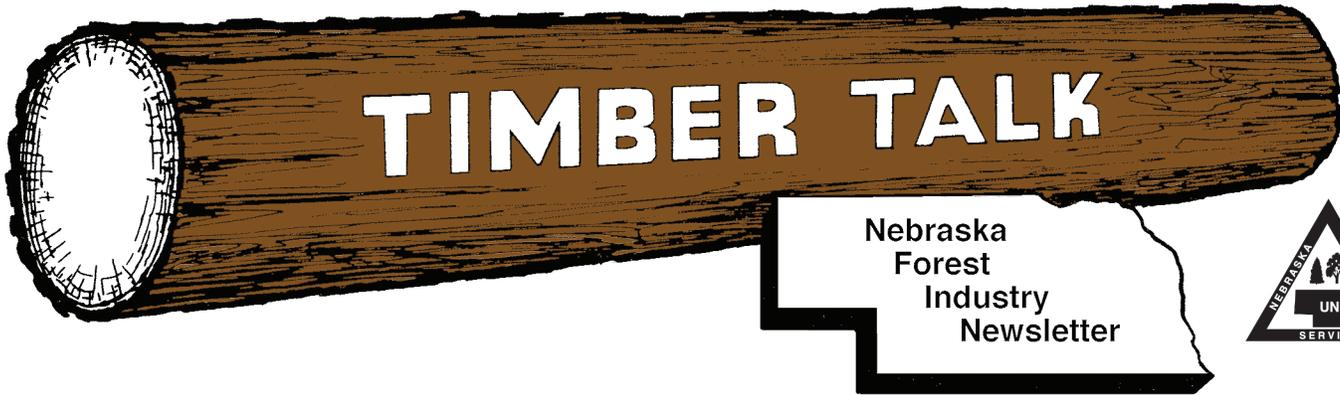


NEBRASKA FOREST SERVICE



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The Nebraska Forest Service publishes *Timber Talk* four times annually (February 1, June 1, September 1, and November 1) to serve 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, 203E Forestry Hall, P.O. Box 830815, Lincoln, NE 68583-0815. Phone (402) 472-5822, FAX (402) 472-2964.

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Lumber Market



HARDWOODS

Appalachian. No one in the hardwood industry has escaped adverse effects from the downturn in lumber consumption caused by the housing market crash. That is one reason why there is little confidence and reluctant optimism in current conditions. Sales operations and end users have experienced upticks in business during the first half of the year for the past few years only to see profits dwindle the final two quarters. It is difficult to believe growing interest in lumber is not totally supply driven. But the fact is, the US housing market has rebounded sharply, increasing consumption of grade lumber in the US and abroad. Supply shortages have been instrumental in the rapid rise in pricing. Once weather conditions allow, that part of the equation should correct itself. Lumber production will eventually meet demand. However, weather conditions are not allowing access to purchased lumber; area mills are working from low log decks; and green lumber output remains controlled.

Northern. Escalating prices for key species have improved the desire and ability for increasing sawmill output. Additionally, the rush to wrap up winter-cut production boosted the volume of green lumber available to the marketplace. The surge may have seemed sudden and unexpected, but it is not unprecedented. Each year, sawmills make every effort possible to saw through winter-cut whitewood logs before warm temperatures set in. Other grade lumber items and industrial products show no signs of surging supplies or wavering demand. This is a strong indicator that markets are still on track with increased residential construction, moderate economic growth, and strong export activity.

Southern. Because of wet weather, many logging contractors have been unable to obtain access to purchased timber. Most sawmill operators continue to work from depleted log decks, which limit green lumber output. Buyers are actively pursuing developing supplies and prices remain pressured. However, the steep trajectory of upward price trend has leveled for most green lumber items. The marketplace is in a gap between kiln dried prices keeping pace with the higher prices incurred by green lumber and attaining a healthy margin between the two. Yards and secondary manufacturers are struggling to push through escalated raw material costs and thus, are cautious with purchases. Many contacts believe sawmills will be able to boost production in coming weeks and are unwilling to speculate too far in advance.

