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The Nebraska Forest Service publishes *Timber Talk* four times annually (September 1, November 1, February 1, and June 1). The purpose of the newsletter is to serve and promote the forest industry of Nebraska. All questions and correspondence concerning *Timber Talk* should be directed to: Dennis M. Adams, *Timber Talk* Editor, Nebraska Forest Service, University of Nebraska, 109 Plant Industry Building, P.O. Box 830815, Lincoln, NE 68583-0815. Phone (402) 472-5822, FAX (402) 472-2964. E-mail: dadams2@unl.edu. *Timber Talk* is partially supported by University of Nebraska–Lincoln Extension funding.

Lumber Market

Hardwoods

Northern. Supply issues remain at the forefront. Sources say the downturn in sawmill output has had a noticeable affect on the availability of various low-grade items, pallet lumber and cants, in particular. However, tighter supplies of green lumber are also being noticed in grade lumber markets. On the other hand kiln-dried lumber inventories are still readily meeting market demand. Tighter availability of green stocks coupled with sufficient inventories of kiln-dried lumber have squeezed the margins between the two. Log inventories are limited at many locations. Disruptions to logging could interrupt production for a number of mills.

Southern. Business conditions have become increasingly competitive in recent weeks as a result of lack of buyer interest or market options for available production. Price concessions have generated some activity for some suppliers. Margins have been negatively affected. With sawmill production down and edging lower, prices for green lumber have exhibited some degree of stability. In contrast, the availability of kiln-dried lumber is ample for many key species and grades; prices are pressured, which further tightens the narrow spreads between prices for like species, grades, and thicknesses of green stocks. Competitive lumber markets and tight profit margins have caused many sawmill operators to take a conservative approach to log purchases.

Appalachian. Buyer and sellers export business activity continues to slow. Secondary manufacturers' sales of cabinets, furniture, flooring and other solid wood products influenced by the U.S. housing market are off substantially from record high levels 2 years ago. The downturn warrants equal cutbacks in raw material purchases.

International. European and Asian markets are taking a “controlled approach” to purchases. The slowdown has led to stiffer competition for orders and downward pressure in prices. The weak U.S. dollar remains a frequent topic of discussion. The Euro is down to a value of \$1.42509. Also, the U.S. dollar is valued at \$0.97 Canadian and 7.49 Chinese yuan. The ramifications of the weaker U.S. dollar are notable. Over the last 12 months the Chinese yuan has appreciated in value by roughly 10%.

Several factors are affecting the rate of sales and shipments of U.S. hardwood lumber to China. Data released from the USDA Foreign Agricultural Service (FAS) show the value of exports through August 2007 is down 22.77%, amounting to over 43 million board feet. Much of this is attributed to the decline in the U.S. housing market. Despite the downturn, the U.S. is still the largest supplier of sawn lumber to China.

(continued on page 3)



Hardwood Lumber Price Trends—Green

Species	FAS				#1C				#2A			
	12/06	3/07	6/07	9/07	12/06	3/07	6/07	9/07	12/06	3/07	6/07	9/07
Ash	620	600	600	600	470	440	440	430	335	315	315	305
Basswood	750	705	705	695	415	375	375	365	225	210	210	205
Cottonwood	600	600	600	600	400	400	400	400	220	220	220	220
Cherry	2350	2350	2290	2290	1305	1335	1230	1230	630	655	640	640
Elm (soft grey)	635	635	635	635	420	420	420	420	235	235	235	210
Hackberry	475	475	475	475	455	455	455	455	265	265	265	265
Hickory	770	755	745	735	660	660	660	640	450	450	450	425
Soft Maple (UNSD)	1185	1185	1170	1130	750	750	675	600	380	380	380	320
Red Oak	1020	945	945	945	675	640	630	630	500	500	500	500
White Oak	1015	1070	1090	1105	600	610	610	620	400	400	400	400
Walnut	2080	2100	2180	2180	1155	1210	1300	1300	850	885	940	940

Note: Hardwood prices quoted in dollars per MBF, average market prices FOB mill, truckload and greater quantities, 4/4, rough, green, random widths and lengths graded in accordance with NHLA rules. Prices for ash, basswood, elm, soft maple, red oak and white oak from Northern Hardwoods listings. Prices for cottonwood and hackberry from Southern Hardwoods listings. Prices for cherry, hickory and walnut (steam treated) from Appalachian Hardwoods listings. (Source: *Hardwood Market Report Lumber News Letter*, last issue of month indicated. To subscribe to Hardwood Market Report call (901) 767-9126, email: hmr@hmr.com, website: www.hmr.com.)

