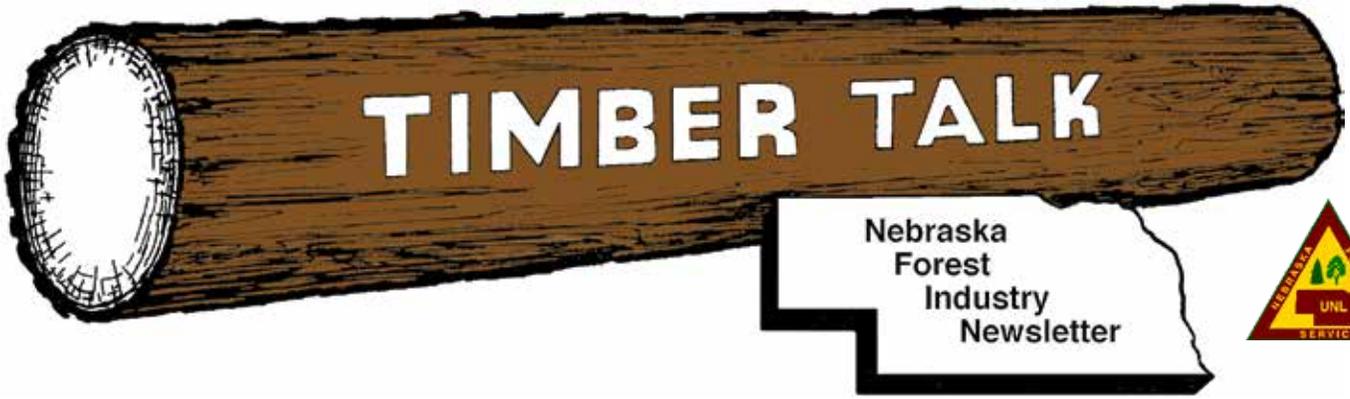


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Editor: Adam Smith
Graphic/Layout: Karma Larsen

The Nebraska Forest Service publishes **Timber Talk** four times annually (March 1, June 1, September 1, and December 1) to serve the forest industry of Nebraska. All questions and correspondence concerning **Timber Talk** should be directed to:
Adam Smith, **Timber Talk** Editor
Nebraska Forest Service
203G Forestry Hall
P.O. Box 830815
Lincoln, NE 68583-0815

Phone 402-472-1276
FAX 402-472-2964
asmith11@unl.edu
www.nfs.unl.edu



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Note from the Editor: 2016 Distribution Schedule

In order to make for a more consistent distribution of the Timber Talk Newsletter throughout the year, we will be changing the distribution schedule of Timber Talk to a conventional quarterly timeframe. Beginning in March 2016, Timber Talk will be distributed in the first week of March, June, September, and December.

Lumber Market

Appalachian. Monthly housing data have been sporadic for some time. However, the annual trend is upward. Through August 2015, new single family home permits rose 9% (unadjusted) over the same period in 2014; starts were up 11.1%; and completions increased 4.4%. These are significant gains, which have not resulted in similar demand increases for hardwood finished goods or hardwood lumber. Consumer preference shifts to painted cabinets and moldings/millwork, as well as engineered wood flooring over solid wood flooring have cut into market share. International sales and shipments have declined year-to-date, also. Hardwood lumber production has been and is adapting to demand, but the process is lengthy. In the meantime, oversupply continues to pressure pricing. The number of items effected has declined. Red Oak and Hard Maple availability is more in line with buyers' needs. On the other hand, Cherry, Walnut, Hickory, and Ash supplies are outpacing interest.



Northern. Sawmill production has adjusted down over time. Within the last few weeks, some buyers have stepped up green lumber purchases to take advantage of low prices and the remaining days for optimal air drying. Together, these two developments have put green lumber supply and demand closer in balance. The prospect of increased domestic and export business is encouraging but nothing has developed at this point to signal a meaningful change in kiln dried lumber demand. At a minimum, supplies are adequate to cover the market's needs for most any thickness and grade combination in most any species. However, the excesses have declined taking with them urgency and distressed sales. In general, there is adequate business to keep kiln dried lumber inventories manageable and prices steady.