(Source: Condensed from *Hardwood Market Report*, May 17, 2013. For more information or to subscribe to *Hardwood Market Report*, call (901) 767-9216, email: hmr@hmr.com, website: www.hmr.com)

Hardwood Lumber Price Trends—Green

Species	FAS				#1C				#2A			
	3/13	12/12	9/12	6/12	3/13	12/12	9/12	6/12	3/13	12/12	9/12	6/12
Ash	860	860	860	860	615	615	625	625	410	410	420	420
Basswood	765	735	715	715	445	410	400	400	225	205	205	205
Cottonwood	635	635	635	635	435	435	435	435	220	220	220	220
Cherry	1235	1235	1260	1355	640	640	640	655	330	330	330	330
Elm	635	635	635	635	420	420	420	420	245	245	245	245
Hackberry	475	475	475	475	455	455	455	455	265	265	265	265
Hickory	735	720	720	720	620	595	545	595	460	445	445	445
Soft Maple	1250	1165	1140	1115	735	705	690	675	410	385	385	385
Red Oak	1005	895	870	870	660	600	585	585	495	480	480	490
White Oak	1000	1000	1000	1000	615	600	600	600	455	440	440	450
Walnut	1795	1795	1795	1410	875	875	875	965	475	475	475	565

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 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			
	3/13	12/12	9/12	6/12	3/13	12/12	9/12	6/12	3/13	12/12	9/12	6/12
Ash	1290	1290	1290	1290	930	930	930	930	735	735	745	745
Basswood	1120	1060	1060	1060	720	665	650	650	470	470	455	455
Cottonwood	725	780	780	780	530	570	530	570	—	—	—	—
Cherry	1800	1830	1725	1935	1065	1065	990	1065	670	670	625	670
Elm	—	—	—	—	—	—	—	—	—	—	—	—
Hackberry	—	—	—	—	—	—	—	—	—	—	—	—
Hickory	1275	1275	1275	1275	1065	1065	1065	1065	855	855	840	840
Soft Maple	1710	1575	1510	1490	1085	1000	960	960	785	720	720	720
Red Oak	1550	1490	1465	1465	1055	1000	1000	1025	875	860	850	850
White Oak	1595	1595	1595	1655	1045	1045	1045	1045	845	830	830	830
Walnut	2915	2915	2915	2295	1645	1645	1665	1755	900	900	900	945

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 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.)

Nebraska Timber Industry 2009

The recently released USDA Forest Service, Northern Research Station Resource bulletin NRS-69, entitled **Nebraska Timber Industry—An Assessment of Timber Product Output and Use 2009**, summarizes the survey conducted in 2009 of all known sawmills and other primary wood products manufacturers in Nebraska. Similar surveys were also conducted in 1980, 1993, 2000, and 2006. The following are selected highlights from the 2009 report.

Primary Wood-Using industry

- Nebraska’s wood products manufacturing industry employs more than 2,300 workers with an output of \$362 million (U.S. Census Bureau 2007)
- Nebraska’s primary wood-using industry includes 62 mills, including 57 sawmills and 5 mills producing other products. (Table 2)

TABLE 2. Number of active primary wood-using mills

Mill type and mill size	Survey year				
	1980 ^a	1993	2000	2006	2009
Sawmills ^a					
5,000 mbf or greater	—	2	2	2	2
Between 1,000 and 4,999 mbf	7	10	5	3	2
Between 100 and 999 mbf	35	8	6	10	8
Less than 100 mbf	—	12	19	34	45
Total	42	32	32	49	57
Vener mills	—	1	—	1	1
Post, pole, piling mills	2	—	—	2	3
Other mills ^b	2	2	2	2	1
All mills	46	35	34	54	62

^aAnnual lumber production in thousand board feet (mbf), International ¼-inch rule.
^bIncludes mills producing excelsior/shavings, cabin logs, etc.
^cNumbers to categorize sawmills producing less than 1,000 mbf of lumber are unavailable for 1980.