Hardwood Lumber Price Trends—Kiln Dried

Species	FAS				#1C				#2A			
	12/06	3/07	6/07	9/07	12/06	3/07	6/07	9/07	12/06	3/07	6/07	9/07
Ash	910	900	900	900	675	665	665	650	595	580	560	560
Basswood	1000	990	990	990	615	605	605	605	410	395	395	395
Cottonwood	755	755	755	755	520	500	520	520	—	—	—	—
Cherry	3000	3000	3000	3000	1700	1700	1625	1550	1010	1010	1000	985
Elm (soft grey)	—	—	—	—	—	—	—	—	—	—	—	—
Hackberry	—	—	—	—	—	—	—	—	—	—	—	—
Hickory	1260	1260	1230	1200	965	965	965	920	830	830	880	810
Soft Maple (UNSD)	1650	1650	1635	1635	950	950	900	890	570	570	540	540
Red Oak	1590	1540	1540	1500	1040	990	990	990	760	760	760	760
White Oak	1600	1670	1695	1720	920	935	945	980	715	725	725	725
Walnut	2715	2765	2885	2905	1740	1785	1860	1875	1460	1475	1540	1555

Note: Kiln dried prices in dollars per MBF, FOB mill, is an estimate of predominant prices for lumber inspected and graded before kiln drying. Prices for cottonwood and hackberry from Southern Hardwoods listings. Prices for ash, basswood, elm, soft maple, red oak, and white oak from Northern Hardwood listings. Prices for cherry, hickory and walnut (steam treated) from Appalachian Hardwoods listings. (Source: *Hardwood Market Report Lumber News Letter*, last issue of month indicated. To subscribe to Hardwood Market Report call (901) 767-9126, website: www.hmr.com.)

Lumber Market (continued from page 1)

Sales of U.S. hardwood lumber in the European Union have slowed moderately this year; down 5.96%, which amounts to slightly more than 12 mmbf.

Currently, supplies are sufficient to meet demand for offshore buyers, and most are limiting purchases to volumes necessary for immediate needs. Despite the favorable position of the U.S. dollar, most exporters expect the global marketplace for North American hardwoods to remain competitive for the foreseeable future.

(Source: Condensed from *Hardwood Market Report*, October 27, 2007. For more information or to subscribe to *Hardwood Market Report*, call 901-767-9216, email: hmr@hmr.com, website: www.hmr.com)

2007 Tax Tips for Forest Landowners

Landowners who sell timber and/or plant or manage forest land could substantially reduce their federal income tax liability by being aware of, and utilizing, current IRS regulations. The following are several excellent (and free) sources of federal income tax information relative to timber.

1. National Timber Tax Website: www.timbertax.org
2. Forest Landowners Guide to the Federal Income Tax. USDA Handbook 718: <http://www.timbertax.org/publications/aghandbook/aghandbook.asp>

What If...Chinese State-owned Companies Started Buying U.S. Forest Products Companies, or U.S. Timber Lands? It Might Not Be Too Far-fetched

China: that vast country of 1.2 billion people is short of fiber, high quality pulp, paper, packaging and tissue grades. Growing domestic production cannot satisfy consumption and massive imports of everything keep rising. So why not go out and buy the best around and send it to the folks at home?

In August, the Chinese National Offshore Oil Corporation (CNOOC) failed in its \$18.5 billion bid for California's Unocal. U.S. political pressure forced CNOOC to withdraw and Unocal accepted a lower bid from domestic rival Chevron.

