


LFPL Steering Committee Meeting Helps Set Path for Year 2000

The Louisiana Forest Products Laboratory Steering Committee met on February 18 to discuss programs for 1997-98 and to start planning for the year 2000. During the meeting,

steering committee members heard presentations from each of the laboratory staff on current projects and program goals. Excellent comments were made by the committee that will

help our efforts to benefit the people of this state. Below are a few of the areas that you will be hearing more about in the near future.

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- A "business doctor" team is being formed among cooperators throughout the university and other agencies in this state to better approach problems or issues in secondary processing companies that require different areas of expertise.
 - A program to provide a better understanding of how Southern yellow pine management regimes are linked to product characteristics is being developed and computerized.
 - New uses for residues and recycled products are being examined and directed toward developing value-added markets.
 - Network development for smaller secondary manufacturers and market strategy issues are being enhanced.
 - Information and enhanced technologies for kiln drying hardwoods and softwoods are continually being developed. Smaller drying facilities are being emphasized.
 - Better processing procedures to improve panel performance for cabinets and furniture are being developed.
 - Development of software tools for the small manufacturer to improve manufacturing efficiencies with an emphasis on ease of use and availability are being developed.
 - An information base on trade issues, including both domestic and international markets, will be enhanced.

These items certainly do not constitute all of our planned work, but rather highlight a few key areas. If

you do not see a subject area you are interested in, or if you would like to find out more about those above,

please let us know. Remember, it is hard for us to get you the information you need if we don't hear from you. ■



Controlling Wood Moisture Content to Prevent Panel Warping

Recently, several manufacturers have encountered warping problems in their solid wood panels for table or counter tops. These panels sometimes warp unexpectedly soon after manufacturing or during service. Severe warp could lead to returned products or even loss of customers. To handle these panels properly, several procedures should be followed.



1

First, during manufacturing of the panels, extreme care should be taken in controlling wood moisture content (MC) to the desired level (e.g. 6.5%). This means to monitor lumber MC before using it. There are several ways to measure wood MC, including oven drying and moisture meter methods. The oven drying method is the most accurate way to measure wood MC. This method involves cutting a small wood sample (e.g. 1 inch along the grain), measuring its weight, oven drying it for 24 hours at 205°F and re-measuring its weight. Wood MC is calculated as a ratio of weight difference before and after oven drying to the weight after oven drying, multiplied by 100. A home microwave oven can also be used to determine the oven-dry wood weight. The moisture meter method is a quick way to estimate wood MC and has been widely used in the industry. There are two types of moisture meters available: the resistance type (pin type probe) and the capacitance type (flat sensing plate). The pin type meter is the most accurate meter available, and wood density has little effect on the meter's reading. However, visible pin holes will be left on the surface of the boards. The capacitance meter will not leave holes in the lumber, but the meter is more sensitive to wood density variation. Readings from both types of meters require correction for species. Meter manufacturers normally provide correction factors for common wood species; however, not every species has correction factors.

2

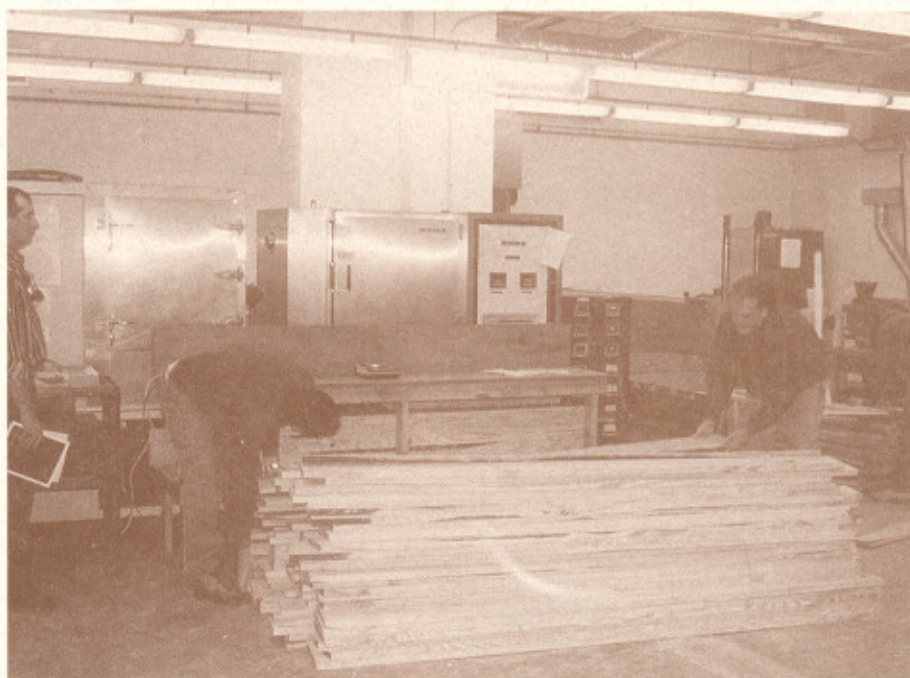
Second, after the panels are made, storage is important. The storage temperature should be maintained between 65°F and 80°F. The relative humidity should be as close to 35% as possible. The panels should be stacked flat. If a long period of storage is required, use 1/4 inch stickers between panels to allow adequate ventilation. Uneven MC change across panel thickness due to uneven rate of moisture exchange with environments from two opposite surfaces is one of the primary causes of panel warping. Use your moisture meter regularly to be sure that there is no loss or gain in moisture. Also, check the ventilation of the storage area daily, and prevent strong sunlight from entering the area.