Industrial Roundwood

- Nebraska’s primary wood-using mills processed 4.1 million cubic feet of industrial roundwood in 2009, a decrease of 19% from 2006.
- Nebraska’s industrial roundwood production decreased

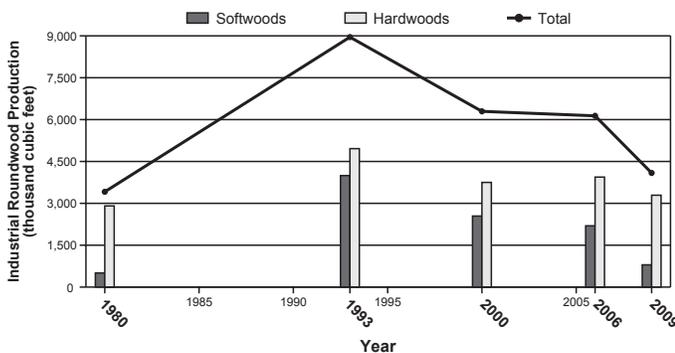
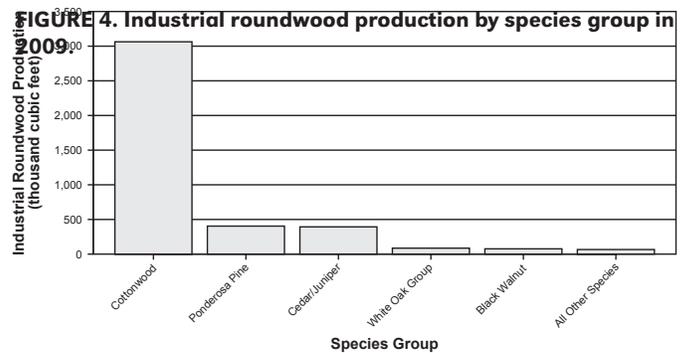


FIGURE 3. Industrial roundwood production by major species group and survey year.

by 33%, from 6.1 million cubic feet in 2006 to 4.1 million cubic feet in 2009, largely because South Dakota imported less ponderosa pine roundwood from Nebraska. (Figure 3)

- Over 90% of the industrial roundwood processed by Nebraska mills was cut from Nebraska forests. Cottonwood accounted for 83% of the total volume processed.
- 75% of the harvested industrial roundwood production volume was cottonwood. Ponderosa pine (10%), cedar/juniper (10%), white oaks (2%), and black walnut (2%) were the other major species harvested. The production of ponderosa pine for industrial roundwood was down dramatically from 2006, from 1.42 million cubic feet in 2006 to 404,000 cubic feet in 2009. (Figure 4)



- Nebraska sawmills processed 19.3 million board feet of saw logs in 2009, a decrease of 16% from 2006.
- Cottonwood accounted for 80% of the harvest from Nebraska forests.
- Sawlog production decreased 37% between 2006 and 2009, largely due to a 76% decline in ponderosa pine sawlog production from 8.2 million board feet in 2006 to 1.9 million board feet in 2009.

Timber Removals and Harvest Intensity

- In 2009, there were nearly 1.5 million acres of forestland in Nebraska. 73% of the 5.6 million cubic feet cut during the harvest of industrial roundwood was used for primary wood products. The remainder was left on the ground as harvest residues.
- More than 25 million board feet of sawtimber was removed from Nebraska’s timberland. Cottonwood, ponderosa pine, and cedar/juniper accounted for 96% of the total sawtimber volume removed.
- The net volume of live trees on forestland was 2 billion cubic feet. The 5.6 million cubic feet of total wood material removed during harvesting is less than 1.0 % of the total live volume of trees in forest land.

Residues

(continued on next page)

- Harvesting of industrial roundwood left 1.5 million cubic feet of the harvest residues on the ground.
- Nebraska's primary wood-using industries generated 68,000 green tons of wood residues (slabs, sawdust, bark, etc).
- 76% of the mill residues were utilized for fuel, mulch, bedding, etc.; 24% percent went unused.

