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In This Issue

Lumber Market News	1
Hardwood Lumber Price Trends	2
Forestry Field Day 2006	2
Water, Water, Everywhere	2
Accurately Measuring Moisture	4
2 x 4s?	5
Nebraska Forestry Industry Spotlight	6
Coming Events	6
The Trading Post	7
Six Simple Marketing Steps to Improve Profitability	7

Editor: Dennis Adams Graphic/Layout: Anne Moore

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. Established customer/supplier relationships are a major factor in determining prices and quantities for key species and grades. Cultivating new customers for available production is challenging. Weather conditions across the North Country have been for any full. How



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favorable for logging and log decks are full. However, there are concerns that limited demand for pulpwood may adversely affect sawlog availability.

Southern. The stability of 4/4 FAX and 1F Red Oak is a key issue among area sawmill and resale contacts. There is still activity, but volumes ordered and shipped are off from previous levels. Meanwhile, activity for KD 4/4 #1C Red Oak remains consistent in terms of both prices and quantities. Export markets are playing a vital role for a number of species and grades, including #1C and Btr White Oak, and #1C Poplar and Red Oak. Solid offshore demand has helped keep prices firm in the domestic market.

Appalachian. Mills and resalers indicate moving 4/4 FAS and 1F Red Oak production is challenging. Conversely, markets for 5/4 FAS and 1F Red Oak are sound and activity for the common grades has improved. White Oak business is solid, especially for upper grades. Activity involving heart dimension products has softened with the exception of 7x9 crossties.

International. Global demand for North American hardwoods is favorable. European buyers are active now that the traditional summer holidays are winding down. Sales into Asian markets, China in particular, remain brisk. Competition in the global marketplace has restricted significant upper price movement for most North American hardwood items, but has provided a valuable outlet for a number of species and grades.

Global shipments of U.S. hardwood lumber for the first 6 months of 2006, according to the USDA Foreign Agricultural Service, are 692,734,671 board feet, up 4.85% from the first 6 months of 2005. Assuming 11,000 board feet of lumber per 40' container, the increase if 32,000,000 board feet equals an additional 2,910 loads shipped offshore during the first half of this year. Combined shipments to China and Hong Kong increase 16.79% January through June 2006 compare to 2005. There were notable increases in activity into Vietnam, just shy of 60%. Demand for North American hardwoods from Europe has been consistent, increasing 3.13% from the same period last year. White Oak accounts for 41% of the total volume of hardwood lumber exported to the European Union.

(Source: Condensed from *Hardwood Market Report*, August 26, 2006. For more information or to subscribe to *Hardwood Market Report*, call 901-767-9216, or email: hmr@hmr.com.)

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by the Nebraska Forest Service is implied.

Hardwood Lumber Price Trends

	FAS				#1C				#2A			
Species	9/05	12/05	3/06	6/06	9/05	12/05	3/06	6/06	9/05	12/05	3/06	6/06
Ash	730	730	670	670	565	575	575	575	415	415	365	365
Basswood	710	710	795	785	435	435	435	425	225	225	225	225
Cottonwood	600	600	600	600	400	400	400	400	220	220	220	220
Cherry	1570	1570	2330	2350	1330	1320	1290	1305	640	625	575	585
Elm	635	635	635	635	420	420	420	420	235	235	235	235
Hackberry	475	475	475	475	455	455	455	455	265	265	265	265
Hickory	770	770	770	770	630	650	650	650	380	405	415	435
Soft Maple	1200	1200	1525	1510	800	790	825	825	410	400	425	415
Red Oak	1150	1150	1125	1125	760	740	730	720	515	500	500	500
White Oak	895	910	910	910	625	625	590	590	400	400	400	400
Walnut	2040	2040	2040	2055	1020	1030	1045	1100	640	650	685	745

Note: Hardwood prices quoted per MBF, FOB mill, truckload or carload quantities, 4/4, rough, green, random widths and lengths. 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.)

