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Editor: Adam Smith Design/Layout: Diana Marcum

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, University of Nebraska, 203G Forestry Hall, P.O. Box 830815, Lincoln, NE 68583-0815

T: 402-472-1276 Fax: 402-472-2964 E: asmith11@unl.edu W: nfs.unl.edu



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## **Lumber Market Reports**

#### Northern

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Contacts in the North report a mixed bag of activity. In places, logging conditions deteriorated enough to affect log decks. Other areas have sufficient on-hand log supplies. There is some evidence green lumber production has edged down. However, there remains excess availability of ties, mat timbers, board road, and cants. Too, upper grade whitewoods, especially Hard kiln dried stocks. Demand is keeping common grade Hard and Soft Maple inventories in check, though FAS availability is high and is keeping prices unsettled. International demand is driving business for Red Oak and White Oak and has inventories thin for #1C and #2A. Activity for FAS Red and White Oak is more subdued than for the common grades.

#### Southern

A drier weather pattern improved logging conditions in parts of the Southern region. It appears that mills that want logs have enough to run consistent schedules. Mills maintaining low log decks, generally, are doing so by design. Most of these sawmill operators cut industrial timber products. Because purchases of ties, mat timbers, and cants are down, mill owners must watch cash flow, which includes controlling log inventories. There is little evidence weak demand for industrial products or sawmill byproducts has impacted total sawmill output to this point. Supplies of more species, grades, and thicknesses are meeting the market's needs. Meanwhile, overseas business is steady and is keeping kiln dried Red Oak, White Oak, Ash, and Poplar inventories at manageable levels.

#### Appalachian

A majority of reporting sawmills in the region entered February with lower log decks than at the start of January. While wet weather is largely to blame, weakened markets for pulp logs are also factoring into reduced logging activity. In some instances, robust overseas demand for logs - especially from China - also hindered sawmills' efforts to build log inventories. For mills that do have logs, many are struggling to find adequate market outlets for residual products, such as sawdust, bark, and chips. Despite these challenges, almost all mills have maintained production levels, even if that has meant piling up hard to move industrial lumber and timbers and byproducts in hopes of future sales. Markets for green and kiln dried grade lumber are relatively busy though somewhat less hectic than during the first few weeks of January. Order fulfillment and order placement seem to have caught up following the holiday break. Demand has moderated for some Red and White Oak items, though grade lumber business is still decent.

(Source: Condensed from Hardwood Market Report, February 3, 2017. For more information or to subscribe to Hardwood Market Report, call (901) 767-9216, email: hmr@hmr.com, website: www.hmr.com)

	Hardwood Lumber Prices - Green											
		F/	<b>AS</b>			#1C			#2A			
Species	2/17	11/16	8/16	5/16	2/17	11/16	8/16	5/16	2/17	11/16	8/16	5/16
Ash	945	905	925	1055	590	540	540	655	325	325	350	425
Basswood	830	860	860	885	485	510	520	555	260	270	300	310
Cottonwood	780	780	780	780	560	560	560	560	260	260	260	260
Cherry	1055	1055	1055	1100	690	690	700	800	385	385	385	435
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	820	820	820	830	525	525	525	545	385	385	405	425
Soft Maple	1305	1350	1395	1370	795	855	890	890	470	485	510	520
Red Oak	1160	1140	1120	1195	755	730	700	700	500	500	490	490
White Oak	1655	1630	1505	1435	860	820	750	715	505	505	490	490
Walnut	2515	2515	2515	2515	1300	1270	1270	1270	715	715	715	715

Note: Lumber prices quoted in \$/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 list. Prices for cottonwood and hackberry from Southern Hardwoods list. Prices for cherry, hickory and walnut (steam treated) from Appalachian Hardwoods list. (Source: Hardwood Market Report (HMR), above prices are from the 1st issue of the indicated month. To subscribe to HMR, call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

	Hardwood Lumber Prices - Kiln Dried											
	FAS				#1C			#2A				
Species	2/17	11/16	8/16	5/16	2/17	11/16	8/16	5/16	2/17	11/16	8/16	5/16
Ash	1420	1420	1445	1580	980	925	945	1035	645	630	665	730
Basswood	1200	1215	1215	1215	760	760	760	770	485	495	510	510
Cottonwood	980	980	980	980	730	730	730	730				
Cherry	1715	1740	1770	1770	1150	1140	1140	1150	680	700	710	730
Elm												
Hackberry												
Hickory	1470	1490	1530	1530	1030	1060	1075	1110	800	810	810	855
Soft Maple	1755	1805	1855	1830	1185	1185	1220	1220	800	800	800	800
Red Oak	1610	1610	1605	1630	1220	1120	1100	1040	845	845	815	800
White Oak	2300	2300	2220	2085	1475	1395	1295	1235	1000	970	910	870
Walnut	4070	4070	4070	4070	2175	2100	2100	2100	1400	1360	1360	1360