Southern. Most mills that want logs, have logs. Some mills that have logs wish they had fewer. Timber and log prices have not declined at the same rate as lumber prices. Timber purchased a year or two ago is being harvested now, and that timber was purchased in a rising lumber market. It is a challenge for sawmill operators in this or any region to obtain a reasonable return on investments. Sales operations hope that mill output reductions and stronger demand will correct the imbalance and improve pricing.

Hardwood Lumber Prices - Green												
Species	FAS				#1C				#2A			
	9/15	6/15	3/15	12/14	9/15	6/15	3/15	12/14	9/15	6/15	3/15	12/14
Ash	1120	1160	1155	1100	695	800	775	710	465	530	500	475
Basswood	885	885	885	885	565	565	565	565	310	310	310	310
Cottonwood	765	745	725	705	545	535	515	500	260	260	260	260
Cherry	1220	1310	1310	1355	845	920	955	955	515	590	600	620
Elm	650	650	650	650	420	420	420	420	300	300	300	300
Hackberry	530	530	530	530	480	480	480	480	305	305	305	305
Hickory	850	905	980	1000	590	705	820	835	460	545	615	615
Soft Maple	1275	1275	1295	1295	780	780	830	845	520	520	535	550
Red Oak	965	1015	1185	1200	605	605	785	885	500	500	625	750
White Oak	1310	1310	1385	1430	660	660	900	900	475	490	620	685
Walnut	2450	2635	3015	3040	1270	1350	1620	1645	730	775	1015	1035

Note: Lumber 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, northern soft grey elm, unselected 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*, last issue of month indicated. To subscribe to Hardwood Market Report call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

Hardwood Lumber Prices - Kiln Dried												
Species	FAS				#1C				#2A			
	9/15	6/15	3/15	12/14	9/15	6/15	3/15	12/14	9/15	6/15	3/15	12/14
Ash	1550	1640	1640	1570	1050	1160	1150	1075	770	800	800	785
Basswood	1195	1210	1210	1190	800	815	815	785	510	510	510	495
Cottonwood	980	960	940	900	730	715	695	660	----	----	----	----
Cherry	1795	1880	1880	2145	1280	1330	1330	1515	870	905	905	1010
Elm	----	----	----	----	----	----	----	----	----	----	----	----
Hackberry	----	----	----	----	----	----	----	----	----	----	----	----
Hickory	1530	1555	1575	1575	1155	1255	1335	1335	895	1055	1105	1105
Soft Maple	1710	1800	1735	1780	1080	1175	1120	1140	785	870	820	835
Red Oak	1505	1575	1675	1765	915	950	1220	1350	780	795	1030	1080
White Oak	1955	1955	2015	2040	1180	1200	1440	1500	855	855	1100	1180
Walnut	4015	4140	4255	4090	2125	2165	2300	2320	1400	1435	1580	1595

Note: Kiln dried prices in dollars per MBF, FOB mill, is an estimate of predominant prices for 4/4 lumber measured after kiln drying. Prices for cottonwood and hackberry from Southern Hardwoods listings. Prices for ash, basswood, northern soft grey elm, unselected 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*, last issue of month indicated. To subscribe to Hardwood Market Report call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

Pallet Lumber - Green				
Dimension	9/15	6/15	3/15	12/14
4/4 x RW	285	295	----	----
5/4 x RW	300	315	----	----
6/4 x RW	325	325	----	----
4/4 x SW	395	410	----	----
5/4 x SW	410	410	----	----
6/4 x SW	425	425	----	----

Ties (7x9) - Green				
Region	9/15	6/15	3/15	12/14
<i>Crossties</i>	----	----	----	----
Northern - 8.5'	26-28.5	26-28.5	----	----
Appalachian (South) - 8.5'	25.5-31	25.5-31	----	----
Appalachian (North) - 8.5'	25.5-30.5	25.5-30.5	----	----
Southern (West) - 9'	27-34	26-32.5	----	----
Southern (East) - 8.5'	27-33.5	26-32.5	----	----

Note: Pallet lumber prices quoted in dollars per MBF, average market prices FOB mill, truckload and greater quantities, rough, green, random widths and lengths graded in accordance with NHLA rules. Tie prices quoted in dollars per piece, average market prices FOB mill. Prices for pallet lumber from Northern Hardwood listings. Prices for ties from the respective regional listings. (Source: *Hardwood Market Report*, last issue of month indicated. To subscribe to Hardwood Market Report call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

