

Training Programs for Louisiana's Forest Products Industries Needed

Owners and managers of Louisiana forest products companies have expressed a common concern: "it is difficult to get quality trained labor for my company". This concern in both large and small companies is very important to the state industry since it is fundamental to building a strong and viable manufacturing economy. The Louisiana forest products industry has estimated it will need approximately 4,000 employees in the next 2-4 years as determined in a study by Dr. Richard Vlosky at the Louisiana Forest Products Laboratory. In addition, the Louisiana Furnishings Industry Association (LFIA) has estimated that 1,200 jobs are currently available in the secondary processing industry for trained individuals. But sufficient programs are not yet in place. The Governors Forest Industry Development Task Force concluded the following after looking at the current situation in Louisiana.

- Many high schools have abandoned woodworking programs.
- High school courses that remain face a number of problems:
 - lack of centralized source for instructor guidance,
 - antiquated textbooks,
 - minimal, old shop equipment,
 - lack of project materials, and
 - high school courses present little or no information on career opportunities in forest products.
- Few trade schools in the state offer carpentry or furniture building programs.
- A survey of in-state furniture builders indicates that very few have attended high school or trade school training programs.

Most training is done by the companies themselves, which has been estimated by WoodLINKS, to cost between \$6,000 to \$20,000 per employee. WoodLINKS is a program set up to work with high schools and

technical colleges in Canada. This cost is prohibitive to most of Louisiana's secondary processing companies such as kitchen cabinet manufacturers and crafted furniture producers of which 50% have 4 employees or
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Dr. Ramsay Smith lectures on wood moisture relationships to the workshop participants. Story on page 3. (Photo by Qinglin Wu.)



Training Programs

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less. Concerns have also arisen that after employees are trained they may be hired away by another company.

This issue was recognized by Representative Jimmy Long and Senator Mike Smith who are the initial forces behind an initiative to establish a solid wood products curriculum at the Huey P. Long Technical College in Winnfield, Louisiana. Through their efforts a task force has been set up by Dr. Wayne Meaux, State Director, Louisiana Technical College System (LTCS). This task force, headed by Mr. Johnnie Smith LTCS, will begin addressing this issue through development of curriculums and working with Barron, Heinberg & Brocato Architects and Engineers to design new buildings proposed for the site. The 15-member task force is made up of the Solid Wood Products Committee and a multi-purpose Instructional Facility Committee.

The Solid Wood Products Committee members are representatives of the Louisiana Technical College System (LTCS), the Louisiana Department of Education, the Louisiana Department of Agriculture and Forestry (LDA&F), Louisiana Forestry Association (LFA), Louisiana Furnishings Industry Association (LFIA), and the Louisiana Forest Products Laboratory (LFPL). The Solid Wood Products Program consists of three curriculums and equipment for each. These include forest products technology being developed by Dr. Ramsay Smith with LFPL and Mr. Michael Buchart with LDA&F, forest management technology being developed by Mr. Don Leunser (LTCS), and forest technology and forest equipment operation being developed by Mr. Clyde Todd with LFA. As an example, the objective of the forest products technology curriculum is to produce an individual having knowledge of the primary and secondary wood-working industries with specific training in wood technology, CAD-operated equipment, wood processing techniques (close tolerance techniques, finishing, drying, gluing, etc.), quality control, systems flow technology, good work ethic, communication, and supervisory skills.

A program such as this, however, can only be successful if two additional components are included. The first is a strong effort to attract students from high schools to enroll in the program and the second is to have jobs with appropriate wages waiting for graduates. This will take a concerted effort by people in the industry to help develop programs in their local high schools to create awareness of the potential careers in

the industry and provide the opportunities for graduates to enter this profession. High school interaction will require development of materials for guidance counselors and wood working classes.

One example mentioned previously for high school interaction is WoodLINKS in Canada. This has been brought to the USA through the auspices of the Woodworking Industry Manufacturers Association as WoodLINKS USA. A kit consisting of a video and CD has been developed for high school students to attract their interest in this profession. In addition they are working with high schools in developing curriculums for working with wood to provide a better basis for technical college training.

With the new structure of Louisiana's Technical College System, the Huey P. Long Technical College will be the emphasis center for forestry and forest products with other technical colleges providing supporting courses. There are also possibilities being explored for those students desiring to further their education to transfer credits to a 4-year institution.

Other work is also going on in the LFPL to help address this issue. Dr. Richard Vlosky is conducting a survey of the secondary wood processing industry to collect information on this sector's specific needs. This is discussed in his article on page 3.