Note: Kiln dried prices in \$/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 list. Prices for ash, basswood, northern soft grey elm, unselected soft maple, red oak, and white oak from Northern Hardwood list. Prices for cherry, hickory and walnut (steam treated) from Appalachian Hardwoods list. (Source: Hardwood Market Report (HMR), above prices are from the 1st issue of the indicated month. To subscribe to HMR, call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

Pallet Lumber - Green									
Dimension	2/17	11/16	8/16	5/16					
4/4 x RW	255	255	265	275					
5/4 x RW	290	290	300	300					
6/4 x RW	315	315	325	325					
4/4 x SW	330	340	360	370					
5/4 x SW	365	365	395	395					
6/4 x SW	380	380	410	410					

Ties	(7x9) -	Green		
Region	2/17	11/16	8/16	5/16
Crossties				
Northern - 8.5'	25-27.25	25.5-27.25	25.5-28	25.5-28.5
Appalachian (South) - 8.5'	24.5-29	25.5-30	25.5-30.5	25.5-31
Appalachian (North) - 8.5'	24.5-28.75	25.5-29	25.5-29.5	25.5-30.5
Southern (West) - 9'	26.5-32	27-33.5	27-33.5	27-34
Southern (East) - 8.5'	26-30.5	26.5-32	27-32	27-33.5

Note: Pallet lumber prices quoted in \$/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 \$/piece, average market prices FOB mill. Prices for pallet lumber from Northern Hardwood list. Prices for ties from the respective regional lists. (Source: Hardwood Market Report (HMR), above prices are from the 1st issue of the indicated month. To subscribe to HMR, call 901-767-9126; email hmr@hmr.com; or go to www.hmr.com.)

## Hardwood Lumber Market History--Green

This hardwood lumber market summary is presented to provide a historical perspective of lumber prices since 1979 with emphasison the preceding 3 years. Hardwood prices quoted per MBF, FOB mill, truckload or carload quantities, 4/4, rough, AD, RL & W. Prices for ash, basswood, northern soft grey elm, unselected soft maple, red oak & 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. Prior to 1990, the #2A column listed only #2C prices.

Species	DATE	FAS	#1C	#2A
	12/85	600	445	210
	12/90	745	585	215
	12/95	765	630	325
	12/00	755	615	380
A - I-	12/05	730	565	415
Ash	12/10	800	570	405
	12/13	835	575	390
	12/14	1100	710	475
	12/15	1120	680	465
	12/16	905	540	325
	12/85	560	310	182
	12/90	550	295	170B
	12/95	620	365	195B
	12/00	720	425	225
	12/05	710	435	225
Basswood	12/10	705		205
	12/13	835		260
	12/14	885		310
	12/15	885		310
	12/16	845		260
	12/85	320		142
	12/90	400		150B
	12/95	605		185B
	12/00	600		220
	12/05	600	445 585 630 615 565 570 575 710 680 540 310 295 365	220
Cottonwood	12/10	625		270
	12/13	670		240
	12/14	705		260
	12/15	765		260
	12/16	780		260
	12/16	785		305
	12/83	965		285
	12/95	1185		445
	12/93	1605		585
	12/05	1570		625
Cherry	12/03	1530		330
	12/13	1235		455
				620
	12/14	1355		
	12/15	1140		440
	12/16	1055		385
	12/85	410		255
	12/90	665		165B
	12/95	665		210B
	12/00	635		235
Elm (soft grey)	12/05	635		235
	12/10	635		235
	12/13	635		270
	12/14	650		300
	12/15	650		300
	12/16	650		300
	12/85	345		220
	12/90	390		240
Hackberry	12/95	485		275
	12/00	475		265
	12/05	475	455	265
	12/10			