Open for Business

The March 2016 edition of Timber Talk will feature the second article in our “Open for Business” series, which highlights Nebraska’s marketable forest resources. This article will focus on Nebraska’s community forests and urban wood utilization opportunities. As the upcoming spring leads us into potential emerald ash borer (EAB) identification season (as of

November 1st, EAB has still not been identified in Nebraska), the March edition will also feature an article discussing the impacts of an EAB find on Nebraska’s forest products industry. Mark your calendar for March 1st, 2016 for our next article in the series, “Open for Business: Nebraska’s Urban Wood Basket.”

Sun-dried Lumber: Turning Theory into Practice

Oftentimes, small mills have only a small quantity of lumber to be dried, so the large kilns are not interested or charge way too much for the extra handling of small loads. Yet, small mills are able to customize their sawn products (that is, provide the size and quality lumber that a customer wants) which puts them at a big advantage over the large mills that essentially make the same product for everyone – take it or leave it. But many of these customers for the small mills also want the lumber dried.

Certainly many mills have decided to dry lumber using a dehumidifier (DH) and electrical power. This provides dry lumber 365 days a year, but does require a significant capital expense and a few hours of kiln-operator’s time. As an alternative, solar heated lumber dryers are available to provide kiln-dried lumber at low capital cost and with minimal labor. The major disadvantage of solar is the poor performance (that is, no drying) in the cold winter months given the low sun angles and short duration of sunshine.

Of course, it is common to air dry lumber before it goes into the kiln. Such air drying is really solar-powered – so almost all lumber is “sun-dried.” But what we are considering here is a solar-heated dry kiln.

HOW WOOD DRIES

When drying lumber, there are essentially three requirements that have to be considered when designing, modifying, or comparing various solar kiln designs.

1. It does not matter how we dry wood. All drying processes require energy. Without energy, water will not evaporate. In fact, a pint of water at room temperature can be heated 1°F hotter with just one British thermal unit (Btu) of energy, but to evaporate this water requires nearly 1,000 Btus. In all solar and conventional kilns, the energy comes from the heated air. As a result, the hotter the air, the faster that wood will dry.
2. Once the water has evaporated from the lumber, this moisture must be carried away from the lumber stack. This transportation is done by blowing air through the lumber pile. Above 30% MC (the living tree often has 75% MC), the rate of airflow influences the rate of drying. However, at low MCs, the velocity does not appreciably affect the speed. (Jumping ahead, if our kiln has wet lumber, airflow is important, while at low MCs, it is not. Air movement is done with electrical fans, so with dry lumber, we need smaller fans and less electricity than with wetter lumber.)

3. The relative humidity (RH) of the air that is blowing through the load must be under 100% RH. The lower the RH, the faster that the wood will dry. As an approximation, the rate of drying is proportional to $(100 - RH)$. So, we will generally see lumber dry twice as fast at 60% RH compared to 80% RH; that is, $(100 - 60)$ is 40, while $(100 - 80)$ is 20.



I WANNA...

Before considering the kiln and collector designs, the first step is to answer a few basic questions about your drying operation. The answers will help you decide if solar is what you need. So, “What are your objectives in drying?” Some potential answers are:

- To achieve a low (10% for construction softwoods and 7% for most hardwoods) and uniform final moisture content (MC). – A solar kiln can do this.
- To dry without surface checks. – Checks result from drying too fast at high. A solar kiln can be operated at a drying rate that will avoid checking.
- To dry without end checks. – End checks are controlled with end coating, not with the dryer.
- To relieve any drying stresses so the wood is stress free after drying. – A solar kiln can do this.

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NFS Forest Products Utilization Program

Wood is an abundant and renewable local resource that contributes to the global and local economies. Here in Nebraska we are fortunate to have diverse forest ecosystems including ponderosa pine, Midwestern hardwoods, eastern red cedar, and flourishing urban forests. A thriving market for timber and specialty forest products derived from our forest resources is crucial to sustainable forest management. Environmentally sound forest management can reduce the risks of devastating wildland fires, outbreaks of diseases and pests, and encroachment of invasive species that threaten Nebraska's rich forest resources all while providing local jobs and supporting regional economic development.

