The Department of Wood Science & Forest Products at Virginia Tech
Volume 2 Issue 32 — Monday, October 8, 2007

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INSIDE VT WOOD

Reminder...

Remember to submit department news items by Friday 3 p.m. of each week to Will Pfeil at wpfeil@vt.edu for inclusion in Inside VT WOOD each Monday morning. All past issues of Inside VT Wood reside on our department website under the publications link.

News From Paul Winistorfer

- Last Thursday we conducted an internal safety audit at the Brooks Center. We will make available a large dumpster container in the coming weeks for disposal of unwanted items. Our main issue is accumulation of test samples, wood materials used in projects, and unwanted or not used hardware. We are reviewing all safety postings, availability of personnel safety equipment in all labs, and record keeping of necessary safety training materials. NOTE: Proper clothing and attire in these labs by both faculty and students is required for access to and use of these labs. Sandals and flip-flops will not be allowed in these labs. We will let you know when we arrange for a dumpster to be available for cleaning out unwanted materials. Safety is our first priority for our faculty, staff and students working in these labs.
- There will be a college administrative team meeting on Friday October 12. Please let me know if there are any issues you want to bring before the administrative team.
- On October 22 or 23 we will be hosting a delegation from Congressman Boucher's office, and other officials from Covington and Roanoke. More detail will be coming soon on this visit to the Virginia Tech campus. Please mark your calendar. We will be touring the Brooks Center.
- I will be on Southside Tuesday Oct. 9th in a planning meeting for a November 29th meeting of interested parties regarding WoodLINKS and other educational programming in the region. Faculty, please mark your calendar for November 29th and plan to attend this meeting.
- I met with interested parties on campus last week regarding mutual interests in a 'wood design' initiative on our campus. There was much interest and we will have another meeting scheduled for October 25th to continue the discussion.
- Dr. David Damery, Assoc. Professor and Director of Building Materials and Wood Technology at the University of Massachusetts will be visiting our department for three days from October 29-31. This is a visit scheduled as a mini-portion of a sabbatical leave for Dr. Damery. He is interested in visiting with faculty, guest lecturing in classes, learning of our initiatives, opportunities for collaboration, and to bring news and information from the Massachusetts program. We will seek opportunities on campus for Dr. Damery to be engaged with other relevant programs (Building Construction, Architecture, Civil Engineering). Dr. Damery's contact information is:

Dr. David Damery, Associat Professor
Room 120, Holdsworth Natural Resources Center
University of Massachusetts, Amherst, MA 01003

Tel. 413-545-1770
http://www.umass.edu/bmatwt/

- We will hold a department meeting on Wednesday October 10 at 3:30 pm in the Brooks Classroom. Agenda items are welcome for this meeting.
- We now have approval to proceed with open faculty searches in the department and we will be forming search committees and moving forward quickly with process.
- I am honored to chair the search committee for the Department Head of Forestry search in the College. I will be working closely with a group of forestry faculty-staff-graduate students, and Mr. Paul Howe, Executive Director of the Virginia Forestry Association, who is serving as an external member of the search. This is an important leadership position in the College and we have already begun important search work.
- Dr. Sean McGinnis, Director of the VT Green Engineering program will be our seminar speaker on Wednesday at 2:30 pm in the Brooks classroom. Please support our seminar program, our students who will be making presentations later in the semester and our guests.

Wood Bowl 2007 Recap

The faculty came out victorious against the students in the hard fought battle of Wood Bowl 2007 on Friday, September 28.

General Announcements/News

Wood Science Alum Named Director Division of Marketing VA Dept. of Ag and Consumer Services

Although family commitments prevent me from meeting with you in person today, I am very pleased nonetheless to share with you some very exciting news. Specifically, I am honored to announce formally that I have selected Charles Green to be the new Director of the Division of Marketing for the Virginia Department of Agriculture and Consumer Services. Charles begins his new duties at VDACS today, so please take time to stop by his office and wish him well in his new leadership role.

When Governor Kaine appointed me VDACS Commissioner earlier this year, he asked me, among other things, to be a domestic and global ambassador and advocate for Virginia agriculture and agribusiness and to find ways to increase and promote the Department's marketing efforts on behalf of the Commonwealth's growers and producers. When he said this to me, I knew that the VDACS Marketing Director position was vacant and that finding the best person available to fill this role would be one of the most important decisions that I would make during my first weeks in office. Charles is that person, and now that he has been tapped as the Marketing Director, I believe that I have taken a positive first step in fulfilling the Governor's broad mandate of me. Indeed, Charles, his new Marketing Division teammates, and I will work closely in the years to come to assist Virginia's wide array of growers and agribusinesses to move more and more of their products into markets both here and around the world.