There have been a string of bids by Chinese firms for U.S. companies. In July, Haier pulled out of a bid for Maytag after Whirlpool bid more. China Minmetals failed in its \$7 billion bid for Canada's Noranda.

China's determination to buy something in North America is obvious, and ultimately, unstoppable. Its main target is the oil and gas section in order to achieve energy security. But is it too much to predict that parts of the U.S. paper industry and its forests may be destined for China's shopping basket?

Some of the U.S. paper companies desperately need funds to modernize. But very few people are interested in providing those funds. The big suppliers like Metso and Voith are looking elsewhere for their profits – to South America, Asia, and Russia. So are paper companies like Stora Enso, M-real and UPM. U.S. companies may be cheap to buy, but the domestic investment required to modernize them isn't there.

Large chunks of the U.S. West Coast's export network of recycled paper are owned, essentially, by Chinese/American firms. So it's a logical next step to buy into a mature but cash-strapped U.S. papermaker of printing and writing papers, tissue or packaging, and export all the production across the Pacific to Chinese ports.

In similar fashion, China's need for fiber also makes U.S. forests attractive. Many U.S. paper companies have removed their forests from the bottom line and either sold or leased them to private owners. The latter care about money and might be willing to sell to Chinese buyers.

The dilemma for a struggling U.S. papermaker is a dismal one. The options are usually to downsize, merge or close. The effects can be devastating for rural communities, extended families, and infrastructure. But what if China-based manufactures come shopping for U.S. mills, with promises of capital investment and the possibility of increased production in order to satisfy a growing Chinese market? Jobs become secure and employees remain in their communities, while the mill and its forests benefit from an infusion of foreign investment dollars.

It seems simple, but it won't be. First the U.S. government would certainly object to such investment—there will be conflict between the anti-China groups in Washington and the pro-China business lobby. And, which way would the AF&PA lean? If it thinks Chinese investment could revive a struggling mill or forests in Alabama and be a good thing, would it say so to Washington? If the U.S. blocks Chinese investment would U.S. business interests be damaged in China and elsewhere? It's a nightmare for any executive or politician who relies on the good will of his supporters.

Industry analysts have told me it would be simple and cheaper for China to continue to reform and modernize its own domestic production by installing more, big and new machines. But in my view, this will not be enough to satisfy a growing demand that will outrun any prediction I have read.

China's huge demand for fiber has already locked in every major fiber source in the region, such as Russia, Indonesia, South East Asia (Malaysia, Thailand, Vietnam, Cambodia, etc.) USA, Canada, and every Pacific island that has serious forests, such as Papua New Guinea or the Solomon Islands

By 2010, Chinese production is predicted to reach 62.4 million tons per year (tpy). However, demand will rise to 68.5 million tpy, according to Jaakko Poyry. So, can the Pacific fiber supplies feed China's insatiable appetite? It depends on how rapidly Chinese demand for virgin fiber will rise and how efficiently China's suppliers can fill that need.

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What If.... (continued from page 3)

UK consultants, Hawkins Wright, estimate that through 2008 the world demand for market pulp will reach 51 million tpy, of which China will account for 50%. With these numbers, I think that virgin fiber procurement will become a strategic necessity for China—its need for fiber security, similar to that of its oil and gas needs.

In a nutshell, this is my take on what will happen. Because the U.S. has abundant wastepaper, extensive privately-owned forests and many pulp and paper companies which are right now, relatively cheap to buy, Chinese state trading companies will, discreetly and steadily, buy into these sectors.

At first this strategy will be hard to spot as the Chinese will try to minimize the political fallout. But by 2010, forest products could become a major trade row between the U.S. and China.

(Source: *Paper Age*, September/October 2005. Author: David Price. Mr Price may be contacted by email at: DPrice1439@aol.com)

Moisture Meters – the “Whys” and “Hows” of Establishing The True Moisture Content of Wood

Moisture Content Basics – It is common to find that the living tree will have 40% water and 60% wood by weight. (Some trees have less water and some have substantially more.) This water is the lifeblood of the tree, conducting nutrient-rich water from the soil to the leaves through the sapwood of the tree and then back again toward to roots in the inner bark.

