Madison's Lumber Reporter

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News & Updates

Madison's Timber Preview

This week's *Madison's Timber Preview* closely examines the possibility of a labour interruption in the British Columbia Interior, and what effects a work stoppage, either in the summer or in September, would have on the lumber industry.

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Genome Research into Forestry Biofuels

A new research project largely funded by Genome Canada, Genome BC and Genome Alberta will tackle the problem of the sheer volume of biomass required to produce biofuels, and how to guarantee a steady supply.

Canada's conifer forests form the largest renewable source of "woody plant" feedstock for the national bioenergy sector, for which BC and Alberta forests constitute a large percentage. Their sustainable use for biofuel production would help economically diversify the forestry sector and reduce dependence on fossil fuels.

But predicting and guaranteeing sources of feedstock is complicated by natural and environmental factors, such as the current mountain pine beetle epidemic. Dr. Joerg Bohlmann (UBC) is co-leading this project along with Dr. Janice Cooke (U of Alberta). "We are currently faced with millions of hectares of dead trees, and have a surplus of potential bioenergy feedstock, but this does not guarantee a supply for the future. The question is: what are we going replant with?" says Bohlmann. READ MORE

BC Wood Exports to China Continue Growing

While the 714 million board feet of lumber shipped from BC to China in 2008 didn't meet BC Forests Minister Pat Bell's forecast last year of one billion board feet, it continued a trend of several consecutive yearly increases. With another 413 million board feet already shipped to China this year, Bell believes his ambitious target for China up to 2011 isn't out of reach.

The minister said shipments of 2.5 billion board feet to China by next year isn't unrealistic and that would put shipments on target for four billion for 2011, according to the Canadian Press.

Bell even believes the volume of lumber shipments to China in 2009 could exceed that to Japan, traditionally BC's No. 2 market. READ MORE

Biofuels from Plant Cellulose

Yet another announcement of a research project in the mad race to develop green energy from forest residue, this time from Pennsylvania State University. A team there is researching a process to break down lignocellulose, the cell wall of wood.

Progress in this area is critical to all methods of extracting energy from wood residue, because breaking the tough exterior of a wood cell has to date been prohibitively expensive. READ MORE

Prices are in U.S. dollars per 1,000 fbm.

Key Prices

	This Week	Last Week	Change	Month Ago	Change	Year Ago	Change
WSPF KD R/L 2x4	**200**	201	-1	178	+22	254	-54
WSPF KD R/L 2x6	**208**	206	+2	168	+40	244	-36
WSPF KD R/L 2x8	**225**	220	+5	172	+53	240	-15
WSPF KD R/L 2x10	**322**	285	+37	195	+127	250	+72
WSPF KD PET 2x4 Stud	**210**	210	0	190	+20	230	-20
Douglas Fir Green R/L 2x4	**175**	190	-15	142	+33	205	-30
Douglas Fir Green R/L 2x10	**240**	240	0	192	+48	205	+35
ESPF KD 2x4 8ft Stud	**285**	280	+5	260	+25	315	-30
OSB Ontario 7/16" (CDN$)	**209**	205	+4	195	+14	210	-1

Weekly News

Beetle Kill as a Fuel Source

CONTINUED The $7.8 million dollar research project spans universities and scientific institutions across BC and Alberta, and will create tools for the prediction of available sources of feedstock so that investments in bioenergy are made in the right place and at the right time.

This work will form the basis of improved environmental risk assessment tools, which resource managers can use to help them determine the geographic areas that will be threatened next, and help inform long-term forecasts.

Government and industry will have immediate access to the resources and tools developed in this project, which will potentially lead to applications in less than five years of project completion, expected in the fall of 2012.