Forestry Field Day 2006

"Growing Quality Trees" is the theme for Forestry Field Day 2006, which will be held Saturday, October 7, at Horning State Demonstration Forest near Plattsmouth.

The 2006 program features four concurrent sessions in which professional foresters and other tree experts will demonstrate how to plant and manage a forest. Concurrent sessions are: 1. Growing Trees from Seed, 2. Forest Management, 3. Fire Resistant Landscaping, and 4. Tree Identification., and 5.. Concurrent sessions begin on the hour from 2:00 p.m. through 5:00 p.m. . Added attractions include hayrack rides through the forest, educational booths and exhibits, portable sawmill demonstrations, and portable post peeler demonstrations. Visitors may also try sawing a log with a cross-cut saw. Professional foresters will be available to answer questions.

Admission to Horning State Demonstration Forest and all Forestry Field Day activities is free. No preregistration is required.Outdoor clothing and footwear suitable for walking in the forest is recommended.

Horning State Demonstration Forest is located two miles south of Plattsmouth on Horning Road. Signs will direct the way from U.S. Highways 73/75 and 34. Because Horning State Demonstration Forest is a forestry research/demonstration facility, Forestry Field Day is one of the few days that the facility is open to the public. Horning State Demonstration Forest will be open to Forestry Field Day visitors from 1:30 p.m. to 5:30 p.m., October 7.

Forestry Field Day 2006 is sponsored by the Nebraska Forest Service, University of Nebrask–Lincoln Extension, the Lower Platte South Natural Resources District and the Nebraska Statewide Arboretum. For more information contact Dennis Adams at (402) 472-5822, e-mail: dadams2@unl.edu, or Becky Erdkamp at (402) 472-9869, e-mail: rerdkamp2@unl.edu, or visit the website: www.nfs.unl.edu/NFSCalendar.htm.

Water, Water, Everywhere

Water is the lifeblood of a tree, so to speak. A living tree can contain, by weight, as much water as wood. The bark is an excellent water barrier and it serves to, among other things, keep the water in the tree. But once you harvest the tree, cut it into logs, and then saw the logs into lumber, the exposed wood quickly begins to lose this water - a process known as drying. It's important to control this drying process so that the final product has the quality characteristics that you and your customers expect and need.

There are many aspects of drying to consider, of course, and other articles in this Special Section will touch on these. Here, I'll focus upon moisture content – the weight of water in a piece of wood compared to the oven-dry weight of the same piece of wood- and why it's important. In my work as a consultant, I find that ³/₄ of the problems I deal with are typically related to moisture content (MC). Either the person drying the lumber did not know the moisture content requirements for the customer, or the drying operation was sloppy.

Before getting to the specifics of moisture content, though, perhaps we should first step back for a moment, and answer a very basic question: Why should wood be dried?

The foremost answer to that question is that wood shrinks as it loses moisture and swells when it regains moisture. As an approximate rule of thumb, each 4 percent MC change in dry wood will result in a 1/2 - 1 percent size change across the grain (wood seldom shrinks or swells in length). Naturally, the precise amount of shrinkage will vary from species to species, with species such as teak being very stable while dense hardwoods such as oak are more unstable.

Wood is also dried in order to eliminate the risk of fungal infestations – rot, mildew and stain. Under 22 percent MC, there is no risk of these infestations.

Another reason for drying is that wood will glue and machine better at low MCs. For softwoods, ideal MCs for machining and gluing are 9 to 12 percent MC; for hardwoods, 6 to 7 percent MC. Most finishes also work better at low MCs.

Finally, improved fastening is yet another reason for drying. When the MC changes, nails and screws will loosen or lose their holding power, especially if installed in wet lumber that then dries to lower MCs.

Required or recommended MC levels

Depending on the product being dried, and how this product will be used, the required final moisture content at the end of drying will vary. For someone involved in drying, achieving the correct final MC is critical. Usually, the customer assumes that the product they are buying is at the required level. Customers may not give precise MC levels; rather, they assume that the seller knows and has achieved the correct values. Poor communication about the required final MC frequently leads to dissatisfaction for the customer and, perhaps, even legal action. As a general rule, customers will be satisfied if the MC of the lumber is very close to the MC of the wood in use.