3

Third, the panels should be shipped to the customer in carefully loaded trucks and be shielded from rain with vinyl covering on wet days. Finally, make sure that your customer follows the same careful procedure as you do. ■

Practical Wood Identification Workshop Scheduled

The Louisiana Cooperative Extension Service is offering a day-and-a-half workshop on Thursday - Friday, August 7-8, 1997 titled "Practical Wood Identification" to be held in the Forestry, Wildlife and Fisheries Building on the LSU campus. Instructors from the Louisiana Cooperative Extension Service, Louisiana Tech University and the USDA Forest Service will give lectures on hardwood and softwood anatomy and identification. Participants will be assisted with hands-on identification of wood. All participants will receive a practical book on wood identification, a collection of wood samples, a hand lens and razor blade. The workshop will be beneficial for anyone working with wood who wants to learn the skills necessary to properly identify wood. The registration cost is \$100 before July 25 and \$125 after July 25. All hobbyists and wood using or wood producing personnel are urged to contact Dr. Todd Shupe for more information at the Louisiana Cooperative Extension Service (504) 388-4087. ■



A three-day workshop on lumber drying was held February 26 - 28, 1997. The above pictures show participants selecting sample boards, preparing kiln and moisture content samples and performing necessary calculations. (Photos taken by Qinglin Wu)

Want To Submit An Article?

If you would like to have an article printed in the newsletter, contact JoAnn Doucet at

(504) 388-4157 or fax (504) 388-4251.

Linking Resource Characteristics to Product Characteristics

Help is needed from the southern plantation pine processing industry in a new study designed to link characteristics of this resource to product characteristics. The Louisiana Forest Products Laboratory is in the process of establishing this research study and is looking for industry cooperators to provide material and limited funding.

A number of studies in the past 50 years established links between location, silvicultural practices and genetic improvement effects on wood quality. Wood quality was predominantly measured by density, strength and in a few cases by value of produced lumber.

There are no studies to date, however, that would determine which location, silvicultural practices, genetic improvement or remanufacturing methods are most feasible when producing a given product, whether it is structural lumber, millwork lumber, veneer, chips, pulp, etc. There is no information available about the incidence (size and frequency) of various defects in southern plantation pine.

The objective of this new program is to increase the value of southern plantation pine resources by matching available wood resources to desired value-added products. Methods for identifying commodities on stump,

determining where to build a plant, merchandising logs based on products that will be made from them, determining feasible processing methods, etc., will be the outcome of this research. It will be accomplished through digitizing the lumber of known origins and defects in this lumber, reconstructing the trees in a computer and simulating various scenarios for processing options using existing modeling software.

Please contact Dr. Rado Gazo at (504) 388-6432 for further information. Companies that contribute will be able to better analyze their resources to obtain maximum returns when planning which products to produce. ■

Award Winning LFPL Publications

Barbara Corns, Louisiana Agricultural Experiment Station graphic designer, designed and submitted the LFPL brochure in the Critique and Awards Program of Agricultural Communicators in Education. Barb won a Bronze for her entry in that contest! Congratulations, Barb, for the excellent work you do!

The Louisiana State University Graphic Services won first place with the LFPL newsletter in the In-Print® 97 fine printing awards competition co-sponsored by the International Publishing Management Association (IPMA) and In-Plant Graphics Magazine. Barbara Corns shared the award for the excellence of her design and typography. Congratulations, LSU Graphic Services and Barb, for a fine job! ■

Louisiana Valued-Added Wood Products Industry Report Now Available

The Forest Products Marketing Program at the Louisiana Forest Products Laboratory has recently published a new report titled *"The Louisiana Solid Wood Products Industry: Resource Assessment, Industry Structure and Value-Added Market Opportunities."* The research was made possible by a grant from the U.S. Department of Agriculture, Forest Service, Southern Research Station, New Orleans, LA. The report contains an overview of Louisiana's forest resources and solid wood products industry structure in addition to a discussion of value-added product groups that may have potential for further development. The product group market analysis is intended to be a guideline for identifying broad market opportunities for producers in Louisiana. Beyond these broad product groups, the authors conclude that there are likely to exist narrow niche market opportunities for a myriad of value-added wood products. The overall objective of this study was to identify broad defensible product markets for Louisiana value-added solid wood products. The information contained in this report may serve as the basis for developing a comprehensive industry-wide action plan to advance industry development or as an information source for individual companies. For information on this report contact Dr. Richard Vlosky (504) 388-4527 or Ms. JoAnn Doucet (504) 388-4157. ■



Visit our website: <http://www.lfpl.forestry.lsu.edu>

LFPL Graduate Studies

Do you know of a qualified person who may be interested in obtaining an advanced degree in Forest Products? The Louisiana Forest Products Laboratory is looking for qualified graduate students for both the Master of Science and Ph.D. programs. Funding is available to help defray costs (and most times will cover all costs) including tuition and living expenses.