The amount of water in wood is called its moisture content (MC) and is almost always expressed as a percentage. An engineer not used to dealing with wood and people involved in wood pulp, wood chip and wood energy, would quickly state that the moisture in a living tree (also called the green MC) is 40% MC, meaning that by weight, the living tree is 40% water and 60% wood.

However, for anyone dealing with lumber, percent moisture content is (and has been for well over 100 years) calculated in a different manner. Lumber people will state that freshly sawn lumber from the green tree (as mentioned above) has 67% MC. That is because they compare the 40% water weight to the 60% value that is the dry weight of wood (also called oven-dry weight or bone-dry weight.) So, $(40/60)$ is $2/3$ or 67%. Mathematically, for lumber %MC = $[(\text{weight of a piece of wood/oven-dry weight}) - 1.00] \times 100$.

As a quick example, assume that a small piece of wood weighs 150 grams. When the wood is oven-dried to 0% MC, it weighs 125 grams. Then, % MC = $[(150/125) - 1] \times 100 = [1.2 - 1] \times 100 = 20\%$ MC.

The oven-drying method actually has some strict requirements, including one that the wood be dried at approximately 215 degrees F and be dried until no further weight loss occurs. Accurate weighing is also required -- at least to 0.1 grams. For reference, a \$1 bill weighs 1 gram.

Why do we need to measure MC? The in-use MC of wood varies with the relative humidity (RH) to which it is exposed. Wood exposed outside, in most of North America, but protected from the rain, will be exposed to 65% RH. Check with your local weather experts at a nearby airport for the RH value in your area. Except for coastal areas or desert climates, 65% RH is a good value throughout the year for almost all people. Exposing wood to 65% RH results in 12% MC in wood.

Wood used inside a home or office in most of North America will be exposed to 50% RH in the summer time and 30% RH in the winter time. These result in 9% to 6% MC within the wood. In fact, we call these conditions 9% EMC to 6% EMC, where the “E” stands for equilibrium.

Many wood properties change when the MC changes. Of greatest concern to many people who work with wood products is the shrinkage that occurs when wood loses MC and the swelling that occurs with increases. Another concern is the amount of warp that can occur when wood dries from its green MC to its in-use MC value.

From a practical point of view, if the MC of wood is within one or two percent of the in-use EMC, the amount of shrinkage or swelling in-use will be well under 0.5 %...almost negligible. So, this is the objective of drying and storage of lumber...to get the MC within 2% of the expected in-use EMC. In other words, the in-use EMC then establishes the ideal final MC for lumber drying. For hardwood lumber, perfect kiln drying will typically dry all the pieces to 6% to 7% MC. For softwood, because the wood is more brittle at lower MCs, the ideal final MC is 9% to 10%; the shrinkage that may occur in-use going from 10% to 7% MC is so small that it is usually not a problem with softwoods.

Measuring MC – As stated, the oven-drying technique can be used to accurately establish the true MC of wood. But the test is destructive; the oven-dried test piece cannot be used for much else except firewood. The test also typically requires 24 hours. Being realistic, it would be impossible to check the MC of every piece of lumber in a kiln load or every piece being used by a manufacturer using the oven-drying test.

So how can the MC be checked? The answer is “Use an electronic moisture meter!”

There are two types of moisture meters used with lumber. One uses pins or needles that are inserted into the piece of wood being tested; the other does not have pins but has a plate that must contact the wood.

Pin Meters – With the pin meter, the electrical resistance between the pins is measured. The resistance value is then converted into a MC estimated value. The theory is that the resistance in wood is affected primarily by the amount of water in the wood. However, each species has a slightly different inherent resistance, so the species must be known and the adjustments made for it. (Traditionally, American-made meters have their calibration based on Douglas-fir; non-American meters have used many different standards.) Further, temperature also has an effect; for every 20 degrees F warmer than room temperature, 1% MC is subtracted from the reading; and for every 20 degrees F cooler, 1% MC is added. I did a test on several hundred pieces of kiln-dried lumber at room temperature of various species using two common USA meters and the results were within ½% MC (in most cases) of the oven-dry MC that I subsequently measured.