Editor's note: This 54 page report presents data concerning forest industry trends, timber removals, roundwood production and wood residue utilization in Nebraska. A free copy of "Nebraska Timber Industry—An Assessment of the Timber Product Output and Use 2009" is available from the Timber Talk editor, or online at: http://www.fs.fed.us/nrs/pubs/rb/rb_nrs69.pdf

Global Timber and Wood Products Market Update

Seattle, USA. China's hunger for wood was less acute in 2012 than the previous year. In particular importation of softwood logs fell substantially from the record levels of 2011, as reported by the Wood Resource Quarterly (www.woodprices.com). Importation of lumber was also lower in 2012, but the decline was much less than that of logs. The biggest changes in wood imports between 2011 and 2012 were the sharp decline of Russian logs crossing the Chinese border and the reduced lumber volumes from the US lumber entering Chinese ports.

North America is a major supplier of softwood products to China, with the market share for logs and lumber in January 2013, accounting for 26% and 53%, respectively. In 2012, Canada and the US exported logs and lumber valued at 2.1 billion dollars, which was down 17 percent from 2011. Despite the decline in shipments last year, it was still the second highest level on record and more than four times the level just three years earlier.

Sawmills in British Columbia have become the largest suppliers of lumber to China in recent years, surpassing Russia in 2010. The value of Canadian shipments was about 1.1 billion dollars in both 2011 and 2012, and the value is likely to be higher in 2013. Just five years ago, less than hundred million dollars worth of lumber was shipped to China! This new market has become increasingly important for many sawmills in Western Canada, which historically have been shipped most of their production to the US market. Five years ago, about ten percent of the export volumes from the province were destined for China. This share had gone up to 32 percent in 2012. The still unanswered question is how sawmills in this region will choose to allocate their production in the coming years when lumber demand is expected to increase in the US.

Log exports from Western US to China have jumped tenfold the past five years, which has had a major impact on the Coastal log market in the states of Washington and Oregon. Despite relatively low production levels in the industry the past five years, sawlog prices in the 4Q/12 were about 60 percent higher than in 2009, according to the North American Wood Fiber Review. This development coincides with the period when log exports to China expanded rapidly. Although lumber price increases are good news for sawmills in the Western states during 2012 and early 2013, the bad news is that the log prices are increasingly as well.

(Source: News brief from *Wood Resources International LLC*)

Drying Methods For Small Operators

No discussion about lumber drying would be complete without first introducing the terms "moisture content" and "case-hardening". Moisture content is the amount of water in wood and can be directly measured or calculated. Moisture content is the ratio of the weight of water in wood to the weight of the actual wood material. Moisture content can be measured using the oven-dry method or an electric moisture meter if the wood is below 30% moisture content. Case-hardening is the term used to describe the stresses that result from the drying process. Drying stresses are developed in lumber due to the lumber drying from the outside toward the center. If the stress is not relieved at the end of the drying process, the outside, or shell, will be in compression and the center, or core, will be in expansion. A simple way to think of the amount of stress in dried lumber before conditioning is—the faster the drying rate, the greater the stress. The stress in lumber can be removed by conditioning, which is a process where the humidity is increased at the highest temperature used at the end of the drying process. The need to condition lumber and the ability to do so should be one of the criteria you consider when comparing different types of kilns. Finally, to dry lumber, it must be properly stacked and stickered.

Air Drying

Air drying is the simplest and least expensive way to start drying your lumber. However, the lowest moisture content that can be reached is dependent upon the relative humidity in your area, which, for most of the United States, ranges between 65% and 75%, resulting in a moisture content of 12% to 15%. If you need lower final moisture content, such as 6% or 8%, you will need to use some type of dry kiln. Since most checking, staining, and end splitting occurs during the first stages of drying, it is important to have some control of the process. My suggestion is to keep the lumber covered to keep off the rain and sun. Rain-caused re-wetting of lumber will lead to increased checking, splitting and warp. Having the sun hit the top and ends of the lumber when it is green can lead to end splits and increased warp on the top layers. The best air-drying set-up for small operators that I've seen is a pole barn or covered structure that is open on two ends for access, and where the lumber is completely covered. Avoid a completely closed space, as drying could be too slow. While air drying may not allow you to reach the final desired moisture content, you may want to consider using it as a way to decrease the moisture content of the wood from green to 20% to 25% prior to kiln drying.