The MC of wood in use depends on the relative humidity (RH) surrounding the product. Temperature is not a factor in determining the MC in use, although MC changes are faster when the wood is warmer. To simplify discussions, the moisture in the air often is termed the EMC (equilibrium moisture content) rather that the RH. The EMC is numerically equal to the MC that wood will eventually achieve when exposed to a given relative humidity.

Some key moisture values to consider are in the table below. Note: "Exterior" means outside climate, but not exposed to direct rain; "interior" means inside an office or home.

The application of the wood is also important. Here are some general applications and the typical MC associated with each:

Key Moisture Values							
RH	МС	EMC	Environment				
100%	28%	28%	Very wet; foggy				
80%	16%	16%	Tropical island; coastal climates;				
			humid				
65%	112%	12%	Exterior in moist of North Amer-				
			ica; interior in coastal areas				
50%	9%	9%	Interior in summertime for most				
			of North America; dry				
3-%	6%	6%	Interior in wintertime for most of				
			North America; dry				
0%	0%	0%	Oven-dry				

Softwood construction lumber – MC in-use is typically around 10 to 12 percent MC, but can range from more than 30 percent to less than 6 percent. In practice, most lumber will be dried to under 19 percent MC, but not much below 12 percent MC.

Lumber for bending – for severe bends, 25 percent MC is ideal. Fore shallow bends, 15 – 20 percent MC is acceptable.

Lumber for treating – In most cases, the outer shell must be less than 30 percent MC. Often, for construction lumber that will be treated, the entire piece will average about 20 percent MC or slightly lower.

Furniture, cabinets and flooring – because further drying in-use causes many more problems than a slight regain of moisture for these products, the preferred level in most cases is 5.5 to 7 percent MC.

Lumber for barns, fences and other exterior locations – lumber for such uses are typically dried to 16 percent or slightly lower.

Being specific

Finally, let me close with a few definitions. Typically, you'll find that using general terms to describe the moisture content may not be adequate. Whether you're a producer or a manufacturer, you should always be as specific as possible in expressing your MC requirements or needs.

Green moisture content: This is the moisture content of wood in the living tree. The term has been used to refer to lumber that is more than 30 percent MC, but this is an incorrect usage. Green MC levels vary with species, but are typically 75 to 100 percent MC. Douglas fir has 30 percent green MC; white oak, 65 percent MC; red oak, 75 percent MC; southern pine, 100 percent MC; and redwood and cottonwood, over 150 percent MC.

Wet: There are three definitions for this term. Lumber that is over 30 percent MC is often called "wet." Softwood lumber over the specified MC level on a grade stamp is called "wet." Finally, hardwood lumber that is over 8 percent MC is often called "wet," especially if 7 percent MC is the expected maximum MC level.

Air-dried: Lumber that has been air-dried to approximately 20 to 30 percent MC is called air-dried.

Partly air-dried: Lumber that has been air dried to approximately 30 to 50 percent MC is referred to as partly air-dried (PAD).

Predried: Hardwood lumber dried to less than 25 percent MC (approximately) in a predryer is called predried.

Kiln-dried (softwood): Softwood lumber that has been dried in a kiln to under 19 percent MC is called kiln-dried. The expression often includes a MC level, such as KD15, meaning that most of the pieces are under 15 percent MC. Most of the time, the maximum MC level is specified in the grading rules. Minimum MCs are not specified, but could be important to some customers or wood manufacturers.

Kiln-dried (hardwood): hardwood lumber that is under 10 percent MC may be called kiln-dried, especially by producers. For most buyers and users of kilndried lumber, however, kiln-dried means lumber that is 6 to 8 percent MC, or perhaps 5 to 7 percent MC. There is certainly some confusion about the exact definition. It's best to use the tem "kiln-dried" along with a MC range – such as "kiln-dried to 5 to 7 percent MC." It's generally expected that there may be a few (but very few) pieces over 7 percent MC and under 5 percent MC.