If the pins used are insulated along their length, except for the tip, then the MC reading will be the MC in the vicinity of the tip. It is possible with the pin meter, therefore, to obtain the MC variation at different depths.

The practical range for these meters is 6.5% MC to 25% MC. Some meters may provide MC values outside this range, but the reliability of such readings is poor. This unreliability is due to the extremely high resistance at low MCs and the fact that resistance changes very little as the MC changes above 25% MC.

Perhaps the greatest concerns with using these meters are the time it takes to drive the needles into the wood and the two small holes that the pins leave. Further, the MC measured is only the MC in the vicinity of the pins, which leaves most of the piece unmeasured.

Pin-less Meters – With the pin-less meter, a dielectric factor in the wood is measured and the results are converted to an estimated MC value. Although moisture is the greatest factor influencing the value of the dielectric coefficient in wood, the density of the wood is also important. Even with the same species, if there is a density variation within the wood, there will be a similar variation in the indicated MC even though the true MC does not vary.

The main advantage of the pin-less meters is their speed (readings are almost instantaneous); every piece in a load can be measured for MC quickly. These meters can scan an entire piece if the probe/meter is moved across the lumber's surface, and the readings are not significantly influenced by temperature.

Gradient readings cannot be taken. The meter responds more heavily to the MC on the surface closest to the meter. Perhaps the greatest concern when using this meter is the density issue. Therefore, whenever high MC readings are seen, it would be prudent to double check the readings with a pin-type meter to assure that the MC is really high.

In tests on hundreds of kiln dried lumber samples at room temperature, the MC readings were typically within ¾% MC. The practical range for these meters is 4.5% MC to 25% MC. Some meters may provide MC values outside this range, but the reliability of such readings is poor.

Which meter is best?

Both types of meters have several strong features and several limitations. The best meter is actually both of them used together, as the weakness of one is a strong point of the other. I like the pin-less for its ability to scan large areas and many pieces quickly and the lack of temperature sensitivity. I like the pin meter for its gradient ability and small species effect.

When selling lumber, the best meter is the same one that your customer will be using to check the MC of the incoming lumber. If buying lumber, the best meter is the one that your supplier is using. For this reason, avoid purchasing a meter that is not commonly used in the wood industry. In fact, specifying the moisture meter to be used on purchased orders is a great idea.

In all cases, the manufacturer's instructions must be followed if accurate readings will be obtained. Several key items are mentioned here, but check the manual for details. Always use fresh batteries. (I remember one legal case where a person testified that they used the meter several times a day, but on

cross examination, the person did not know what size batteries were used, where the spare batteries were kept, or how to install them. I doubt that he actually used the meter at all.) Some pin meters require the pin to run along the grain; others, across the grain. Most pin meters suggest that the reading be taken immediately after the reading button is pushed. Pin-less meters are designed for certain thickness material and for wood that has an air gap on the other side. Use a calibration plate for the pin-less to assure the meter is in calibration; use a resistance for pin meters.

Specifying MC When Buying and Selling – If MC is an important criteria, always specify the brand of meter, the type of probe, depth of penetration of the needles, number of readings, species correction and similar issues. This extra specification on a purchase order will avoid any conflict between buyer and seller. The truth is that the MC values can vary slightly depending on the user's techniques, the meter type and the meter manufacturer.

(Source: *Independent Sawmill & Woodlot Management* magazine, May/June 2004. Article written by Gene Wengert, president of The Wood Doctor's RX in Madison, WI. For more information or to subscribe to IS&WM call 1-888-762-8476 or website: www.sawmillmag.com.)

You Know You Are Living in 2007 When...

1. You accidentally enter your PIN on the microwave.
2. You haven't played solitaire with real cards in years.
3. You have a list of 15 phone numbers to reach your family of three.
4. You e-mail the person who works at the desk next to you.
5. Your reason for not staying in touch with friends and family is that they don't have e-mail addresses.
6. You pull up in your own driveway and use your cell phone to see if anyone is home to help you carry in the groceries.
7. Every commercial on television has a web site at the bottom of the screen.
8. Leaving the house without your cell phone, which you didn't even have the first 20 or 30 (or 60) years of your life, is now a cause for panic and you turn around to go and get it.
10. You get up in the morning and go on line before getting your coffee.
11. You start tilting your head sideways to smile. :)
12. You're reading this and nodding and laughing.
13. You are too busy to notice there was no #9 on this list.

