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

Lumber Market

HARDWOODS



Northern. Market conditions are better for producers than at the start of the second quarter. However, stable pricing and increased continuity in business resulted from supply correction. A substantial portion of the supply adjustment stemmed from sawmill production idled for the summer months. Plans called for production to resume by fall in anticipation of better business performance. However, the market has not improved; demand is flat, and there are no indications that an upturn is imminent for the near-term. In a broad view, prices are holding steady, but include moderate upward and downward movement as determined by supply/demand imbalances.

Southern. Many suppliers are encouraged by a slight improvement in shipments of green and kiln dried hardwood lumber. Cautious purchasing by domestic and international secondary manufacturers and distributors has reduced inventories, not only at that end of the supply chain but throughout the hardwood supply pipeline. Sawmill operators lowered log inventories due to limited demand for developing lumber. As a result, many logging contractors exited the business, and landowners have delayed timber sales. Therefore, hardwood timber, log, and lumber supplies have contracted. Now, buyers are replenishing inventories, increasing orders and shipments. The uptick in purchasing has pressured green lumber pricing for certain species, grades, and thicknesses, though upward movement is mostly coming from the extreme low end. On the other hand, markets are soft for crossties and other industrial timber products, with activity confined to established buyer/seller business.

Appalachian. It cannot be overstated how important the housing market is to the entire hardwood supply chain, from landowners to secondary manufacturers. At the peak (January, 2006), total housing starts were 2.265 million units on an annual basis. Since 1959, when the US Census Bureau began tracking housing statistics, 1972 (2.357 million units) was the only year to eclipse 2005 starts. In April 2009, new construction fell to 479,000 units annualized, rising to 587,000 units in June, before dropping 1.0% in July to 581,000 units. After three consecutive months above 500,000 units, experts are hopeful the housing market has bottomed out. However, the hardwood industry supplied enough raw materials and finished goods at peak to accommodate over 470.0% more residential construction than is occurring now. Out of necessity, contraction in the wood products industry has happened. Businesses have closed their doors, idled plants, and drastically reduced operating hours. And, demand for furniture, cabinets, flooring, mouldings, millwork, and other interior fittings has not significantly improved. However, reduced supplies of timber, logs, lumber, and finished goods have affected activity. Estimates show hardwood lumber production has declined 31.5% in 2009 compared to 2008. Too, imports of hardwood lumber to the US have fallen 46.3%. Opinions differ as to whether supplies have decreased below demand, but it is certain that progress has been made to correct previous imbalances.

(Source: Condensed from *Hardwood Market Report*, August 22, 2009. 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			
	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08
Ash	625	640	655	655	420	435	450	450	295	305	325	325
Basswood	685	685	685	685	340	350	350	350	205	205	205	205
Cottonwood	605	605	615	615	405	405	415	415	220	220	220	220
Cherry	1550	1710	1895	2020	625	655	790	895	320	340	425	475
Elm (No. soft grey)	635	635	635	635	420	420	420	420	235	235	235	235
Hackberry	475	475	475	475	455	455	455	455	265	265	265	265
Hickory	615	630	650	690	490	490	490	525	350	350	350	370
Soft Maple (UNSD)	960	960	1100	1100	480	515	545	585	260	270	280	295
Red Oak	785	785	930	945	510	520	585	630	420	430	490	500
White Oak	940	940	1065	1105	490	500	570	620	350	360	400	400
Walnut	1800	1870	2010	2110	765	830	1065	1180	860	395	520	580

Note: Hardwood prices quoted in dollars per MBF, average market prices FOB mill, truckload and greater quantities, 4/4, rough, green, random widths and lengths graded in accordance with NHLA rules. Prices for ash, basswood, Northern soft grey elm, soft maple-unselected, 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			
	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08
Ash	905	905	905	905	685	680	680	680	1580	580	560	560
Basswood	890	915	950	950	520	550	575	575	395	395	395	395
Cottonwood	740	755	755	755	510	520	520	500	—	—	—	—
Cherry	2260	2415	2625	2720	860	905	990	1095	555	580	700	755
Elm (No. soft grey)	—	—	—	—	—	—	—	—	—	—	—	—
Hackberry	—	—	—	—	—	—	—	—	—	—	—	—
Hickory	985	1055	1100	1100	825	860	870	880	695	735	745	760
Soft Maple (UNSD)	1355	1475	1600	1600	715	750	750	800	515	540	540	540
Red Oak	1095	1145	1310	1335	785	820	945	975	610	645	730	760
White Oak	1340	1490	1660	1700	715	760	895	950	585	610	700	715
Walnut	2670	1790	2905	2905	1320	1450	1685	1785	755	835	1060	1140

Note: Kiln dried prices in dollars per MBF, FOB mill, is an estimate of predominant prices for 4/4 lumber inspected and graded before kiln drying. Prices for cottonwood and hackberry from Southern Hardwoods listings. Prices for ash, basswood, Northern soft grey elm, soft maple-unselected, red oak, and white oak from Northern Hardwood listings. Prices for cherry, hickory and walnut (steam treated) from Appalachian Hardwoods listings. (Source: *Hardwood Market Report Lumber News Letter*, last issue of month indicated. To subscribe to Hardwood Market Report call (901) 767-9126, website: www.hmr.com.)

