and elsewhere that might impact your business; the Ask the Expert column is intended to share answers to common questions we receive.

However, periodically we will also share with readers some of the specific projects we have in-progress with companies. A key issue with such projects are that the details are often confidential, particularly with companies developing innovative new products or processes. When that's the case, we will present the information in very general terms to give you an idea of 'what's happening at OWIC.'

New product development: We are currently working with 2 companies that are developing new wood composite products. We're discussing product testing for mechanical properties and durability to then refine product design and target markets.

New process development: Discussions are in the early stages to link a firm with a new system for processing woody biomass with entrepreneurs wishing to utilize such biomass for wood energy. Also, we are working with a firm to develop a novel process to reduce emissions of volatile organic compounds (VOCs) from wood products manufacturing facilities.

Problem solving: We are following-up on recent research on the problem of hardwood veneer checking in decorative panels to develop a proposal for a more in-depth research project with a group of firms.

Market assessment: We are assisting a group of landowners with a market assessment to help them identify niche market opportunities suited to the timber on their woodlots.

Industry Dinner Meeting: OWIC is in the process of planning the first in a series of industry focused dinner meetings. The first dinner meeting will provide a format for you to come meet OWIC personnel and to interact with other people in the industry. The first dinner meeting will be held in conjunction with a job fair where firms will have the opportunity to meet with and interview students for summer jobs, internships, and full-time positions. Look for more information in the December issue of the OWIC newsletter.

As these projects develop, and new ones begin, we will share results via a new column - OWIC Success Stories.

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Ask the Expert

Have questions related to wood? The faculty of the Wood Science and Engineering Department at OSU have the expertise to handle almost any question about wood. Simply submit your question using the Ask the Expert form (http://owic.oregonstate.edu/askexpert.php). Please be as specific as possible when submitting your question.

The following is an example of a recent 'Ask the Expert' question:

Q: Are there risks to using CCA-treated lumber for a raised-bed garden?

A: This concern has come about primarily because of potential leaching of the arsenic used in CCA (chromated copper arsenate) - one of the treatment formulations used. Resarchers at Texas A&M studied this and found the level of arsenic in the soil 1 inch from the timbers was within the normal range that arsenic naturally occurs in soil. Also, chemicals that leach from the wood are likely to bind to soil particles rather than be absorbed through plant roots. Thus, they concluded that CCA-treated timbers are safe for raised-bed gardens. Organic gardening 'purists' have suggested coating the timbers or using a plastic barrier for those that are still concerned.

Struggling with Succession:

New Workbook and DVD Help Families Plan across Generations

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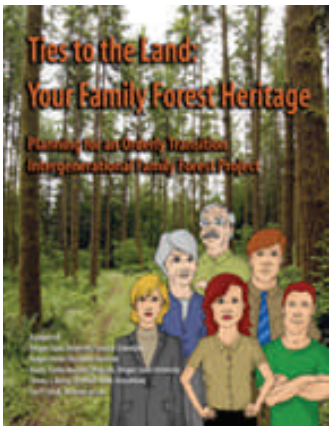
Passing property from one generation to the next can be challenging at the best of times. When the property is forest land, the process can be even more difficult, not only legally but emotionally.

Now there's help. A new workbook with DVD, titled *Ties to the Land: Your Family Forest Heritage,* aims to help families with the delicate and complicated process of intergenerational transfer of their forest lands.

The *Ties to* the *Land* workbook is part of a project by the Oregon State University Forestry Extension Program and Austin Family Business Program. The workbook is a guide to help navigate the difficult steps of succession planning. Written to accompany Extension workshops on family forest land transfer, it is also available as a stand-alone tool for families coping with the succession process. The *Ties to the Land* workbook and companion DVD and workshop information are available through links on the Intergenerational Family Forest Project resource website, http://www.familybusinessonline.org/resources/ttl.htm. Additionally, workbooks may be purchased over the phone by calling Austin Family Business Program 541-737-3326 or toll free 800-859-7609.



Featured Researcher: Kaichang Li

This month's featured researcher is Dr. Kaichang Li. Dr. Li is an Associate Professor in the Wood Science and Engineering Department with a specialization in wood chemistry and wood-based composites.

Dr. Li's primary research interests include the development of formaldehyde-free wood adhesives from renewable natural resources; development and characterization of superior wood-plastic composites; investigation of interfacial chemistry of wood-plastic composites; development of new applications for room temperature ionic liquids; novel technology for bio-energy, mechanistic studies of lignin biodegradation; development of an environmentally benign pulp bleaching technique; modification of cellulose and lignin for a high-value added product; pulping and pulp bleaching chemistry.

Dr. Li currently has three graduate students, one visiting student, two faculty research assistants and one postdoctoral research associate working with him in the areas of formaldehyde-free adhesives, wood-rubber composites, wood-plastic composites, and novel technology for production of electricity from renewable materials. More information on Dr. Li's research can be found here: http://woodscience.oregonstate.edu/faculty/li/

OWIC Forest Business Brief

Chris Knowles
OWIC Program Assistant

OWIC introduces a new series of publications—the OWIC Forest Business Briefs. These business briefs are designed to provide assistance to commonly asked questions related to starting or running a business in the forest products industry.

The first Forest business brief in this series is: Overview of Starting a New Business. In addition to providing an overview of the things that should be considered when starting a new business, this publication also provides links to organizations that provide assistance to new businesses.

If you would like to suggest a topic for future Forest Business Briefs, please submit your suggestion to chris.knowles@oregonstate.edu.

To subscribe to this newsletter send an email to Chris Knowles with "subscribe to newsletter" in the subject line.

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