Kiln Drying

A well designed and operated kiln will allow lumber to be dried with the highest quality and fastest possible drying time. Regrettably, not all kilns are well designed and operated. Those with higher cost typically provide better control over the process. Also, the greater the complexity and control over the kiln, the more knowledge is required of the operator as to what changes to make and when to make them. Regardless of the kiln used, someone drying lumber should have an idea of the

defects that can happen during the drying process and what to do to avoid them. Several great resources for this information are listed at the end of this article.

A dry kiln is a well-insulated chamber that has airflow in which the level of moisture in the lumber can be changed by controlling the temperature and relative humidity. Increases in temperature can be produced from steam or water pipes, direct or indirect heating, or solar power. Humidity can be increased using steam, water vapor, and the evaporating moisture from the wood surface, and removed by venting or condensing. Airflow is produced from fans inside the kiln.

While conventional steam kilns are the most common type used in large scale commercial operations, due to the high capital cost for the kiln and boiler system, they are rarely used in small scale operations. However, they are available in small sizes (1,000-board-foot capacity) from most commercial kiln manufacturers and provide excellent control over the drying process.

Hot-water kilns are the more commonly used conventional type kilns for small scale drying. These kilns use a boiler to heat water, which is then pumped into the kiln to provide the heat source for drying. Many of these designs use an insulated shipping container as the lumber-drying chamber. These systems require a way to control the temperature of the drying process and some method to reduce the humidity inside the drying chamber. Lowering the humidity is typically done by venting moist air from the chamber and bringing in fresh ambient air from outside the chamber. If the level of temperature and humidity control is high, these systems can be used to dry lumber from the green condition to 6% to 8% MC with excellent quality. For those systems with poor control over the temperature and humidity, it is recommended to air-dry the lumber prior to kiln drying. Due to the relatively low cost of materials used for these kilns, they are becoming more common for small operators.

Direct-Fired And Indirect-Fired Kilns

These kilns were the most common for small operators when I started working in the late 1990's. They use a wood, electric, or gas-fired stove/furnace to provide the heat for the kiln, electric fans to move air and some type of venting to remove humidity. A direct-fired unit sends all the heat produced from the stove/furnace into the lumber-drying chamber (an electric or gas burner, for example); whereas an indirect-fired kiln heats air which is moved through the chambers and the combustible gases escape through dedicated venting (woodstove, for example).

Operating temperatures are usually kept low to reduce the drying rate of the lumber and to help reduce the drying stress. These kilns are often made out of locally obtained materials and can be relatively inexpensive to construct. Depending on the heating method and the amount of control used, it can be difficult to control both the temperature and humidity throughout the process; therefore, it is recommended to air-dry the lumber to moisture content below 30% prior to kiln drying.

Dehumidification Kilns

Dehumidification (DH) kilns are similar to conventional kilns in the basic design of airflow and heating, but differ in the method that removes water from the air. In a DH kiln, water in the air is condensed on the coils of a dehumidifier

and is removed as liquid rather than vented. The lack of venting reduces the amount of energy required to heat the kiln atmosphere. Since the heat of vaporization (energy required to evaporate water) is recovered through condensation of water on the coils, this energy can be applied to drying the lumber. Dehumidification kilns are typically more energy efficient than other conventional kiln types. Dehumidification kilns range from 100 to 50,000 board feet in size. There are many sources for full kiln packages, dehumidification units and kiln plans, and demand dehumidification units themselves. One advantage of DH kilns is that the lower operating temperatures can provide very bright colored wood. Depending on the size of the DH unit selected for the amount of lumber to be dried, these units are capable of drying lumber from the green condition to the kiln-dried condition with excellent quality.

There are several articles in woodworking magazines and at the Forest Products Lab on how to build small scale dehumidification kilns using home-sized dehumidifiers. While these articles demonstrate an excellent and inexpensive way to get started, it should be noted that due to the tannic acid in many hardwoods, home DH units will typically corrode over time. Most commercial units sold for lumber-drying purposes use materials to prevent corrosion of the condensation coils.