Final MC: The moisture content when the lumber leaves a kiln or other drying system is called the final MC.

(Source: *Independent Sawmill & Woodlot Management* magazine. May/June 2003. Article written by Gene Wengert, president of the *Wood Doctor's Rx* in Madison, Wisconsin. For more information or to subscribe to IS&WM, phone: 1-888-762-8476 or website: www.sawmillmag.com)

Accurately Measuring Moisture

Electric moisture meters are so named because hey measure an electrical property of a piece of wood, then convert that measurement to a corresponding moisturecontent (MC) value, usually read directly on the meter. Depending on the type and manufacturer of the meter, the electrical property measured may be resistance, conductance, dielectric constant, or a power-loss factor.

Today, producers as well as users utilize these portable electric meters to monitor MC and to provide data for statistical process control programs. If they're used properly, these meters can provide a rapid, convenient and, for most purposes, sufficiently accurate means of determining wood MC when this is lower than 30 percent.

Two types of portable electric meters are currently in widespread use: pin and non-pin. Because both types of meters measure an electrical property rather than directly reading MC, some natural variation will occur in the readings. This means that two different meters measuring MC on the same piece of wood may produce slightly different readings from time to time.

The pin's the thing – With pin meters, also called resistance meters, pin or needle-like electrodes are driven into the wood. The meter measures the electrical resistance or conductance between the pins (electrodes), then converts this to an MC reading. Two styles of pin meters are available: When the pins are mounted in the meter case, they are usually not insulated and measure about 3/8-inch long. In the other style of pin meter, the pins are mounted in some type of hammer device for driving the pins into the wood, and this hammer is connected to the meter by cable. These designs usually use 1-inchlong pins that are insulated except at the tips.

Both pin-meter styles read the MC of the wettest areas that contact the un-insulated part of the pin. Keep in mind that the effective measurement range of resistance is 7- to 30- percent MC; below 7-percent MC, the electrical resistance is too high for reliable readings. For example, at 7-percent MC, the resistance for red oak is about 15,000 megohms and for hard maple, 72,000 megohms. Above 30 percent MC, electrical resistance has too much variability and shows too little change for reliable readings. At 3 percent MC, the resistance for red oak is about 0.50 megohms and for hard maple, about 0.60 megohms. Some tips on using a pin meter:

• Selecting the location on the lumber for measurement is important. For unpiled lumber, this location should be at least 2 feet from the end of the piece, about in the middle of the wide face of the board. If you're measuring pieces of molding, turnings or other products less than 4 feet in length, select a location approximately in the middle of the piece. For piled lumber, you can take readings on the edge or narrow face of the board; remember, though, that the MC of edge pieces may not represent the MC of interior pieces. Readings from the end grain of boards will not usually represent the average MC of the piece.

• Although a few meters require the pins to be across the grain, it's generally best to position the pins on the wood surface with needles parallel to the grain. Orienting the pins parallel to the grain is important when MC exceeds 15 percent; for readings below 15 percent MC, pin alignment is not critical.

• Always force the pins into the wood to the required depth. When using meters with pins mounted in a meter case, however, be careful not to hammer or pound on the case; apply hand pressure only, pushing the pins to their full length into the wood. Insulated pins should be driven 1/5 to 1/4 of the thickness of the piece – for instance, for 4/4 lumber, drive pins ¹/₄ inch deep; for 8/4 lumber, drive 1/2 inch deep.

• If your readings drift, use the reading taken immediately after the electrode reaches the desired depth.

• Take MC readings at more than one location per piece. Doing so will help locate any wet pockets;

• If lumber temperature is below 60 degrees Fahrenheit or above 90 degrees F, you'll have to make temperature corrections. Meters are usually calibrated for 70 degrees F to 80 degrees F (21 to 27 degrees Celsius). If lumber is above or below this temperature by 20 degrees F (11 degrees C) or more, corrections should be made (correction tables are available from the meter's manufacturer).