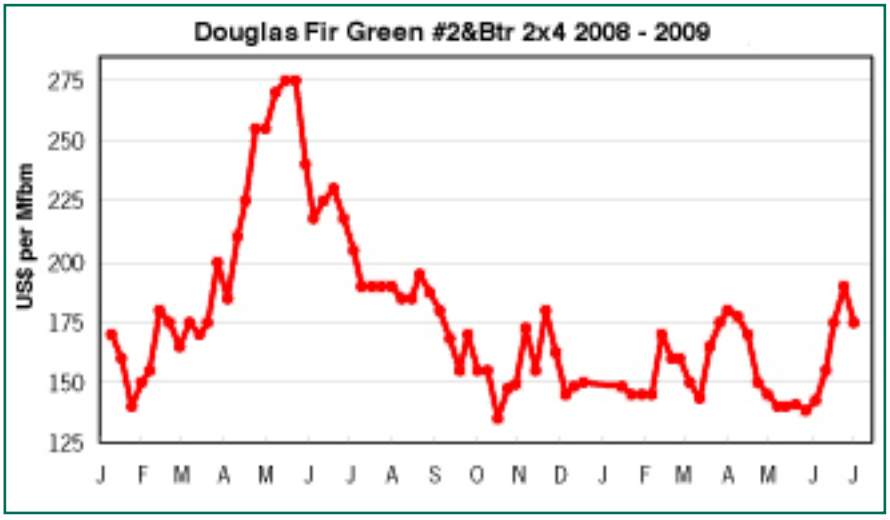
The project will deliver a high level of preparedness far beyond the current MPB epidemic and into other jurisdictions of forestry and agriculture and will build on previous and ongoing studies of the mountain pine beetle

Chinese Demand for Lumber

CONTINUED It's unlikely, however, that the dollar value of shipments to China will surpass that to Japan, as Japan is a market for high-end lumber. For example, the dollar value of shipments to Japan in 2008 was $719 million, while the value of shipments to China was $177 million.

Meanwhile, production by China's forestry industry rose 13 per cent last year to US$194.7 billion, said a senior forestry official on Monday.

Foreign trade of forest products was US$70 billion, 18 per cent of the world's total and ranked second after the United States, said Li Yucai, deputy director of the State Forestry Administration.



New Canadian Export Figures

Canada's merchandise exports fell 5 per cent to $30.8 billion in April, mostly due to a 3 per cent reduction in prices while volumes decreased 2 per cent, according to a new report out of Statistics Canada.

Lower exports of industrial goods and materials, energy products, and machinery and equipment largely accounted for the decrease in overall exports. Gains in agricultural and fishing products, and automotive products partially offset the decline.

Exports and imports have generally been trending downwards since the peak of July 2008. Exports have fallen $13.6 billion or 31 per cent since July 2008, with more than 80 per cent of the decline occurring from November 2008 to January 2009.

In April, Canada posted a small trade deficit with the world of $179 million following a surplus of $1.0 billion in March.

Canada's trade surplus with the US shrank from $3.5 billion in March to $2.8 billion in April, as exports and imports both declined. Since July 2008, exports to the United States have accounted for 88 per cent of the decrease in Canada's exports to the world. Accordingly, the US share of Canada's exports was 72 per cent in April 2009, down from 77 per cent in July 2008.

The trade deficit with countries other than the US widened from $2.4 billion in March to $3.0 billion in April, as exports fell 7 per cent and imports were down 1 per cent. After a solid gain in March, exports to the EU fell 17 per cent and led the decrease in exports to countries other than the United States.

Plant Cellulose

Biofuels

Jeffrey Catchmark sees the quest to unlock the mysteries of lignocellulose synthesis and assembly as one of the most important research pursuits of the next century.