Softwood Lumber Price Trends

Species	Selects ¹				Shop ²				Common ³				Dimension ⁴			
	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08	6/09	3/09	12/08	9/08
Ponderosa Pine*	451	491	541	745	346	229	217	NA	409	397	382	382	216	208	262	322

*Rocky Mountain Ponderosa Pine

¹Selects = D and Btr Selects, Stained Select, Mld and Btr.

²Shop = 4/4 Factory Select - #2 Shop.

³Common = #2 and Btr Common.

⁴Dimension, Timbers and studs = Std and Btr, #2 and BTR Dimension and Timbers.

Note: Average Softwood prices quoted per MBF rounded to nearest dollar, FOB mill, KD. This information is presented to indicate trends in the softwood lumber market. Actual prices may vary significantly from prices quoted.

(Source: Excerpt from *Inland Grade Price Averages*, Western Wood Products Association (WWPA) for the month indicated. To subscribe contact WWPA, phone: (402) 224-3930, website: www.wwpa.org).

Timber Stumpage Prices

The Nebraska Forest Service does not have a reliable system of collecting data on timber stumpage prices paid for Nebraska timber. Since current timber stumpage price information would be useful to landowners, loggers, sawmills and forester's in Nebraska, timber stumpage price information will be summarized from selected states and periodically presented in Timber Talk. Although this data is not collected from Nebraska timber sales, it may serve as a general guide in tracking stumpage trends. Prices quoted in \$/MBF.

Species	(1) Illinois (May - Aug. 2008)		(2) Missouri (Jan. - March 2009)	
	Sawtimber	Veneer	Sawtimber	Veneer
Ash	50-140 (130)		110-110 (110)	
Basswood	50-100 (100)		85-85 (85)	
Cherry	100-600 (330)	200-1650 (820)		
Cottonwood	20-100 (80)			
Elm	(80)			
Hackberry	(80)			
Hickory	50-200 (120)		80-130 (105)	
Soft Maple	80-250 (130)			
Red Oak	80-400 (230)	300-700 (510)	80-210 (135)	
White Oak	150-400 (350)	450-2000 (1060)	80-210 (125)	665-665 (665)
Sycamore	(90)			
Black Walnut	200-1000 (530)	500-4000 (1670)	385-385 (385)	835-835 (835)
Redcedar			110-110 (110)	

(1) Source: Illinois Timber Prices. Stumpage price range for Sawtimber reported from the Prairie Unit (Zone 3). Sawtimber price average, in parentheses, and veneer price range and average reported from Statewide statistics. Doyle Scale.

(2) Source: Missouri Timber Price Trends. Stumpage price range and average, in parentheses, reported from Statewide statistics. International 1/4" Rule.

Little Known Nebraska Facts!

In 1927, Edwin E. Perkins of Hastings invented the powdered soft drink Kool-Aid.

Logger Safety Training Sept. 30

Logging ranks as one of the most dangerous occupations in the U.S. Every year many loggers are injured or killed in logging accidents, many of which could be prevented by proper training.

In this effort the Nebraska Forest Service (NFS) will host a “Logger’s Safety Training Workshop” in Valentine, Nebraska on September 30, 2009. The workshop is designed to help everyone from the inexperienced chainsaw operator to the most experienced logger become more safe and efficient in their logging operations. No matter what your logging experience level, this workshop offers something for everyone.

The workshop will be conducted by Lee Schauman, an experienced logger and Lead Safety Trainer for the Forest Industry Training Alliance (FISTA), Inc. based in Rhinelander, Wisconsin. Mr. Schauman is also a certified Game of Logging Instructor.

The all-day workshop includes a morning indoor session to address OSHA regulations, personal protective equipment, and chainsaw safety/maintenance. The afternoon will be spent in the woods with tree felling demonstrations and hands-on participation. Participants should plan to bring their own personal protection equipment, including hard hats, ear and eye protection, chainsaw chaps, and work boots.