Species	DATE	FAS	#1C	#2A
	12/13	475	455	285
Haaldaan (aast)	12/14	530	480	305
Hackberry (cont.)	12/15	530	480	305
	12/16	530	480	305
	12/85	325	305	160
	12/90	335	315	195
	12/95	455	435	265
	12/00	625	515	340
	12/05	770	650	405
Hickory	12/10	640	530	405
	12/13	845	715	520
	12/14	1000	835	615
	12/15	830	545	425
	12/16	820	525	385
	12/85	400	335	200
			335	
	12/90	420 600		200B
	12/95	600	490 640	205B
	12/00	850		340
Soft Maple (UNSD)	12/05	1200	790	400
	12/10	870	570	325
	12/13	1250	830	510
	12/14	1295	845	550
	12/15	1300	820	520
	12/16	1325	795	470
	12/85	715	450	225
	12/90	815	645	295
	12/95	1025	840	475
	12/00	1095	910	660
Red Oak	12/05	1150	740	500
nea Oak	12/10	1040	680	555
	12/13	1320	885	700
	12/14	1200	885	750
	12/15	1030	605	500
	12/16	1160	745	500
	12/85	660	355	225
	12/90	800	445	215
	12/95	800	565	340
	12/00	770	535	340
White Oak	12/05	910	625	400
White Oak	12/10	1035	645	480
	12/13	1200	750	610
	12/14	1430	900	685
	12/15	1360	675	475
	12/16	1630	820	505
	12/85	1565	855	255
	12/90	1605	855	290
	12/95	1535	810	290
	12/00	1455	785	315
	12/05	2040	1030	650
Walnut	12/10	2105	1125	740
	12/13	2250	1175	685
	12/14	3040	1645	1035
	12/15	2425	1270	730
	12/16	2515	1270 be, call (90	715

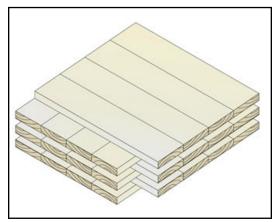
(Source: Hardwood Market Report. To subscribe, call (901) 767-9126, email: hmr@hmr.com, www.hmr.com)

## **Bringing Innovative Timber Construction to Nebraska**

In the spring of 2014, the city of South Sioux City, NE established a community orchard to promote the use of locally produced fruits. The orchard also serves an educational role by offering citizens the opportunity to learn how to maintain an orchard of their own. However, maintenance of the orchard is difficult as there is no storage on site for tools.

In the summer of 2016, the City and the Nebraska Forest Service reached out to the University of Nebraska-Lincoln School of Architecture to discuss the possibility of another educational opportunity at the orchard; a UNL student-designed building for the orchard. After months of design work and planning, the project has turned into yet another educational opportunity. The new orchard building will be the first facility in the region constructed out of an innovative timber product; cross laminated timber.

Cross laminated timber (CLT) is an advanced construction material which is changing the architectural landscape across the globe. Using low-quality softwood lumber, CLT is a large wood panel consisting of angles to one another and glued to form a solid structural panel. Panels are then used as walls, floors and roofs in construction, offering exceptional strength, dimensional stability, and rigidity. Replacing traditionally stick or steel framed construction with solid building components, CLT utilization reduces construction time, offers unique engineering and design performance, and lowers capital costs.



While CLT use in architecture is gaining popularity in the Pacific Northwest, the partnership between the City, the University of Nebraska-Lincoln, and the Nebraska Forest Service is bringing CLT construction to the Great Plains for the first time. Professor Jason Griffiths with the University has spent years working with students to design buildings utilizing innovative

timber products. The work of Professor Griffiths and his students recently received a prestigious design award from the Wood Products Council in February of 2017 for a student-designed and built structure in Eugene, Oregon, a project titled "Emerge." His students spent the 2016 fall semester of their Design-Build Studio course developing designs for the orchard building and working with City officials to finalize the project details. The project was then presented by the students to the City Council, which approved the project for construction in spring of 2017.



In addition to utilizing innovative wood products to construct the facility, the project partners are also working to utilize a local wood resource for the exterior of the building; urban ash trees. The City has been very proactive in the management of the community forest in response to the impending emerald ash borer damage to the community's ash tree population. In an effort to reduce waste and utilize the material, the University and the Nebraska Forest Service developed a design to cover the exterior of the building in ash wood milled from the community ash trees.



(continued on page 7)

## **Using Biochar to Reduce Cattle Emissions**

By Heather Nobert

The Nebraska Forest Service continues to investigate market opportunities for biochar, a high-quality charcoal made from wood. The development of biochar markets would provide great opportunities to utilize low-quality wood resources in Nebraska. The newest effort is a partnership with the University of Nebraska-Lincoln (UNL) Department of Animal Science to evaluate whether including biochar in cattle feed can reduce methane emissions from livestock.