As you know, Charles has spent the last several years serving as Project Manager on the VDACS Agribusiness Development team. In that position, he focused his efforts on actively recruiting clients to Virginia by marketing the Commonwealth as the premier location for agriculture and agribusiness. Charles also worked closely with the VDACS Marketing staff to promote development opportunities for Specialty Agriculture ventures in the Commonwealth, and he managed the Virginia Specialty Agriculture Research Grants program. In addition, Charles spent time assisting existing Virginia agribusinesses by connecting them, as needed, with the appropriate public and private resources to address issues such as financing, permitting, community infrastructure, labor resources, environmental requirements, and zoning regulations.

Prior to his work at VDACS, Charles served as Director of International Marketing for the North Carolina Department of Agriculture and Consumer Services (NCDACS) and as an International Marketing Specialist for NCDACS. Charles also gained valuable professional experience earlier in his career as a Corporate Transportation Manager for Coastal Lumber Company in Weldon, NC and as a Cooperative Education employee of Chesapeake Corp. in West Point, VA.

In addition to his professional background, Charles has an impressive educational resume that will serve him and the Marketing Division well. Specifically, Charles has a Bachelor of Science degree in Marketing & Management: Forest Products from Virginia Tech as well as a Masters in Business Administration from Campbell University.

Let me close by mentioning that VDACS was incredibly fortunate to have an outstanding pool of Marketing Director applicants from which to choose. The fine, talented, and highly qualified individuals with whom several members of the Strategic Management Team and I interviewed and spent time made the final decision quite difficult, which, as you know, is a nice challenge to have when you're interviewing for such an important position. In the end, Charles' unique blend of professional, educational, and personal experiences and attributes made him the correct choice to be the new Marketing Director.

Again, please join me in congratulating Charles as he begins his tenure as VDACS Marketing Director, and please give him your full support and cooperation as he begins his new endeavors on behalf of the Department and Virginia's agricultural community.

Regards,

Todd P. Haymore
Commissioner
Virginia Department of Agriculture & Consumer Services P.O. Box 1163 Richmond, VA 23218

New life for paper mills: Ethanol plants

Research suggests existing plants could produce both products

By Tim Simmons, Staff Writer

In the category of unlikely marriages, old-school paper mills and 21st century ethanol plants might seem like an odd couple.

But the two share a certain chemistry that makes it possible for paper manufacturing mills to be converted to produce ethanol.

Among those playing matchmaker for the two industries is Steve Kelley, head of the wood and paper science department at N.C. State University.

"There are important differences, but you start with the same material -- namely wood -- and you can work with a lot of the same equipment," Kelley said. "It makes a lot of sense."

Production so far is confined mostly to test projects throughout the country, and it's too early to know whether any North Carolina plants might be converted. But interest is high in a state that has more than two dozen pulp and paper mills.

The reason is simple, Kelley said: Pulp and paper companies need to improve their bottom lines.

"The whole industry is getting beat up because it doesn't have the returns on capital that other companies do," he said. "This gives them another product."

The idea is realistic enough that last week, Kelley joined an international group of investors wanting to know more.

This year, Weyerhaeuser and Chevron agreed to a joint research project to convert wood into biofuels for large-scale distribution. "There is a lot of urgency to do this," said Denny Hunter, vice president of technology at Weyerhaeuser's international offices north of Tacoma, Wash. "We and other companies are spending a lot of money to find a good technology for this."

Stripping it down

Making ethanol in a paper mill is possible because of the makeup of wood.

In a traditional paper mill, bark is peeled from logs, and wood is chipped to a uniform size.

A chemical bath reduces chips to a pulp that can be spread, formed and dried into huge rolls of paper.

To make pulp, the chemical bath strips out lignin -- the sticky material that makes wood stiff -- and hemicellulose sugars.

Sugar is a primary building block in the production of ethanol.

Stripping wood sugars for ethanol requires different chemicals than those used to make pulp.

But once those sugars are isolated, the solution can be fermented and distilled into ethanol. That makes it possible to convert an entire plant to allow ethanol production while burning chips as fuel.

It's possible, at least in theory, to still use the chips for pulp. That means a single plant could make ethanol and paper.