The workshop fee is \$20, which includes lunch and handout materials. Pre-registration, payable to NFS, is required by September 23, 2009. To insure one-on-one instruction, workshop attendance is limited to the first 15 paid registrants. So, submit your workshop payment and contact information (name, address, phone, email) early. Confirmation will be sent to the first 15 registrants.

For more information or to pre-register, contact Rich Woollen, NC District Forester, Lower Loup NRD, POB 210, Ord, NE 68862. Phone: 308-728-3221, email: rwoolen1@unl.edu.

Nebraska Timber Industry

The recently released USDA Forest Service, Northern Research Station Resource bulletin NRS-28, entitled Nebraska Timber Industry—An Assessment of Timber Product Output and use, 2006, summarizes the survey conducted in 2006 of all Nebraska sawmills and other primary wood products manufacturers, similar surveys were also conducted in 1980, 1993 and 2000. The following are selected highlights from the 2006 report.

Primary Wood-Using Industry

- Nebraska’s wood products manufacturing industry employs more than 2,200 workers with an output of \$286 million (U.S. Census Bureau 2002)
- Nebraska’s primary wood-using industry includes 54 mills (49 sawmills and 5 mills producing other products) (Table 1).

TABLE 1. Number of active primary wood-using mills

Kind of mill and mill size	Survey Year		
	1980	1993	2000
Sawmills¹			
>=5,000 mbf	—	2	2
1,000 - 4,999 mbf	7	10	5
50 - 999 mbf	35	13	11
< 50 mbf	—	7	14
Total	42	32	32
Other products²	4	3	2
All mills	46	35	34

¹Annual lumber production in thousand board feet (mbf), International 1/4-inch rule.

²Includes plants producing veneer, shavings, cabin logs, posts, etc.

Industrial Roundwood

- Nebraska’s primary wood-using mills processed 5.1 million cubic feet of industrial roundwood in 2006, an increase of 8% from 2000. However, Nebraska’s industrial roundwood production decreased by almost 3%, from 6.3 million cubic feet in 2000 to 6.1 million cubic feet in 2006, mainly because South Dakota and Missouri imported less industrial roundwood from Nebraska. (Figure 1)

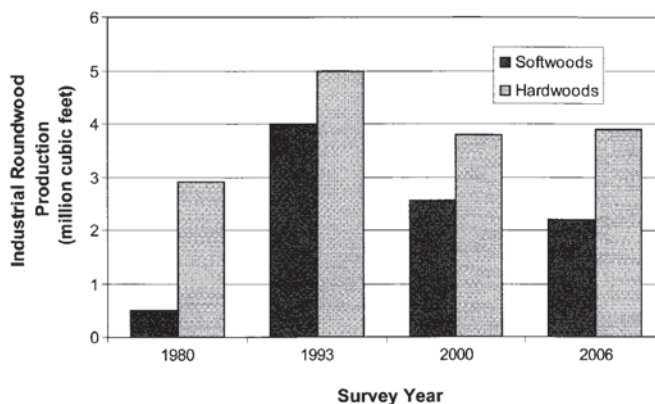


FIGURE 1. Industrial roundwood production.

- Over 90% of the industrial roundwood processed by Nebraska mills was cut from Nebraska forests. Cottonwoods account for almost 80% of the total volume processed.
- 59% of the harvested industrial roundwood was cottonwood. Ponderosa pine (23%) and east redcedar (13%) were the other major species harvested. (Figure 2)
- Nebraska sawmills processed 22.9 million board feet of saw logs in 2006, a decrease of 20% from 2000.
- Cottonwood and ponderosa pine account for 93% of the harvest from Nebraska forests.

Timber Removals and Harvest Intensity

- 74% of the 8.3 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.

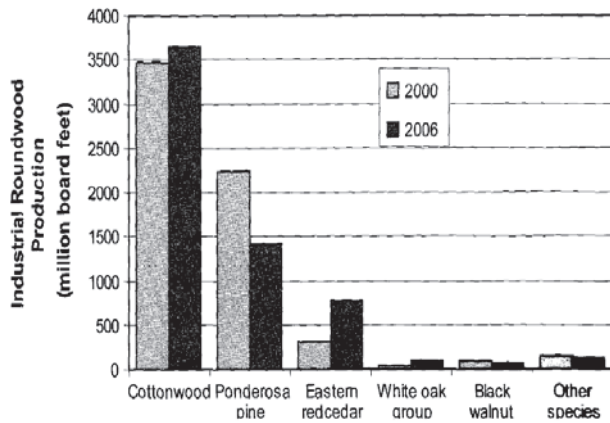


FIGURE 2. Industrial roundwood production.

- The 8.3 million cubic feet of total wood material removed during harvesting is less than 0.5% of the total live volume of trees in forest land.