Biochar use as a cattle feed additive could provide a solution to multiple issues, specifically, low-value wood use and the environmental impacts of livestock. This serves an opportunity to incorporate wood products into the daily operations of one of Nebraska's largest industries.

Research in Europe has demonstrated that the effect of charcoal (biochar) in animal feed reduces common gastrointestinal diseases. It is so well recognized that in fact, 90% of the biochar produced in Europe is used in livestock farming. In additional to reductions in gastrointestinal diseases, farmers utilizing biochar have noted overall improvements in animal health and appearance, improved udder health, reduced odors, reduced diarrhea, and declines in animal mortality with the use of biochar. The effects of biochar in cattle rumen fluid has also been studied previously and suggests that it may reduce methane production up to 25%, with biochar additions as little as 0.6% of diet dry matter. Cattle in these studies also had a 25% weight gain with similar intake.

In May 2016, partnering with NFS, Dr. Andrea Watson of the UNL Department of Animal Science reached out to the Food and Drug Administration (FDA) to request permission to study the effects of biochar in cattle. Unfortunately, this request was denied.

In 2012, the Association of Animal Feed Control Officers, which determines allowable feed products for livestock being grown for human consumption, ruled to ban the use of plant-based charcoals for feeding purposes, citing a fear of potential chemical and heavy metal contamination. As a result of this action, the FDA requested of Dr. Watson an extensive review of data to demonstrate the safety of feeding biochar to livestock and human food safety.

In November 2016, Dr. Watson sent biochar samples to be tested for heavy metals, dioxins, and furans to

meet the requests of the FDA. In February 2017, contrary to early assumptions, test results determined that the biochar tested contained no heavy metals, dioxins, or furans. Dr. Watson is working to submit the test results to the FDA for a ruling on continuing with a large research effort.

In the meantime, UNL Animal Science has taken on the issue of biochar as a cattle feed additive in their academic pursuits, with Dr. Watson leading the charge. Six steers were made available for a pilot study to investigate the impact of biochar on cattle emissions. Dr. Watson's study will evaluate four types of biochar (mixed hardwood, cedar, pine, and blended) at multiple feeding rates. Laboratory testing will determine the two best combinations of biochar and feeding rates and those two selections will be fed to the project animals and methane emissions will be evaluated. The data returned from this pilot study will be used to develop a long-term research plan to continue to evaluate biochar impacts on cattle emissions.

The potential impacts for Nebraska's cattle industry are enormous. At a conservative rate of 0.6% of biochar per head of cattle per day, we could expect to see a reduction in methane of 320 pounds of  $\mathrm{CO}_2$  equivalent per animal each year. This number represents a 0.8 million ton reduction in  $\mathrm{CO}_2$  equivalents from feedlot cattle in Nebraska. For perspective, it would be the same as taking 150,000 cars off the road for one year, replacing the energy used by 75,500 homes for one year, or the benefits of installing 182 wind turbines.

Furthermore, the implications for Nebraska's wood products industry is substantial. Nebraska has a 4:1 ratio of cows to humans, totaling approximately 4.7 million cattle, statewide. If each cow were to ingest 0.5 grams of biochar daily, the daily demand for biochar would exceed 2.5 tons (>900 tons, annually). On average, it takes 3 tons of wood waste to produce a ton of biochar, creating a ~3,000 ton annual market for wood waste in Nebraska.

While we await further guidance on the large research study, the Nebraska Forest Service and UNL Animal Science remain dedicated to evaluating this opportunity to increase the use of Nebraska's wood resource while at the same time dramatically reducing the environmental impacts of Nebraska's largest industry.

## **Nebraska Forest Industry Spotlight**

Dudley's Dew-Right Tree Service

Dudley started out as a full-time airplane mechanic with Duncan Aviation and a part-time farmer in Seward County. From Duncan Aviation, Dudley and his family became owners of the Eagle's Nest Storage Complex located off Cornhusker Highway and 33rd Street.

After leaving the storage business to his family, Dudley moved on again and found that his love for big machines and his engineering mind suited him well for taking down big trees. This was the inception of the Dew-Right Tree Service. Dudley bought a bucket truck and a truck mounted crane. Not afraid to take on any challenge, Dudley had the reputation of being the one company that would take down any tree.

Years later, opportunity came knocking again as Dudley contemplated what could be done with all the wood waste being generated by the trees he removed. Ever the businessman, he found himself the owner of a mulch processing unit that colored wood chips produced by the trees being taken down. In 2016, Dudley acquired a Bandit 2680 whole tree processor. Aptly nicknamed "The Beast," this horizontal grinder makes tree parts into mulch suitable for any application.