The Trading Post

The Trading Post is provided as a free marketing service for forestry industry. Only forestry-related advertisements will be accepted. Please submit written ads to the *Timber Talk* editor at least 15 days before scheduled *Timber Talk* publication dates. Ads may be edited to meet space constraints.

For Sale

Hedge Corner Posts. Some hedge logs for hobby lumber. Contact: Joe Straube, Tecumseh, NE. (402) 335-2400.

Electric Bandsaw Mills. One M-324 (\$1200) and one M-267 (\$2195). Contact: 4M Lumber, Ravenna, NE. Phone: 308-452-4032; e-mail: fourm57@Charter.net

Wanted

Logs. Cottonwood, cedar and pine. 4" to 26" diameter, 90"-100" lengths. Below saw grade logs acceptable. Contact: American Wood Fibers, Clarks, NE at (800) 967-4789; email: mvanskike@AWF.com

Hardwood Cross Ties and Switch Ties. Size 7" x 9" – 8' only. **Mixed Hardwood Timbers.** All sizes. **Logs.** C4S, Veneer and C1S, C2S; and C3S logs. Must be able to load 40' containers. Cherry, Walnut, Red Oak, White Oak, Ash, Hard Maple and Poplar logs. **Timbers for Log Homes.** **Car Decking.** Oak or mixed hardwoods. 3"x6"x10'. **Switch Ties.** Oak and mixed hardwood, 7" x 9" – 15', 16', 21', 22, 23'. **White Pine Plank.** #2C, 5 T/LS per month, Rough, green, 1 3/8" x 7 3/8" or 2 1/2" x 9 3/8", up to 1/3 – 8', bal. 10'-16' lengths. 6 1/4" x 12" - 10 to 16'. 4"

x 12" rough KD. **Walnut Sawlogs.** Woods run, #1, #2, #3 grades. **Log Inspector** to inspect logs before shipment. **Cross Tie Buyers.** Good incentive arrangements. **Man to Inspect Logs Before Shipment.** Various locations. **Mills to Produce Oak Car Decking.** Surface, drill – oak or mixed hardwoods. Contact: W. Preston Germain, Germain Lumber Co., Inc., Pittsburgh, PA 15251; 402-782-3240; FAX: 412-781-2551; e-mail: germainlumber@verizon.net.

Services and Miscellaneous

Sawmill Service and Supplies. Saw hammering and welding. Precision knife and saw grinding. Certified Stihl chainsaw sales and service. Contact: Tim Schram, Schram Saw and Machine, PO Box 718, 204 E. 3rd St., Ponca, NE 68770, (402) 755-4294.

Used Portable Sawmills. Buy/Sell. Contact: Sawmill Exchange (800) 459-2148, (205) 661-9821.

Forest Products Equipment Magazine. FREE monthly trade publication for the forest products industry. For a sample magazine or free subscription call 1-800-422-7147, email: jfoatera@mrpllc or visit the website: www.mrpllc.com and click on Forest Products Equipment Magazine.

Timber Sales

The following listings are for stands of timber or logs being offered for sale by owners or persons of delegated authority. Timber was cruised and/or marked for harvest by Nebraska Forest Service or other professional foresters. Volumes in board feet (Doyle scale unless otherwise indicated) are estimates by the forester. If no volume or forester is listed, the trees or logs were not appraised or marked by a forester and the listing is included only as a marketing service to the owner. Listings are prepared according to information at the time of publication.

Item	Forester/Date	Contact
1. Black Walnut (10 trees)		Gary Penne Village of Platte Center PO Box 125 Platte Center, NE 68653 (402) 246-9204 Location: Platte County

You know you're from Nebraska if....

football schedules, hunting season, and harvest are all taken into consideration before wedding dates are set.