The Nebraska Forest Service Forest Products Utilization program can help facilitate market development for the state's forest products resources and businesses. It is our goal to connect businesses to potential markets in a variety of ways. As Forest Products Utilization staff, we are able to support demonstrations of available markets for a variety of forest products, connect new and existing businesses with state economic development personnel, and identify potential partnerships between producer and purchaser groups. By working to build interest in the state's forest resources and demonstrating their uses to a wide range of stakeholders, the Nebraska Forest Service aims to enable sustainable and

healthy markets, leading to sustainable and healthy forests. We are pursuing a triple bottom line that benefits the citizens, environment, and economies of Nebraska communities.

In order to sustain Nebraska's forests, we offer a wide range of financial and technical assistance to landowners, businesses, and communities. Sawmills, private landowners, facilities and buildings, and other forest product businesses are just some of the groups that may benefit from these opportunities. Furthermore, there are a number of additional resources offered through the Forest Products Utilization program including primary and secondary processors directories, a timber buyer's directory, and of course, the Timber Talk Newsletter.

By providing assistance to businesses and creating demand for the state's forest products, our program works to facilitate sustainable and healthy markets, leading to sustainable and healthy forests. Maximizing the potential of Nebraska's unique forest resources in order to maintain thriving forests is the goal of the Nebraska Forest Service Forest Products Utilization program. We hope you won't hesitate to contact us if you have any questions or comments. We look forward to hearing from you!

Milling Railroad Ties in Nebraska

Frequently Asked Questions

Aren't most wood ties being replaced with new concrete ties?

In fact, new wood ties are still the preferred option. In 2013 the major railroads installed a total of 16,222,511 ties. Of these ties, 93.4% were new wood ties. In 2014, Short Line and Regional Railroads projected replacing approximately 4,139,446 ties, 86.2% of which were new wood ties.

What percent of the railroad tie market in the United States uses wood ties?

Wood maintains a 93%+ share of the market for ties installed in North America. Wood not only has certain desirable performance properties that make it ideal for a wide variety of track applications, but initial and long-term life cycle economics of wood ties is one of the most important reasons that wood is the material of choice for railroad ties.

What is the typical size of standard, mainline ties?

Standard ties measure 7' x 9' x 8.5' or 9' long (mostly 8.5'... some 7x8 and 6x8 are also in use).

What species are used to produce railroad ties?

The vast majority of species used today for crossties and bridge ties are hardwoods. The mix of species depends on the application and locale of sourcing, but a good rule of thumb is

50-60% oaks and hickory and 40-50% other mixed hardwoods. Some of the most abundantly used species include ash, beech, birch, elm, locust, maple, oaks (mainly red and white oak), and sycamores. Only 4-6% of ties are produced from softwood species. You should contact your potential customers to ensure your planned species are currently in demand.

I can get more value out of a log by producing lumber than I can by producing a railroad tie.

Let's look at an example of sawing a 7x9 red oak tie versus milling the same 7x9 cant into 4/4 red oak lumber using a circle mill with a 1/4 inch kerf. At the end of September 2015, the price of ties was approximately \$610.60/MBF, while the price of green red oak lumber (assuming all boards are 4/4, #1 Common) was \$605/MBF. After milling, the final tie contains 44.63 board feet while the lumber tally for the five 9'x 4/4 boards is only 30 board feet. The increased number of cuts involved in the secondary breakdown of the cant into lumber reduced the lumber recovery by 32.7%. As a result, the final value of the tie is \$27.00 while the value of the lumber produced is only \$18.15. Even using the December 2014 price of \$885/MBF of green, 4/4, #1 Common red oak, the value of the lumber would be only \$26.55.

Milling ties in Nebraska is not economical because of the distance to the treatment plants.

There are a number of tie treatment plants in an economical haul distance from most points in Nebraska, including facilities in Colorado, Missouri, Oklahoma, Illinois, and Wisconsin. Assuming the facility was a maximum of 450 miles from the sawmill location, \$4/loaded mile shipping costs, 220 ties shipped per truck load and a price of \$27.00 tie (FOB at the treatment plant), producers can still produce and ship ties for \$18.82 per tie, versus \$18.15 plus shipping for the same board footage of 4/4, #1 Common red oak lumber.