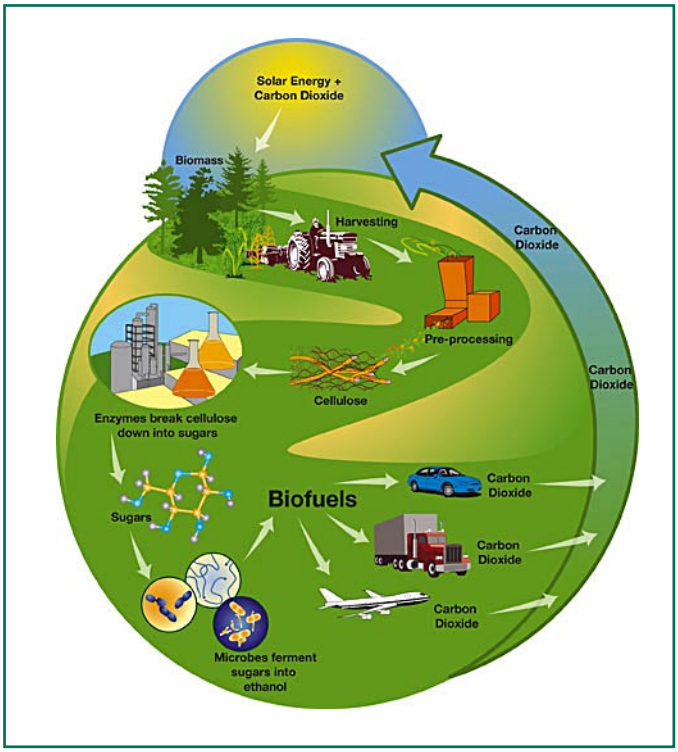
And the associate professor of agricultural and biological engineering in Penn State's College of Agricultural Sciences is on a mission to find the key. Co-director of the university's new Center for Lignocellulose Structure and Formation, Catchmark is determined to help answer the long-standing question of how our civilization can produce food, fuel and fiber more efficiently and sustainably.

The structure of cellulose – the rigid material that makes woody plants hard and stiff and protects their sugars that scientists covet to produce biofuels – holds the answer, he believes. "Even after decades of research, cellulose synthesis is not very well understood," Catchmark said. "We don't know how the cells assemble this chemical barrier to weather, insects and other organisms. The cell wall is very difficult to degrade."

Catchmark, center co-director Daniel Cosgrove, professor of biology in the Eberly College of Science, and other colleagues at the center will have substantial resources to aid their study of the molecular biology of cellulose. The U.S. Department of Energy recently awarded the center a $21 million, five-year "Energy Frontier" grant to learn more about the physical structure of the bio-polymers in plant cell walls and improve methods for converting plant biomass into fuel. The funding for this center is contained in the economic stimulus bill, the American Recovery and Reinvestment Act of 2009.

"Cellulose is the most abundant biopolymer on Earth," Catchmark pointed out. "More wood is used than all other materials, except those mined like the ingredients in concrete. If we could more efficiently use this fiber, it would have huge impacts. The question is, how can we better use the cellulose that we get from plants?"

The Center for Lignocellulose Structure and Formation will be one of few places where research is truly focused on unraveling the secrets of lignocellulose. "We believe we can answer the basic questions that to date no one has been able to answer," Catchmark explained. "We need to learn how cellulose is produced and how the biopolymers are assembled.



If we know that, we think we can develop processes to disassemble it."

Disassembling plant walls is crucial, of course, because improving methods for converting plant biomass into fuel depends on breaking down the cellulose.

With vast agricultural and forest-based feedstocks, the United States is uniquely and competitively poised to capitalize on technical advancements relating to lignocellulosic materials, noted Nicole Brown, associate professor of wood chemistry, who is part of the center.

But the center — which also will sponsor collaboration with researchers at North Carolina State University and Virginia Polytechnic Institute and State University — is about more than biofuels, she pointed out. "Understanding these complex materials — specifically how proteins work to assemble the biopolymers – is key to efficient utilization and technological breakthroughs," Brown said. "Furthering our understanding of renewable material synthesis and coupling this to nanotechnology is paramount to engineering composites and other value-added materials for the 21st century."

Other researchers involved in the center from the College of Agricultural Sciences include John Carlson, director of the Louis W. Schatz Center for Tree Molecular Genetics in the School of Forest Resources; Tom Richard, associate professor of agricultural and biological engineering and director of Penn State's Institutes of Energy and the Environment; Doug Archibald, research associate in the Department of Crop and Soil Sciences; and Virendra Puri, Distinguished Professor of Agricultural Engineering.

"We want to understand the role of the different components of plant cell walls," Puri said, "The hope is that once we understand this, we can design a better plant that will give us biofuel without having to waste or deal with other materials."

Puri doesn't expect any quick revelations. "It is a long-range kind of thing — our understanding will be a lot better in the coming years," he added. "Once we unlock the mystery of how the materials go together — how they are intertwined — and we can learn to take them apart, then the possibilities are vast."

Pennsylvania State University Press Release