Solar Kilns

Solar kilns use the energy from the sun as the main heating source for the kiln. A solar kiln may consist of just a solar collector and a space for the lumber. Solar kilns do require electricity to run fans for air circulation through the lumber; however, this energy can also be obtained through solar panels. Solar kilns vary greatly in complexity and cost. The simpler kilns use direct solar collection and a greenhouse approach to drying. More complex solar kilns use indirect collection, heat storage capacity, and water or air is used as the transfer medium to move heat from the collector to the insulated drying compartment. Direct-heating solar kilns are inexpensive and simple to construct; however, they provide the least amount of control over temperature and humidity, and require low drying temperatures to prevent the formation of defects in the lumber. Typically the kiln is designed such that the collector size controls the amount of available heat for drying, therefore, reducing the need for control during the drying process. This also allows for the operator to have limited knowledge of the drying process, making this type of kiln very attractive to first-time drying operators. The drying rate obtainable using direct-heating solar kilns can be significantly reduced by unfavorable weather, resulting in potentially longer drying times than other kiln types. Also, winter conditions can significantly impact the performance of these kilns, making them unsuitable for drying lumber in the northern climates. One advantage of direct solar collection is that the stresses in the lumber are minimized since drying only occurs during daylight hours. During the evening, the air cools and the humidity rises inside the kiln to provide some stress relief.

Most solar kiln designs will not provide temperatures more than 50° above the ambient temperature for a significant period of time; therefore without supplemental heat they are not good for the setting of pitch or resin in pine or to allow

(continued on next page)

Nebraska Forestry Industry Spotlight



DOWHOWER CABINET & MILLWORK



Dowhower Cabinet & Millwork, owned and operated by Ron Norrie since 1992, is a custom cabinet shop located in North Platte, Nebraska. In this largely rural area, Ron's custom creations encompass many types of wood products, primarily custom-made nurses' stations, conference tables, entertainment centers, bathroom vanities, kitchen cabinets and an occasional new countertop. General contractors and architects, as well as homeowners, appreciate and often request the fine work that is designed to fit the customer's specifications. Prices are very competitive with big box store cabinets.

The process begins by Ron meeting directly with the client to discuss their ideas and expectations. Then a set of drawings and cost estimate is developed. If the proposal is accepted by the client, the custom products are created, the finish work completed, and then the products installed. Dowhower's market area covers about a 100 mile radius, although special products have been built for clients in the Omaha, Denver and Rapid City.



Ron in his shop.

Most of the custom-made products are manufactured with a computer numerical control (CNC) machine which increases production and safety. Other equipment includes a vertical panel saw, an Oliver straight line rip saw, a Holzher automatic edge bander and other common woodworking tools. At the present time the shop has two full time employees.

Ron has found that over the years the wood that people request has shifted to a more knotty and rustic look. Currently, alder, hickory, maple and birch are the primary wood species used and occasionally cherry and black walnut. Oak, although used, is not often requested. Ron prefers using northern-grown woods as they tend to be more dense, stable and have prettier grain. The cabinet shop utilizes hardwoods in many different forms from sheet goods to hardwood lumber

from the Midwest.

Contact information for Dowhower Cabinet – Millwork is: Ron Norrie, 1102 Prospect Dr., North Platte NE, 69101; phone: (308)532-8508.

Drying Methods for Small Operators *(continued from page 5)*

for the sterilization of lumber (temperatures required to kill insects). Auxiliary heat for these processes can be provided by the use of electric or gas heaters and should be applied at the end of the drying process. There has been an increased interest in solar kilns with increased interest in "green" building and "environmentally friendly" wood products. Solar dry kilns also provide for low energy use and can be used off the grid when solar panels are added to run the electric fans.

Vacuum Kilns

The use of a vacuum chamber for lumber drying allows the lumber to be dried at lower temperatures, where the wood has more strength, thus reducing the chance of certain defects and allowing for a faster drying rate. The vacuum provides an additional moisture transfer process and allows rapid drying of thick stock such as turning squares. Vacuum kilns differ in the method in which heat is transferred through the lumber. Effective convective heat transfer in a partial vacuum is not possible; therefore, several different methods are used to heat vacuum kilns.