How can I begin looking into producing railroad ties at my facility?

Obviously the first goal would be to identify a treatment facility who is actively purchasing ties. Once a treatment facility has been identified the sawlog advertising and purchasing logistics should be determined. The Nebraska Forest Service Forest Products Utilization staff is available to assist sawmills and other forest products businesses investigate the feasibility of producing railroad ties from their facility.

Source: Railway Tie Association, “Frequently Asked Questions.” For more information, visit the RTA website: www.rta.org

A Closer Look at Edgers

An edger is the most evil machine ever invented. You can't live with one, but you can't live without one. This is one area where doing it right can make you hundreds of dollars per day or, conversely, lose you hundreds of dollars per day. If you are cutting grade lumber and you are edging on the sawmill, STOP! I have seen this done in a lot of sawmills, whether it is with a vertical edger mounted on the mill or by just stacking up four to six boards at a time and using the sawmill to edge the boards. The problem with a vertical edger is that most sawyers take off too much wane because they don't have any way to re-edge. Also your sawyer needs to be focused on sawing for grade and turning that log. Trying to save money on an edger operator will end up costing you money. Also stacking boards and then edging on the mill usually wastes tons of lumber, as the stack is edged to clean up the smallest board, and you really can't see where the wane is on the other boards in the stack.

The Costs

Let's look at some of the cost. If you are sawing most of the hardwood species and all grades, you are probably averaging \$800 per thousand board feet or \$0.80 per board foot or more. If you edge 300 boards at the edger today and take off just 3/8 inch to 1/2 inch too much on each side, that's about 300 BF x \$0.80 equals a loss of \$240 per day, x 5 days equals \$1,200 per week, x 50 weeks is \$60,000 per year (in the chipper). Many big mills may not even see that much profit this year.

To keep from throwing away hundreds of dollars each day, each and every board must be looked at and edged individually. The main focus of an edger is to leave the correct amount of wane on each side of the board based on the NHLA grade standards for that species and grade. Let's look at the basic wane restrictions for each standard grade.

- **FAS** (boards that grade First and Seconds on both faces, 6 inches and wider, 8 feet or longer.)
- **NHLA RULE #57:** Wane shall not exceed on either edge of the piece over 1/2 the length in aggregate. (There is no width restriction on the wane, provided the board meets Rule #59's first lineal foot rule.)
- **FAS/1-FACE** (boards grade FAS on better face and not

below No. 1 Com on reverse side)

- **NHLA rule #57** applies to the FAS face, and the No. 1 Com face must meet **Rule #64:** Wane on the No. 1 Com side is limited to the following: The width of wane from both edges, when added together, cannot exceed 1/3 the total width of the piece. The total length of wane on either edge cannot exceed 1/2 of the length.
- **No. 1, No.2, and No. 3 Com** (3 inches and wider, 4 feet and longer, but based on your customer specifications.).
- There is not length or width restriction to the common grades, but they must still meet with **NHLA Rule #8:** Lumber should be properly manufactured of good, average width and lengths. It should be edged and trimmed carefully to produce the best possible appearance while conserving the usable product of the log.

Edging involves a lot of common sense; you need to know your customer base and what they are manufacturing from the lumber. You will find that under different market conditions the same customer will have different standards. I have three customers who purchase FAS/1-FACE white oak or cherry. All three will take 5-inch-wide boards if we remove most of the wane. This works well for the customer and me; I get to move some clear No. 1 Com boards for the FAS price, and they get some clear 5-inch-wide boards, instead of a 6-inch-wide board with 1 inch of wane on it. A second method is to upgrade boards by ripping them into a higher grade—and we will talk about this in the grading section. Third would be to rip to a standard dimension, but this will be covered later as we are focused on grade lumber, not dimension stock, at this time.

Correct Alignment

Let's take it step by step and use a two-saw or three-saw edger with a good laser that shows where the saws will be cutting. First we need to set up the edger to make sure it will cut correctly.