• You may have to make species corrections. Some meters have provisions for re-setting species or species groups. Species corrections are usually very slight (1 percent) for most North American hardwoods; correction tables may be greater for some tropical woods. Correction tables are also available from the meter manufacturer.

Going pinless – Non-pin (dielectric) meters utilize a sensor plate that does not physically penetrate the wood. Instead, the sensor plate is held in contact with the wood surface, and an electric field is projected into the wood. An electrical property such as the dielectric constant or power-loss factor is measured and then converted to the MC reading. Effective range of nonpin meters is about 5 percent to 30 percent MC – a lower limit range about 2 percent lower than that of pin/resistance meters.

• As with pin meters, selecting the proper location for MC measurement is important. For lumber, the location should be at least 2 feet from the end of the piece, and about mid-width. Position the meter so that no metal rollers or supports are on the back side of the board opposite the meter location; it's best to position the back side of the board so that it is exposed to air. For moldings, turnings or other products less than 4 feet in length, select a location in approximately the middle of the piece. Use the meter on the edge or narrow face of piled lumber only if the sensor plate does not overlap adjacent boards.

• Firmly press the sensor plate of the meter against the wood surface. Non-pin meters are designed to give readings of average MC of the cross section of the lumber up to about 2 inches thick.

• Take MC readings at more than one location per piece. Since non-pin meters don't make holes in the wood, you can take your readings along the length of the wood without marring the surface. Taking several readings per board will give an indication of MC variation along the length and easily locate wet spots.

• Because non-pin meters are greatly influenced by the specific gravity or density of the wood, you must make allowances for both of these factors. Some meters have built-in species adjustments; use this feature it it's available.

Affecting accuracy – The following situations may affect the accuracy of any reading:

Wet wood surface as a result of rain, snow or ice – when the probe of a pin meter is inserted, liquid moisture on the wood surface can enter the lumber. This can result in incorrect readings, even when insulated pins are used. Do not use non-pin meters when surface moisture is present; readings will not be accurate.

Moving a meter from room temperature to a hot, humid kiln or a very cold outdoor environment – If a meter or probe is brought from a cold environment into a warm one, and the equipment is colder than the dewpoint temperature of the warm air, moisture will condense on the equipment. This condensation will cause an extremely high reading, or may limit the reading to 10 percent MC. Low MC cannot be measured until the moisture is evaporated from the equipment, which may take several hours. It's best to use the meter at room temperature.

Use of pin meters in very low humidity conditions – In a very dry environment (below approximately 30 percent RH), or when very dry lumber is planed, a static charge can develop on the lumber or the meter cable that can cause bad meter readings. The meter may also begin to indicate an MC value before the pins even tough the lumber. You may have to take MC readings on a grounded metal table in order to dissipate the static charge.

Wood treated with certain wood preservatives or fire retardants – The meter readings of wood treated with waterborne salt solutions of wood preservatives or fire retardants will generally be too high when wood MC is higher than approximately 10 percent. Wood treated with water-borne oxide solutions of wood preservatives such as chromated copper arsenate, type C (CCA-C), will give fairly accurate readings up to about 25 percent MC. Treatment of wood with oil-borne preservatives generally does not affect meter readings.

Adapted from "Portable Electric Moisture Meters" which appeared in Drying Hardwood Lumber, a USDA Forest Service publication.

(Source: Article by Sidney Boone and Paul Bois for *Independent Sawmill & Woodlot Management* magazine, June/July 2002. For more information or to subscribe to IS&WM, Phone 1-888-762-8476 or Website: www.sawmillmag.com)

2 X 4s?

Why doesn't a "two-by-four" measure two inches by four inches?

Before the invention of mass-scale surfacing equipment, most lumber was sold to the construction trade in rough form. In the "good old days" a "two-by-four" was approximately two inches by four inches. Even then, two inches by four inches was a rough estimate - cutting equipment trimmed too thick or too thin on occasion.