One method requires the use of alternating vacuum and atmospheric conditions. Another uses electrically heated blankets or heated-oil-filled plates placed between each row of lumber to heat it. The third method uses a high-frequency electrical energy (radio frequency). Vacuum kilns are usually 200 to 10,000 board feet in size, limited by the size of the vacuum chamber. Advantages of vacuum kilns are the extreme rapid drying rate, minimal stress buildup, and the excellent bright color of wood. The main disadvantages of this kiln type are the small volumes that can be loaded, high unit cost, high-energy costs and, often, increased labor costs due to special loading requirements. This type of kiln is the best for drying thick stock.

Other Considerations

While lumber drying can provide new market access and more value added to your operation, it can also cost you significantly if not done correctly. If you desire to dry from the green condition to the final moisture content in the kiln, you must have good control over the process and the knowledge of how to control the process. Such precision requires expensive

control equipment. An alternative is to air-dry the lumber to 20% to 25% moisture content prior to kiln drying. At this moisture content, the wood is no longer at risk of starting to check, stain, warp, and split; however, if such defects are present, they can be made worse by rapid drying.

The rate at which wood dries is controlled by the temperature of the wood, relative humidity, moisture gradient (moisture in the air versus the moisture in the wood), thickness of the wood and the density of the wood. These factors influence how much stress the wood can take while drying and how fast water will be moved to the surface in order to be evaporated. A kiln schedule is a set of temperatures and humidity conditions that are selected for a certain species, lumber thickness, and initial moisture conditions. Once a schedule has been selected, the temperature and humidity of the kiln is set and drying is monitored. Schedules are available for convention and dehumidification drying for the Forest Products Laboratory and from kiln vendors. Kiln schedules are not required for the solar kiln, as the design limits the amount of heat available to the process. Schedules for vacuum kilns are highly dependent on the variables used in the process and are available from the vendor.

Most of the kiln types discussed need some way to relieve stresses present at the end of the drying process. This can be accomplished by introducing moisture back into the process at the end of the schedule. This moisture is typically introduced as steam from a small boiler or high-pressure cold-water

spray. To achieve the best possible conditioning, the moisture is introduced at the highest temperature used in the drying schedule. It is not uncommon for many small scale operators to utilize air-drying and then slow-drying schedules in the kiln to keep stresses to a minimum. By keeping stresses to a minimum in the drying process, hopefully they can avoid having to condition the lumber.

For those who would like more information about some of the topics presented in this article, I suggest the following references that are available online from the Forest Products Laboratory, www.flp.fs.fed.us/search/index.php.

The Dry Kiln Operator's Manual. USDA Agricultural Handbook 188. USDA Forest Service.

Air Drying Lumber. USDA Forest Service. Forest Products Lab. General Technical Report FPL-GTR-117

Drying Hardwood Lumber. USDA Forest Service. Forest Products Lab. General Technical Report FPL-GTR-118

Dry Kiln Schedules for Commercial Woods: Temperate and Tropical. USDA Forest Service. Forest Products Lab. General Technical Report FPL-GTR-57

(Source: *Independent Sawmill and Woodlot Management* magazine, May/June 2010. Article written by Brian H. Bond, Extension Specialist in the Department of Wood Science and Forest Products, Virginia Tech. University. For more information or to subscribe to IS&W: phone 1-888-762-8473 or website: www.sawmilling.com)

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. 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.

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

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@AWF.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.

Horse-drawn or Tractor-drawn grader. With front wheel dolly. Contact: Carl Hinds, S. Sioux City, NE. Phone: (402) 494-2127 or cell (712) 281-1472.

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

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 is listed, the trees or logs were not 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. Green Ash (23 trees) Ave diameter - 21 inches		John Kellogg 515 Elk Creek Rd. Palmer, NE 68864 (308) 894-8086 Location: Nance County

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

you can tell the smell of
a skunk and the smell
of a feedlot apart.