Lining the Laser

The first thing to do is to line the laser to the saws. I have found that most people try to do this by eye, WRONG! Yes, you can look down that laser beam and see if it hits the saw

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(continued from page 5)

blade. It may hit the tip of the blade, but not actually line up with the body of the saw, as you may be feeding in at an angle. Also, most people don't know where to line the laser against the saw blade.

So here goes. You must align the beams with the INSIDE of the two edger saws, and not with the center or outside edge. The inside distance is what you will have left when the board comes out the other end. My experience is that most people align the beams with the outside of the saw, taking the saw kerf from the good part of the board, not out of the edging strip. I have seen many people measure from outside to outside of the saw blades and then visually set the laser to that distance. This loses a board foot per board, about \$60,000 per year by just edging 300 boards per day. At my mill we have a piece of flat steel about 3/4 inches thick by 4 inches wide and 20 feet long. With the saw not running and locked out, we clamp one end of this piece of steel to the INSIDE of each blade, using two clamps on each blade, with one on each end to align the steel with the blade. Be sure to have the long end sticking out toward the operator, where the laser shines. Now align that laser to just barely hit the edge of the piece of steel from one end to the other, aligning with the edge that is against the inside edge of the saw. Do this on both saws. Before starting the edger, take a tape measure and measure the distance between the two saws to see if the laser beams are the same. If there is a difference, then realign.

Pressure Feed Rolls

For a board to go through the edger you need to have a set of feed rolls at the front of the saws and behind the saws. Usually the bottom ones are fixed and the top floats with air or hydraulic pressure or by weights. These feed rolls must be aligned to have the same pressure on both sides of the board; if not, the boards will pull to one side or the other making the boards edge incorrectly. The best way to check for this is to open the saws and feed boards through without the saws hitting and see if they pull from side to side. If they pull, then you need to adjust the rollers—usually the direction a board pulls is the tight side. Some edgers have adjustments on the top rollers; some have adjustments on the bottom roller. You will have to determine this based on your equipment. Consult your equipment manufacturer for help on adjustment.

Another thing that can cause boards to pull is missing or worn teeth on your feed rolls. Check the condition of your feed rollers and see how much wear is on the teeth. I prefer to use an edger where both saws move when changing size, as this promotes even wear on both sides of the feed rollers. With an edger where only one saw moves, the teeth will tend to wear on the feed rolls next to the stationary saw. If your edger is of this type, then be sure to keep a close watch on the feed roll wear next to the stationary saw.

Another item to test on the feed rolls is the correct down pressure, which should have a stronger pull than the pull from the saws. When you edge wane from both sides of a board at one time, both saws pull against one another and help to keep the board going through straight. But when you have to edge a board on only one side, that saw will pull on the board. So

your feed rolls must have enough down pressure to keep the board straight when only one saw is cutting. You can test this by running some long boards through the edger with only one saw hitting them. If they pull toward the saw, then you need to increase the pressure on the feed rolls to keep it going straight.

Correct Edging

Now that you have the alignment correct, you need to review how to edge properly. The best person to run an edger is a lumber inspector. But it is just about impossible to find a lumber inspector who will do this, as running the edger is one of the hardest jobs in a sawmill. Many operators tend to just shove the boards through instead of taking time to line up the saws correctly. I personally fight this at my mill—more than any other problem—and it's a constant battle. Most mills overwork the edger operators needlessly because they turn the log 1/4 turn and send a lot of boards to the edger that only have wane on one edge. Turning the log 180 degrees or a 1/2 turn will reduce your edger load by about 30% and give the edger man more time to do the job correctly. Also remember that at the sawmill, if you thin slab and then take a low-grade small board, you eliminate a lot of wasted wood on your edging strip.

You may ask, just how much wane do we remove? You actually need to think of how much wane can we still have on the board, which is a better approach. One of the biggest problems on the edger is that everyone wants to clean the entire board. If they have a 16-foot board they want to remove the wane on 15 feet of the board. I have a local mill that edges too much off the board—you can find edging strips that have 3-inch-wide x 6-foot-long boards left in them. At my mill we edge lightly; I have the operator edge each board leaving wane half the length on each side. Then the boards go to the lumber inspector, who grades the boards and sends back the ones that need additional edging. At my sawmill some boards need to have more wane removed to make the highest value, and some boards get re-edged for upgrade. On average, we re-edge about 15% of what the edger man puts through the edger. If you are not re-edging many boards, then a lot of your profit is going into the chipper or the burn pile. At my mill I like to look at the edging strips that are headed to the chipper. I hope to see the edging strips so thin that you can't pick them up without breaking them. If you take the 3/8 inch saw kerf from the edging strip rather than from good wood, your edging strip should be very thin. If you have an edging strip that shows good wood all the way down, you just lost that good wood plus 3/4 inch for the saw kerf from your board. Every time you see a fat edging strip, you've just lost \$1. A good edger can make you \$100 to \$200 more per day, so make sure you have a good operator and constantly coach him, because a bad edger operator can lose that same \$200 per day.