As the construction trade demanded smooth edges, surfacing machinery was created to handle the task automatically. These devices reduced the dimensions of the rough lumber by at least one-eighth of an inch in thickness and in width.

The radio talk-show caller who posed this Imponderable wondered why he got gypped by buying finished "two-by-fours" that measured 1 5/8 inches thick by 3 5/8 inches wide. The answer comes from H. M. Niebling, executive vice-president of the North American Wholesale Lumber Association Inc.:

After the early planers were used, profile or "splitter" heads were developed for planers, wherein one could take a 2" x 12" rough piece and make 3 pieces of 2 x 4s in one surfacing operation [i.e., as the lumber went though the planer it was surfaced on four sides and then, at the end of the machine, split and surfaced on the interior sides]. Unfortunately, the "kerf," or the amount of wood taken out in this splitting operation, further reduced the widths.

The size of these "kerfs," three-eighths of an inch, didn't allow processors to make three pieces 37/8 inches wide (three times 37/8 plus three times 3/8 to represent the "wastage" of the kerfs, equals 123/4 inches, wider then the original 12-inch rough piece). This is why the dimensions of the finished piece were reduced to 15/8 inches thick by 35/8 inches wide.

If you think this is complicated, Niebling recounts other problems in settling the dimensions of lumber. Fresh-cut lumber is called "green" lumber, whether or not it is actually green in color at the time. Green lumber must be dried by natural or artificial means. When lumber dries, it shrinks and becomes stronger. Some lumbermen believed that either dry lumber should be sold smaller in size or that green lumber should be sold larger. Recounts Niebling: AThe result was that $2 \times 4s$ surfaced dry comes out at $1 \cdot 1/2$ " by $3 \cdot 1/2$ " instead of the $1 \cdot 5/8$ " by $3 \cdot 7/8$ ". To settle the fight between green and dry producers, a green 2×4 is surfaced to $1 \cdot 9/16$ " by $3 \cdot 9/16$ ". In effect, they reduced the green size too to settle the fight.

The lumbermen we spoke to agreed that the pintsize two-by-fours provided the same strong foundation for houses that the rough original-sized ones would. One expert compared the purchase of a two-by-four to buying a steak. You buy a nice steak and it is trimmed with fat. Sure, the butcher will trim off the fat, but then he'll raise the price per pound. One way or the other, you pay.

(Source: Why Clocks Run Clockwise and Other Imponderables)

Nebraska Forestry Industry Spotlight



To encourage the preservation of our Great Plains heritage and culture by offering historically designed post and beam barn and outbuilding kits is the mission of Sand Creek Post & Beam located in Wayne, Nebraska.

Sand Creek Post & Beam manufactures traditional oldfashioned wood barns and outbuildings in kit form, featuring full dimension, roughcut lumber and big 6x6, 6x8 and 6x10 posts and beams for an authentic, rustic look and feel. Using Eastern red cedar for the sill plates, and ponderosa pine as their standard choice of wood for the rest of the kit, these barns are becoming very popular with acreage owners and those wanting an attractive, functional building on their property.

Complete with board and

batten siding, and custom made barn windows, doors, cupolas and other accessories, Sand Creek Post & Beam's barns can now be found in ten states. Accord-

and Cupola.



ing to Len Dickinson, President of Sand Creek Post & Beam, they have used over 500,000 board feet of lumber since the company began operations in early 2005. While available in many different styles and sizes, one barn kit shipped to the Kansas City area used almost 50,000 board feet and was an 80' long, 56' wide gam-

> brel including an 18'x80' leanto. Their barn kits have been used as garages, workshops, horse barns, for commercial use, and even for cabin and home conversions.

Custom designed, full ¼" steel joinery plates are used to join the posts and beams together, creating an extremely strong building framework while allowing the beauty of the exposed timbers to show through.

Sand Creek Post & Beam can be contacted at: 215 N Pearl Street, Suite 200,

Wayne, NE 68787; telephone 402-833-5600; or visit their website at www.sandcreekpostandbeam.com.