We would very much like to hear from you to assure success of this project. Please provide your ideas, concerns, and specific needs to Dr. Ramsay Smith (225) 388-4155 or Dr. Richard Vlosky (225) 388-4527. For a copy of the Governor's Forest Industry Development Task Force findings contact Dr. Richard Vlosky. ■

<http://www.lfpl.forestry.lsu.edu>

The LFPL home page covers a great deal of information in an easy-to-use format – publications, the newest as well as the ones you may have missed in the past; a listing of the research projects currently underway at the Lab and who is conducting them; brief biographies of our faculty and a listing of current graduate students and the major professors with whom they are working; the Graduate Handbook, with all the information a would-be student needs; and a list of forest products links you may not have found. ■

New Study Looks at Employment and Training Needs in the Louisiana Value-Added Wood Products Industry

Based on forest products industry hiring intention surveys conducted by the Louisiana Forest Products Laboratory, the number of desired new employees forecasted over the next 2-4 years totals nearly 4,000 positions. Given this employment demand, the need to develop and sustain training programs for the forest products industry is immediate and critical.

The current educational system in Louisiana provides little in the way of work force training and development appropriate for the needs of the state's value-added forest products industries. While there are programs under develop-

ment in select locations for the pulp and paper industry, largely developed by the industry for implementation in the technical college system, there remains a major gap in the skills needed by today's value-added forest products industry sectors.

In order to address these issues, Richard P. Vlosky, Forest Products Marketing Program, recently received a \$19,000 grant from the Tennessee Valley Authority (TVA) Rural Studies Program to study employment structure and training needs in the Louisiana value-added wood products industry. The

objectives of the study are to: 1) determine the current employment structure by activity and skill level in the Louisiana wood products industry, 2) identify unfulfilled training requirements, 3) identify impediments to increasing employment in the value-added wood products industry, and 4) develop recommendations regarding curricula and program development that will lead to increased employment in rural areas of Louisiana.

The study is underway with all Louisiana wood products companies surveyed. Results will be available at the end of the year. ■

Third Annual Lumber Drying Workshop Offered

The third annual three-day workshop on **Drying Lumber for Quality and Profits** was held on February 24, 25, and 26, 1999 in the School of Forestry, Wildlife, and Fisheries, LSU. The workshop was the result of a joint effort between the Louisiana Forest Products Laboratory and Louisiana Cooperative Extension Service at LSU to enhance value-added wood processing in Louisiana through improved drying technology. Twelve people representing various wood products companies from the South attended the workshop. So far, the LSU drying workshop has reached over 80 individuals representing more than 50 wood products companies in the South. ■



A group picture of the participants at the workshop. (Photo by Ramsay Smith.)

For more information on this workshop or future lumber drying workshops, please contact Dr. Qinglin Wu at the LFPL (225) 388-8369 or Dr. Todd Shupe, Louisiana Cooperative Extension Service (225) 388-4225.

LSU Forestry Club Students Go to Forestry Conclave

Every year, the LSU Forestry Club (formally known as the Student Chapter of the Society of American Foresters at LSU) participates in a competition against 12 other southern forestry schools. Known as a Conclave, the students compete in about 20 events such as crosscut sawing, bow sawing, pole climbing, log burling, log chopping, axe throwing, diameter estimation, pole classification, compass and pacing, tree identification, and wood identification.

LFPL's Dr. Niels de Hoop accompanied the Forestry Club as faculty advisor to North Carolina State University, who hosted the Conclave this year. LSU's fifth place performance was repeated from last year (LA Tech placed sixth). Woody Johnson and Brad Duncan won first place again in the log roll by rolling a tapered log over a 50-foot course and back in 38 seconds. Wayne Higginbotham won first place in the knife throw. Aaron Poole won second place in compass and pacing while Len Neumann and Natalie Snider achieved third place in wildlife identification. "The competition was really tough," commented club president Jacob Donelan. "Arkansas, NC State, Virginia Tech, and Stephen F. Austin came well prepared for every event. It's hard to break into that group, but I hope we can do it next year."

"Next year, the club's challenge will be much greater. It will be LSU's turn to host Conclave," said Dr. de Hoop. "This will be an enormous amount of work for the students. LA Tech has graciously offered to help." Tentative plans are to hold Conclave at Camp

Beauregard near Pineville in mid- or late March 2000.

Dr. de Hoop added that NC State raised \$9,000 in donations this year to host Conclave and keep the cost affordable to students. A similar amount will be needed next

year. Anyone interested in making donations should contact him at (225) 388-4242 or Dr. G.H. Weaver (LA Tech) at (318) 257-4985. They will pass on the pertinent information to the students, who will begin contacts next Fall. ■

Louisiana Furnishings Industry Association Contributes to Growth of State's Secondary Forest Products Companies

The Louisiana Furnishings Industry Association (LFIA) is preparing the way for our state's secondary forest products companies to continue their growth and expansion. Here are several current and recently completed projects:

- Over 2,000 sq. ft. of Louisiana-produced furniture and furnishings were displayed at the Houston Home & Garden Show.
- Nearly 6,000 sq. ft. of Louisiana furniture and furnishings occupied the Superdome for the recently completed New Orleans Home & Garden Show.
- Negotiations are near completion on permanent space at the Dallas Market Center.
- The Ponchatoula showroom is receiving a 1600 sq. ft. addition of showroom space to accommodate \$250,000 of member's merchandise.
- The May issue of Southern Living magazine will include a feature story on the LFIA's Ponchatoula showroom.
- A woodworker-training program involving high school students is being developed in conjunction with the statewide School-to-Work program.