In addition to its own research, NCSU is working with eight companies, two other universities and two government labs to refine that process.

Turning a profit

But given the needed economies of scale, it's nearly impossible, at current market rates, to make a plant profitable if it produces ethanol and paper, said Richard Phillips, a retired vice president at International Paper who works at NCSU.

However, converting an entire plant, especially an older site that is no longer competitive, could be a moneymaker, he said.

Paper mills are typically in areas where it's easy to deliver lumber, and they have the equipment to chip and treat the wood.

A company would be spared the cost of closing the site -- an expensive task, given environmental regulations involving permanent removal of chemicals and equipment, Phillips said.

Many small mills in the United States fit that profile. The capital cost of converting them works out to less than $3.50 per gallon of ethanol.

At that cost, a government subsidy to encourage ethanol production could make it financially attractive, Phillips said.

But regardless of profits, converting mills wouldn't put much of a dent in meeting ethanol demand. If every plant in the country were converted -- which isn't going to happen -- the industry might produce about 2 billion gallons a year, Kelley said.

By comparison, the Midwest produces about 5.5 billion gallons a year. That's only a fraction of the nation's fuel needs.

Reason to pursue it

But Hunter, Phillips and Kelley say mill conversions are a goal worth pursuing.

Given the demonstration projects planned or operating, it's inevitable that the industry will discover more efficient ways to turn wood into biofuels.

"We're optimistic it can and will be done," Hunter said. "What we don't have yet is the time frame."

tim.simmons@newsobserver.com or (919) 829-4535

http://www.newsobserver.com/business/story/717702.html

Non-Student VISA Alert/Update

By Jerry Berkley-Coats (gberkley@vt.edu), Assistant Director for International Support Services

(1) H-1B - the new fee for basic filing of an H-1B Petition goes up to US$320 (up from US$190) effective JULY 30, 2007.

(2) H-1B - the fee for Fraud Prevention for 1st time VT-sponsored H-1B Petitions remains US$500

(3) H-1B - the Premium Processing Fee will still be US$1,000

(4) H-1B - the summer is the prime time for academic H-1B

Petitions - so you should expect it to take longer to both process an H-1B, and for USCIS to approve an H-1B.

(1) J-1 - A J-1 can now be good for up to five (5) years

(2) J-1 - Anyone who was in J-1 status on or after 11/18/2006 must wait two (2) years before being granted another J-1 if they were in J-1 status for six (6) months or more.

(3) J-1 - More and more individuals in J-1 Visiting Scholar status are being subject to Rule 212e - the 2-Year Return Home Rule - this means that they must either satisfy this requirement or obtain a waiver before applying either for a new J-1 or for H-1B status.

(1) Permanent Residency (Green Card) - Effective 07/16/2007 the employer MUST PAY for the Labor Certification Stage of the PR Process

- estimated cost of this Stage is US$2,500 to US$4,000. It is unsure at this point whether Central VT or the individual unit at VT will pay this cost.

Green Building Standards Challenged by Authority on Environmental Impacts of Building Materials

Minneapolis, MN (09/26/07) - At a time when the home-buying public, architects, homebuilders, and government agencies are promoting ?green? or environmentally friendly construction, a leading authority on the environmental

impacts of building materials has challenged many of the assumptions and existing guidelines for so-called green construction.

In an article published in the September issue of Forest Products Journal , James Bowyer, University of Minnesota emeritus professor of bioproducts and biosystems engineering, claims that under some of the most widely used green-building certification programs, the choice of environmentally preferable materials is based largely ?on personal bias, intuition, internal politics, and single attributes.?

One of Dr. Bowyer's criticisms is that only one of the major programs he studied calls for systematic analysis of the environmental impact of materials during their entire life cycles. That program is called Green Globes, developed and promoted by the Green Building Institute, and calls for the use of life-cycle assessment (LCA) in determining environmental attributes of all building materials. The National Association of Homebuilders' new green building standards for residential homes include a provision for using LCA, and within the past month, the widely relied-on LEED program has announced plans to implement LCA in its standards.

Under most other green certification programs, according to Bowyer, only wood is subjected to analysis and restrictions regarding sustainability and other environmental factors through a focus on product certification. Wood and wood alone must demonstrate responsible practice in product manufacture. The result is that a number of materials currently listed as environmentally preferable by green building organizations have demonstrably greater environmental impacts than nonfavored alternatives, Bowyer says.