Coming Events

Len Dickson (left), President and Cal Wiechman (right),

purchasing agent with Knox County eastern redcedar

- Oct 3-4 Great Plains Society of American Foresters Meeting. Superior, NE. Contact: Steve Rasmussen at 402-370-4024, email: srasmussen2@unl.edu.
- Oct. 7 Forestry Field Day. Plattsmouth, NE. Cost: FREE. Contact: Dennis Adams at 402-472-5822, email: dadams2@unl.edu.
- Nov. 18Central Region Woodland Stewardship Conference. Nebraska City, NE. Cost: \$41.00.
Contact: Dennis Adams at 402-472-5822, email: dadams2@unl.edu.

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

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

<u>Electric Bandsaw Mills.</u> 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

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.

Six Simple Marketing Steps to Improve Profitability

The "ins and outs" of marketing lumber products are rarely compared to rocket science. However, like putting a spacecraft into orbit, there are critically important steps in profitably converting a standing tree into salable product. Many first-time sawmill operators and wood-product manufacturers have limited knowledge of the marketing process. Few have a working knowledge of all the skills and insights needed to become a successful marketer.

This month's column focuses on six simple marketing steps to improve your sawmill's bottom line. The insights provided are courtesy of one successful marketer of specialty wood products.

Krantz Wood Sales – John and Marci Krantz of Forest, Minnesota specialize in providing lumber products to the wood-carving industry. Begun in 1987 as a part-time venture, Krantz Wood Sales in now full-time and specializes in basswood and butternut carving stock, ovals, crosscut rounds, glued-up panels, barkon boards and other wood items in demand by carvers and woodworking hobbyists.

Although not sawyer himself, John Krantz has over 35 years experience in working with the sawmill industry. Currently, he buys logs and contracts the lumber processing to small mill operators who produce "cut to order" stock for his specialty business.

Step 1 – Decide on Your Market Niche - "Before you saw your first board, have some knowledge on the market intended for the board," emphasizes John Krantz. "the thickness and width of the boards dictate your market opportunity." For instance, Krantz offers the following specialty-market examples. "The scroll-saw market prefers wide boards that are ½ inch or thinner. Wood turners prefer hardwoods that are 3 inches or more in thickness, sometimes square and sometimes wide for turning into bowls. The wood-burning artist prefers light-colored woods, usually less that 1 inch thick."

Krantz's bread-and-butter is the carving market, which pays premium prices for 3-,4-, and 5-inch thick,

properly sawn, soft hardwoods. The general craft market uses material that is mostly 1-inch and under in thickness. The intarsia market wants colored wood, including boards with blue and gray stain.

"If you plan to saw for the cabinet industry," Krantz explains, "a nice clear 1-inch-thick board is great. If you are located in farm country, then lower grade but wide 2-inch planks sawn fir semi-rot resistant species are good sellers.

The important point is to figure out what business you are in (your "niche") before sawing the first log. Krantz notes, "A sawmiller—whether large or small should know what he does best and then become a specialist in that market."

Step 2 – Manufacture Quality Products - Most customers are not eager to pay premium prices for knots, splits, spots, streaks, and bowed boards. Customers prefer 100-percent-usuable wood. End-trimming boards, defecting-out knots, straight-lining the edges, and planing the surfaces are all steps that will make your product more desirable to your customer.

"In my business," Krantz explains, "board length is often not a determining factor in marketing wood as a specialty item. We rarely sell boards longer that 4 feet and we sell many boards less that 1 foot in length."

If you're not a believer in the value of short boards, Krantz offers this challenge. "Go into a brand-name woodworking store and quiz them about board length. They will tell you that they often saw long boards into short boards for customers. This gives the sawmiller an opportunity to defect clear cuttings from larger boards into high-grade, attractive, shorter pieces. And don't forget wide boards, even short ones, are almost irresistible to a customer."

Krantz's motto is that a quality product will sell itself. He illustrated this statement my saying, "A customer told me the other day that he would drive 200 miles for my wood because of its quality."