(Source: Independent Sawmill & Woodlot Management magazine, August/September 2008. Article written by Tim Thompson, Cumberland Ridge Forest Products. For more information or to subscribe to IS&WM, phone 1-800-762-8476 or website: www.sawmillmag.com)

Nebraska Forest Industry Spotlight



LANNY LAWSON BANDSAW MILL NORFOLK, NEBRASKA



Lanny Lawson started “working” with wood at a young age. He remembers unloading dimensional boards off railroad cars for the local lumberyard at Pilger when he was 16 years old. Then some of his memories of attending Wisner High School involve working with wood and turning bowls in the shop class. Lanny says “we were always cutting wood for some use out on the farm northwest of Pilger”.

Lanny has always kept an interest with trees and wood. His primary work involved managing the landscape and trees at Sherwood Medical (Kendall) located in the south part of Norfolk, NE while in the evenings and on weekends he would cut and sell firewood at Cottonwood Lumber sawmill north of Norfolk. When Lanny left Kendall, he worked for two years at Cottonwood Lumber, running a loader and driving truck to make deliveries of products or bringing logs to the mill. Most of the trees he hauled were large cottonwoods for pallets and dunnage. Recently he has also helped with a firewood processor at O’Neill, NE. Trees are cut from roadsides, old windbreaks or dead and dying trees in woodlands along the Niobrara River south of Spencer. Elms, oaks and green ash were the most common trees cut and split for firewood sales.

In 2011 Lanny bought his own small sawmill. His mill is an Oscar 30 inch model Hud-Son bandsaw. With some changes to the original mill, the major modification that Lanny added was 6” X 6” steel tubing under the mill carriage for added strength and support. Now he doesn’t have to worry about the weight of a 30 inch diameter oak log on the mill. Oak, black walnut, redcedar and maple are the most common tree species that end up on his sawmill. These are usually logs from trees that are salvaged or people have him cut for personal use.

Other pieces of equipment that Lanny has added to his tree salvaging and sawmilling enterprise over the past several years include a 1989 Ford L8000 knuckle boom truck with 6 foot high bunkers; a 1996 International semi-truck with a step down deck for easier loading; and three skid loaders (Gehl 4600 and 4625 and a Bobcat 643). His primary chainsaw for cutting is a Stihl MS290.



In 2014, Lanny’s home town and residence in Pilger was hit by a tornado that put everything into turmoil. After losing his house and working through claims and insurance hassles, Lanny is ready to move on with his sawmilling interests. Future plans that Lanny would like to pursue are the potential for turning redcedar posts and poles and possibly getting a larger sawmill, re-saw and other equipment set up for more production and diversification.

Lanny Lawson
1003 West Park Avenue
Norfolk, NE 68701
402-841-0695

The Trading Post

The *Trading Post* is provided as a free marketing service for forestry industry. Only forestry-related advertisements will be accepted with the exception of products manufactured in the normal course of your business. 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

Sawmill. Sanborn Minimax band sawmill, new 80 hp Deutz motor with 232 hours, 36" log capacity, hydraulic-operated belt on/off table, hydraulic log cleaner, digital levels, new track system, straight angled pressure guides. Also includes 60 extra 6" blades, Armstrong filing room equipment, box of new grinding stones. \$30,000. Contact George Hawley, Home 620-473-3468 or Cell 620-365-9744, email: hawleylumber@gmail.com.

Sawmill. TimberKing portable sawmill, 34" x 20' log capacity, 50+ extra blades (some new). \$16,000. Contact: David Champlin. Phone: 785-275-2181.