To learn more about Dudley's Dew-Right Tree Service, visit their website at www.dewrightservices.com, or call at (402) 421-0870.

The mulch yard is located on 48<sup>th</sup> Street between Highway 6 and Superior. Many Lincoln tree services drop their logs and chipped material at the yard. Dudley's grinder is also mobile and thus he often says, "Have Grinder – Will Travel."

Dudley says, many municipalities and state agencies in Nebraska are seeking alternatives to burning or burying their green waste. Turning it into mulch makes it once again viable (and valuable) for use in city parks, trails, and even in high visibility landscapes. The future looks bright, as awareness of the many beneficial uses of mulch grows. "We are here to make a difference," Dudley said. "Recycling trees is our part."

Dudley and his wife Donna have four children, seven grandchildren and one more on the way.

## **Timber Appraisals for March 2017**

Bottomland Timber in Gage County. Mainly silver maple and cottonwood, with some low quality black maple. Karloff 1/2017 Ronald Fleck 3535 N. 175<sup>th</sup> Ct., Apt. 323 Omaha, NE 68116 Location: Gage County P: (402) 677-9223

# Bringing Innovative Timber Construction to Nebraska (continued)

When finished, this facility will truly be a one-of-a-kind building constructed to meet the functional needs of the community, as well as the educational needs of the region. Tools for the orchard will be able to be stored on-site, volunteers will have a space to relax after a long day of work, and the City will have a great facility to showcase innovative timber construction and high-value use of urban wood waste.

The University and Nebraska Forest Service look to continue this momentum in other areas. Education of students and professional architects alike regarding the use of CLT in architecture could change how wood is used in buildings across the Great Plains. While there are currently no regional manufacturers of CLT, increased promotion and marketing of CLT as an architectural opportunity could have a significant impact on the wood products industry in the Great Plains.

Additionally, this facility will serve as a landmark demonstration of high-value utilization of ash wood waste. Repurposing community trees into a useful product is the perfect opportunity. The Nebraska Forest Service continues to promote responsible utilization of urban wood waste as a solution to the impending impacts of emerald ash borer on Nebraska's ash trees. South Sioux City has set the bar very high in Nebraska. However, new opportunities are always out there to utilize urban wood waste, while reducing community wood disposal costs.

## Nebraska Wood Energy Team Conducting Statewide Analysis

As part of the Nebraska Wood Energy Team, the Nebraska Forest Service (NFS) has contracted with the Biomass Energy Resource Center (BERC) of Burlington, Vermont to conduct a statewide review of wood energy potential of Nebraska regions and communities. Working to identify strategic opportunities for wood heating or combined heat and power systems, NFS and BERC will be working to identify communities and areas with characteristics which make wood energy economically-feasible.



These characteristics include:

- reasonable distance to wood fuels sources
- significant energy demands
- elevated electrical rates
- · sufficient infrastructure
- facilities large enough to realize cost savings by switching to wood energy

This process will begin with the collection and analysis of data by will also include significant interactions with facilities and communities across Nebraska. The results of this effort will be used to identify communities to be targeted for education and assistance to investigate wood energy options for their individual community.

The goal of the Nebraska Wood Energy Team is to promote the utilization of wood energy across the state. Wood energy systems serve as significant markets for low-quality processed woody material as a wood fuel. This effort will promote increased wood energy opportunities, leading to increased utilization of wood waste across Nebraska. The work upon which this project is based was funded in whole or in part through a grant awarded by U.S. Forest Service Wood Innovations.

## **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

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. Mighty Mite bandsaw. 20 HP electric motor, tandem axles w/ brakes on one axle, 36" x 24' log capacity, (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. 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 (no visible wear), 6-cyl Deutz engine, laser lights. \$20,000. Contact George Hawley, Home: 620- 473-3468 or Cell: 620-365-9744, email: hawleylumber@ gmail.com.

<u>Timber Harvester.</u> HYUNDAI ROBEX 130. Cuts and delimbs. Works well on cedars. \$18,500. Call Todd Book, 712-251-4464.

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

#### Wanted

<u>Wood Residue.</u> Slab wood, cutoffs, sawdust, mulch, bales, etc. Lincoln, NE. Call Scott Hofeling at 402-432-0806 or email scott@hofelingenter-prises.com.

Logs and Slabwood. Cottonwood, cedar and pine. 4-26" 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@AWF.com

Cottonwood Logs. Veneer-quality cottonwood logs, 16-36" 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**

<u>Woodshop Services.</u> 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.

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