Step 3 – Try to Sell Retail – Why let someone else

take 40 percent of your profits when you can do it yourself? John Krantz's advice, "Take your product directly from the sawmill to the retail user!"

Selling retail at a higher price sounds good, right? But the big question is how to find the retail user. In today's world of information technology, the Internet is becoming a popular way to retail products from your home or office. Establishing a retail outlet at your mill could be the right choice depending on location, traffic flow, etc. For Krantz Wood Sales, the product is brought directly to the potential user. Krantz notes, "We pay to rent tables or space at wood-carving shows. Others may wish to participate in art shows, woodturning exhibitions, flea markets, county fairs, or anywhere a crowd attends. Think "out of the box".

One in every seven families in the U.S. enjoys a hobby involving wood-working of some sort, so this is a market waiting to be tapped. Krantz acknowledges, though, that selling retail takes extra time and sales for his products are typically less that \$50 per customer. He notes, however, "The biggest advantage is that the customer sees your product first-hand. Once the customers is satisfied with your product, he or she will be a retail customer for life. And they will tell their friends!"

Step 4 – Presentation is Worth 50 Percent of the Sale – Organizing your product, whether in your lumberyard, shop, or at a retail show, has a direct bearing on sales. Krantz takes some simple steps to present his product for the benefit of customers. He says, "When I'm at a carving show, I always bring several small rolls of carpet to lay on the floor. I ask for wall space to lean my larger products upright and stack similar sizes together by species. Marci and I use tables for small pieces and use a table cover with colors to accent the wood. It is important to keep the small pieces at waist lever, so customers can easily view and measure the product."

Krantz points out the importance of "being around the wood" to answer customer questions. He also stresses that it's best if the owner or a knowledgeable associate handle the booth space. "The customer will lose faith in your product if you send someone to "man" your booth who cannot answer the simpler questions."

Another "presentation pointer" that Krantz practices is his shirt selection. "I wear an orange shirt since it stands out in the crowd. You would be surprised at the number of references the other show exhibitors give you. Go see the fellow in the orange shirt is heard more that once at the show."

Krantz also prints his business cards in bright

orange. "They will certainly stand out from others in a pile of cards" he chuckles.

Step 5 – Price for the Market – Customers attending an art show are much more willing to pay higher prices that folks stopping at your mill. One of the big differences is that "mill prices" are typically commodity prices. Art show prices tend to be specialty markets where the sky can be the limit. Also, prices at bonafide shows are generally not negotiable, whereas someone visiting your mill may expect to play the "used car game" with you.

Krantz says, "Set your price by pricing each board or piece individually and then stick with it. When customers ask me for a senior discount, I tell them the discount is already included in the price.

Krantz typically markets his product at the carving shows in the Midwest. Last winter he traveled to a carving show in Arizona. "I increased my retail prices 10 to 15 percent to cover the extra expense of a show 1,700 miles from home. Since our producer is well known throughout the country, the price increase had no effect on our sales. We sold 9 percent of our show inventory in two days."

Step 6 – Stay Close to Your Customers – One of the "secrets" for the success of Krantz Wood Sales is the attention given to the customer. Remember, to make a profit you need to satisfy the needs and wants of customers.

The philosophy of Krantz Wood Sales is that every customer has a unique special need. "I always keep a notebook handy," Krantz explained, "to jot down the name, address and special needs of customers. Sawmill operators should to the same." He continued, "When you saw a product a customer can use, check you notebook and contact them. This is a special touch that keeps the customer coming back to you time and again."

Final Thoughts – So there you have it: six simple marketing steps that can get your business over the hump and make it a profitable venture. None of the six steps requires rocket science.

John Krantz sums it up by emphasizing, "The big difference between what sawmills need to do and what they've traditionally done is that they have to start identifying the market and then work backward to the raw material. It's not that way in a commodity business. Sawmillers need to do some homework and find out what niche markets are best suited for their operation, and then find ways to supply them."

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

> You know what the "sea of red & white" is.