Are You Interested?

Program areas available include Forest Products Marketing, Processing and Wood Science Technology. Individual programs are formulated for each student to best suit their needs.

If you are interested or know of someone that may be interested, please have them contact W. Ramsay Smith at (504) 388-4155.

A Softer Way to Harvest Timber

Have you ever driven by a logging job and wondered why it looked so messy? Anyone can pluck a tree out of the forest and not create much disturbance, but removing the volume of wood demanded by today's society requires large skidders and other equipment that often do a lot of damage to the soil and standing trees, especially in wet weather.

Forester Sam Soulé and his staff at Martin Timber Company (Campti, LA), along with logger Travis Taylor, performed a month of field trials of a Scandinavian Cut-to-Length timber harvesting system. Cut-to-Length harvesting requires only two machines and two workers plus the trucking, instead of the typical 6-person logging crew. In these trials, two machines and two operators were sent from Finland by the equipment manufacturer, Ponsse, to test their suitability in pine plantations. At Martin's request, LFPL's Dr. Niels de Hoop assisted with the evaluation of the trials, along with Louisiana Tech's Dr. Clyde Vidrine and Auburn's Bob Lanford.

The two machines are called a harvester and a forwarder. The harvester drives through the woods, reaching out to sever, delimb and buck the stem into measured logs. A computer automatically keeps track of the number, diameter, length and types of logs. The harvester reaches up to 33 feet for a tree, so there is no need to drive to every tree, saving a lot of soil compaction. Even better, it drives on the limbs and seldom actually touches the ground. Then the forwarder picks up the logs and carries them out. The logs stay clean and the tires never spin.

The new system is not only competitive, but environmental damage was obviously much improved. There was minimal rutting to the soil despite extremely wet conditions. There was almost no damage to the bark of the residual trees, and the duff layer on top of the soil was undisturbed. ■



Juha, a logger from Finland, drives Ponsse's forwarder into a Louisiana pine plantation. The harvester and forwarder drive on a bed of limbs, minimizing environmental damage. The bunk behind the operator's cab can carry up to half a truck load of logs.

Calendar of Events And Workshops-1997

- June 22-26 Forest Products Society Annual Meeting.** Held in Vancouver, British Columbia, Canada. For more information contact the Forest Products Society in Madison, Wisconsin at (608) 231-1361, Ext. 208.
- June 18-21 IUFRO International Conference for Forest Products Marketing.** Held in Tofino, British Columbia, Canada. For more information contact the Conference Director at (604) 822-9627.
- July 7-12 IUFRO All Division 5 Conference - Forest Products for Sustainable Forestry.** Held at Washington State University in Pullman, Washington. For more information contact: Conferences & Institutes, Washington State University, Pullman, WA at (509) 335-3530.
- Aug. 7-8 Louisiana Cooperative Extension Service Workshop on Practical Wood Identification.** Held in in the Forestry, Wildlife & Fisheries Building on the LSU Baton Rouge campus. For more information contact Dr. Todd Shupe of the Louisiana Cooperative Extension Service at LSU at (504) 388-4087.
- Aug. 26-28 Louisiana Forestry Association 50th Anniversary Annual Meeting.** Held at the Hotel Bentley in Alexandria, LA. For more information contact the LFA at (318) 443-2558.
- June - 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.



LFPL FACULTY & STAFF LSU

W. Ramsay Smith - Program Leader
 Niels de Hoop - Environmental and Safety
 Rich Vlosky - Forest Products Marketing
 Rado Gazo - Wood Processing
 Qinglin Wu - Wood Processing
 Elvin T. Choong - Wood Physics
 Pat Lefeaux - Chief Clerk II
 JoAnn Doucet - Research Associate
LA Tech
 Mark Gibson - Material Properties
 George Grozdits - Research Associate

Louisiana State University Agricultural Center
 H. Rouse Caffey, Chancellor
Louisiana Agricultural Experiment Station
 R. Larry Rogers, Vice Chancellor and Director
School of Forestry, Wildlife, & Fisheries
 Stanley B. Carpenter, Director
Louisiana Forest Products Laboratory
 W. Ramsay Smith, Program Director
 Forestry, Wildlife & Fisheries Building
 Baton Rouge, LA 70803-6202
 TEL (504) 388-4155 FAX (504) 388-4251
<http://www.lfpl.forestry.lsu.edu>
 LFPL Newsletter Graphic Design, Barbara Corns

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 Forest
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 Laboratory

Louisiana State University
 Forestry, Wildlife & Fisheries Building
 Baton Rouge, LA 70803-6202

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