If you would like information on any of these projects, contact the LFIA at (504) 386-0471. LFIA's showroom is located at 495 SW Railroad Avenue, Ponchatoula, LA. ■

Technical Report Available

Interior-type plywood is widely used in construction of furniture, cabinets, counter-tops, etc. The integrity of such construction is frequently dependent upon the connections between its components. For maximum strength and stability, each connection requires a design that is adapted to the fastener type and to the strength properties of the individual structural members. Ultimate fastener withdrawal loads for plywood joints depend on fastener type (screw or nail), fastening direction (face or edge), panel moisture content, and wood species used to manufacture the plywood.

Dr. Qinglin Wu recently completed a study on assessing the influence of moisture, fastening direction, screw type, screw penetration depth, and wood species on the screw withdrawal load of furniture-grade southern pine (*Pinus spp.*) and sweetgum (*Liquidambar styraciflua L.*) plywood. It was shown that the screw withdrawal loads from both panel face and edge decreased in general with increases in panel moisture content within the hygroscopic range. For each type of plywood tested, the screw withdrawal loads from the panel face were significantly larger than the values from the panel edge. At higher moisture content levels, edge screw-holding capacities deteriorated more rapidly than face screw-holding capacities. For plywood with comparable properties (e.g. panel thickness, bending stiffness, and strength), wood species (i.e. southern pine versus sweetgum) had an insignificant effect on screw withdrawal loads. Thus, sweetgum plywood is as good as pine plywood in screw-holding strength. For a copy of the report, please call Dr. Qinglin Wu at (225) 388-8369. ■

LFPL Researchers Turning Louisiana's Wood and Ag Residues into Firelogs

From wood waste to valuable product – that's exactly what LFPL researchers are doing. They have taken dry wood residues from an architectural millworking firm, combined them with soybean residues, and made a firelog that looks promising.

There are several commercial firelogs available for homeowners who want a quick and easy flame in their fireplace. However, most of them use a petroleum-based wax that sometimes builds up deposits in chimneys and aggravates air pollution problems. Drs. Ramsay Smith and Niels de Hoop are leading the way in developing an "environmentally friendly" firelog. Substantial assistance is being provided by Jimmy Houston (Graduate Assistant), Mike Buchart of Agriculture Commissioner Bob Odom's staff, Dr. Art Sterling of LSU's Department of Chemical Engineering, and Dr. Chun-yun Hse of the Southern Forest Experiment Station. Initial funding was provided by the Southeastern Regional Biomass Energy Program (SERBEP).

This type of product can be made with a simple machine at low cost, making it attractive for small businesses. Anyone interested in the project is encouraged to contact Dr. Smith or Dr. de Hoop at (225) 388-4255. ■



James Houston, Jr. (left) and Dr. Niels de Hoop are shown preparing test burns of new formulations of firelogs. The fireplace insert has been modified so that air pollutants can be monitored. (Photo by John Wozniak.)

LSU Students Graduating in Programs Related to Wood Products

Charles Cooper

BS and MS in Forest Management.
Research Area: Sawing Technology
Available for employment opportunities in forestry operations, quality control, and/or sales in the Baton Rouge and surrounding area. (225) 756-4461
e-mail: cooperlsu@aol.com.

Kofi Poku

MS Forest Products Marketing.
Background in Natural Resources Management and Wood Science and Technology with experience in timber processing, export marketing, and management. Graduating August 1999.
(225) 388-4133 e-mail:kpoku@lsu.edu

James T. Houston, Jr.

MS in forest products, BS in Animal Science. Research in biomass utilization, coursework in forest products, animal systems, chemistry, and biology. Available August 1999.
(225) 293-3812 e-mail:tazx1@aol.com

Christopher A. Dupuy

MS in Forest Products Marketing.
Thesis: Electronic Data Interchange in the Wood Products Industry: Current Status and Projected Trends. Interests in information technologies (IT), electronic data interchange (EDI), and conducting marketing research. (225) 292-4984
e-mail cad90@bellsouth.net

Calendar of Events and Workshops

- June 27** **Society of Wood Science and Technology 1999 Annual Meeting.** "The Roles of Wood Science & Technology in Forest Sustainability". Held in the Boise Convention Center, Boise, Idaho. For more information, contact Vicki Herian at (608) 231-9347.
- June 27-30** **53rd Annual Forest Products Society Meeting.** To be held at The Grove Hotel and Boise Center, Boise, Idaho. For more information, contact the Forest Products Society at (608) 231-1361.
- May-Sept.** **Louisiana Furnishings Industry Association (LFIA)** holds regular monthly meetings at the Ponchatoula headquarters. If you are interested, call LFIA at (504) 386-0471 for the date and time.

 Louisiana
Forest
Products
Laboratory

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Rich Vlosky - Forest Products Marketing
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