With respect to certification of wood by the Forest Stewardship Council (FSC), a focus of LEED and many other green building programs, Bowyer observes that many provisions of FSC certification, including ?attention to land tenure issues, observance of indigenous people's and worker's rights, and focusing on community relations, in addition to a wide range of environmental impacts linked to raw material extraction and processing is certainly an enlightened approach to materials selection.?

But he asks, ?if these factors constitute essential elements in selection of an environmentally preferable building material, it is reasonable to ask why green building programs do not require compliance with similar standards for any material other than wood. As an example, growing and harvesting of bamboo is known to have all the problems often attributed to wood and also often bear the environmental burdens associated with monoculture plantations and intensive agriculture. It is curious, then, that bamboo is accepted without question by LEED and other green building programs as an environmentally preferable material.?

Bowyer also points out that though most programs encourage the use of recycled materials, such materials are not always the most environmentally friendly.

Given a choice of using steel framing that has 35 percent recycled content or wood framing members that contain no recycled content, nearly all green building programs encourage the use of the steel, Bowyer explains. However, ?in this case, a choice to use steel framing based on recycled content would result in more than twice the energy consumption and more than four times the fossil fuel consumption to produce the framing members, and increased emissions to air and water in roughly the same magnitude as the differences in fuel consumption. . . . Is a product containing recycled content always an environmentally better choice? Clearly not!,? Bowyer writes.

Bowyer points out that green building programs ?have grown out of a general concern for the impact of building construction and operation on the local, regional, and global environment. Thus, such programs address a broad array of topic areas, including energy efficiency; water management; building materials production, transport, use and maintenance; indoor environmental quality; and recycling, reuse and waste minimization.?

?In general the influence of green building programs is positive, as the programs are causing builders, architects, home buyers, and others to think systematically about how to improve the environmental performance of buildings,? he writes.

Dear Fellow Wood Products Marketing Professionals,

As you may know, in 2004, the UNECE/FAO TEAM OF SPECIALISTS ON FOREST PRODUCTS MARKETS AND MARKETING developed a "Current Issues" Website hosted by the Louisiana State University Agricultural Center.

Current categories are: Biofuels, Supply Chains, Global Market Enhancement, Responsible Trade, and Certification & the Environment. Content is segmented by global region as well.

I wanted to notify you that the site has been updated and 150 new documents have been added bringing the total to over 450. To date, we have received just over 4,000 visits.

Content will continue to be updated annually. I invite you to submit content to the site. You can email the link or document to me and let me know where you want it placed.

The website is: http://www.rnr.lsu.edu/lfpdc/unece/

Regards,

Rich Vlosky
Leader
UNECE/FAO TEAM OF SPECIALISTS ON FOREST PRODUCTS MARKETS AND MARKETING

The P.E.O. International Peace Scholarship is a scholarship award for international graduate women.

P.E.O. is a philanthropic educational organization providing financial aid to women for their educations. Believing that education is fundamental to world peace and understanding, members of P.E.O. contribute funds for the purpose of providing grants-in-aid for selected women from other countries for study in the United States and Canada.

This scholarship is referred to as the P.E.O. International Peace Scholarship Fund, and the three local chapters of P.E.O. are currently seeking qualified international women to apply for this scholarship.

This International Peace Scholarship is designed for women who are qualified for admission to full-time graduate study, working toward a graduate degree in the college or university she will attend. An applicant must submit a witnessed statement certifying that upon completion of her degree program, she will return to her own country to pursue her professional career. The applicant must not hold citizenship or permanent residency in the United States or Canada. In order to qualify for her first scholarship, an applicant must have a full year of course-work remaining and be enrolled and on campus for the entire school year. Doctoral students who have completed coursework and are working on dissertations only are not eligible as first-time applicants. The maximum scholarship for one year (12 months) of study shall be $8,000, based upon need (year runs from August to August).

If you know of any outstanding international women in graduate study who are interested in being considered for this award, please ask them to send email to me at arthurt@vt.edu. After initial screening, if chosen for nomination, candidates will be provided application packets from P.E.O. Headquarters in Des Moines, Iowa. Nominees are responsible for completing all requirements from this point. The deadline for submitting eligibility material is December 15, 2007, so please ask any potential candidates to contact me as soon as possible to allow for time to complete and submit eligibility documents.

The attachment to this email is for publication of the PEO International Peace Scholarship. Thank you for your assistance in finding a deserving scholar for this award. If you have questions, please feel free to contact me.

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