Sawmill. Mighty Mite band sawmill. 20 horse electric motor, tandem axles with brakes on one axle, 36" x 24' log capacity, (I have cut 46" beams) hydraulic operation includes winch, knees, taper, near arm, dogging arms, far arm, dogging spike, log loading arms, and electric clutch and blade lift. Also includes automatic blade sharpener, setting machine, 12 used blades and 4 new blades. Excellent condition. Never been used commercially. \$17,500. Contact: Gary Fisher, Crawford, NE. Phone: 308-665-1580; email: fisher@bbcwb.net.

Edger. Corley SN E536-054, chromed in-feeds and out-feeds with no visible wear, 6 cylinder Deutz engine, and laser lights. \$20,000. Contact George Hawley, Home 620-473-3468 or Cell 620-365-9744, email: hawleylumber@gmail.com.

Tree Shear. 14" Dymax Model 2135D1, Double grapple. Used very little. Excellent condition. Fits universal skid loader mounts. \$4,000. Contact: Gary Fisher, Crawford, NE. Phone: 308-665-1580; email: fisher@bbcwb.net.

Walnut Lumber. All dimensions. \$3.00 per board foot. Falls City, NE. Contact: Bruce Walker at 402-245-2031.

Wanted

Pine Logs, 3"-10" in diameter cut to 8 or 16 ft lengths. Must be straight. Contact Prairie Home Timber Products, Chadron, NE 308-430-8213 or Rowdy@PHTimber.com

Wood Residue. Slab wood, cutoff's sawdust, mulch, bales, etc. Lincoln, NE. Call Scott Hofeling at 402-432-0806 or e-mail scott@hofelingerenterprises.com.

Logs and Slabwood. Cottonwood, cedar and pine. 4" to 26" diameter and 90"-100" lengths. Below saw grade logs acceptable. Contact: American Wood Fibers, Clarks, NE at 800-662-5459; or email: Pat Krish at pkrish@AWE.com

Cottonwood Logs. Veneer-quality cottonwood logs, 16" to 36" diameter, 7' and longer. Pick up service available. Contact: Barcel Mill & Lumber, Bellwood, NE 68624. Ask for Barton or Megan. Phone: 800-201-4780; email: bj@barcelmill.com.

Services and Miscellaneous

Woodshop Services. Millwork made from your lumber on my planer/molder. Chris Marlowe, Butte, NE 402-775-5000. Marlowepasture@nntc.net.

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

Used Portable Sawmills. North America's largest source of used portable sawmills and equipment. Contact: Sawmill Exchange 800-459-2148, website: www.sawmillexchange.com.

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- To kill any insects, their eggs, and fungi in the wood. – A solar kiln possibly can do this at times, but a separate chamber may be needed for this heat treatment (achieving 133°F throughout the piece of wood).
- To dry lumber rapidly. – The solar kiln is typically designed to dry 4/4 red oak in about six weeks of warm, sunny weather from green to 7% MC. In the cooler times of the year, drying time will be extended. However, if the lumber is air-dried or shed-dried prior to going into the kiln, drying times will be reduced substantially.
- To dry at a total cost under \$100 per MBF. – If you solar dry three loads a year and the initial \$2,000 kiln will last 10 years without major maintenance, solar drying costs, including electricity for the fans (but not profit, administrative or overhead expenses, stacking, loading or unloading), should be under \$80 per MBF, which is reasonable.
- To achieve flat lumber. – Warp is basically determined by the wood characteristics or stacking procedures and not the kiln itself, so a solar kiln will do well.

- To achieve white color for maple, holly, ash, basswood, and other "white" woods. – This white color requires fast drying at cool temperatures (under 110°F). If the outside weather is dry enough (under 65% RH average), then the kiln can be run with the doors open and by using high ventilation rates, which will achieve the fast drying required. If the weather becomes humid, the color may not be as good as desired, so a solar kiln has some risk here.

For more specific information regarding the concepts and specifics of solar-kiln operation and construction, please go online to <http://sbio.vt.edu/for-the-community/extension/solar-kiln/index.html>.

Source: (Modified) Independent Sawmill & Woodlot Management, April 2014, Article by Gene Wengert. For more information, visit the Sawmill & Woodlot website: www.sawmillmag.com