Residues

- Harvesting of industrial roundwood left 2.2 million cubic feet of the harvest residues on the ground.
- Nebraska’s primary wood-using industries generated 72,000 green tons of wood residues (Slabs, sawdust, bark, etc).
- 89% of the mill residues were utilized for fuel, mulch, bedding, etc. Eleven 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—2006” is available from the Timber Talk editor or online at: <http://www.nfs.unl.edu/documents/ruralforestry/NE%20TPO%202006.pdf>.

Nebraska Wood Waste

Woody biomass utilization offers opportunities to produce renewable energy, develop bio-based businesses, generate energy cost savings and create new markets for Nebraska’s low value and waste wood resources. To document the amount of wood waste currently produced and utilized in Nebraska and identify future woody biomass opportunities, the NFS contracted with a consultant to conduct a wood waste supply and utilization assessment. In 2008, 766 wood waste supply locations were surveyed to obtain data concerning wood waste produced and utilized from timber harvests, forest improvement projects, manufacturing residues, and urban wood waste. The wood-waste utilization analysis focused on 422 boilers located at public institutions that are 40 years of age or older.

The final report entitled “Nebraska Forest Service Wood Waste Supply and Utilization Assessment” was published in December 2008. The following are highlights from the final report.

- There is currently 172,395 green tons of processed wood waste generated annually in Nebraska (Table 1)

Table 1: Currently Processed Wood Waste Supply by Group

Group	Green Tons	Percent of Total
Commercial Logging And Fuels Management Contractors	11,500	6.7%
Range Improvement Contractors	400	0.2%
Primary Wood Products	71,972	41.7%
Secondary Wood Waste	11,385	6.6%
Municipal Waste Disposal Facilities	22,854	13.3%
Tree Care Service	32,236	18.7%
City Governments	12,542	7.3%
Utility Companies	9,506	5.5%
Total	172,395	100%

- If all wood waste associated with unprocessed forest biomass, e.g. timber harvests, forest improvement projects and range improvement activities were utilized, another 98, 128 tons could potentially be available. (Table 2)

Table 2: Processed and Unprocessed Wood Waste Supply by Major Category

Major Category	Green Tons	Percent Of Total
Forest Biomass	110,028	40.7%
Residual By-Products	83,357	30.8%
Urban Wood Waste	77,138	28.5%
Total	270,523	100%

- There are currently 8 commercial scale wood-fired boilers located in Nebraska.
- The wood wastes generated from wood products manufacturers represent an important bio-energy feedstock source. A significant amount of this processed wood waste is currently used for landscape mulch or disposed of.
- Urban wood waste represents an important potential bio-energy feedstock source.
- The greatest concentration of wood waste supply exists in the same general areas where boiler conversion potential is the highest.

For a free copy of the “Nebraska Forest Service Wood Waste Supply and Utilization Assessment” contact the Timber Talk editor, or online at: <http://www.nfs.unl.edu/documents/impactreports/NebraskaBiomassReport.pdf>.

Important Trivia!

Did you know that...

- The percentage of Africa that is wilderness: 28%
- The percentage of North America that is wilderness: 38%

Nebraska Forestry Industry Spotlight



SCHNASE LUMBER



Schnase Lumber has been in the sawmill business in the Kenesaw/Bladen area of South Central Nebraska for over 30 years. Owner Dave Schnase started his tree service/sawmill/logging business in 1976 and has operated several different sawmills in the interim. Dave says he became interested in sawmills back when he was sixteen years old and has been involved with sawmilling and logging ever since.

His current sawmill is an older Corley circle mill that he converted into a portable mill about 20 years ago. The mill was also upgraded from a manual to a hydraulic functioning outfit shortly after purchase. Powered by a Perkins 540 diesel engine, the mill utilizes a 64-inch circular blade and can handle logs up to 23 feet long. Mr. Schnase indicates that he can easily cut 10,000 board feet



Dave's portable sawmill.



Dave with cottonwood log deck.

per day. He adds that often he has harvested and cut over 2.5 million board feet in a year for various customers, but the current economic recession has slowed business considerably. Being portable, Schnase sets up his mill at various locations within a 100-mile radius of Kenesaw. Past locations include Central City, Red Cloud, Fremont, Kearney, and Atchison, Kansas. At the present, the sawmill is located near Bladen.

Schnase Lumber harvests and processes all species, with most of the sawmilling being cottonwood for pallets and redcedar for rough lumber. Besides a logging truck, Schnase Lumber also has a portable Cornell edger with 20-inch blades powered by a 6-cylinder Perkins.

Schnase Lumber can be contacted at: Box 333, Kenesaw, NE, 68956. Phone: (308) 233-2826.

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

you know the difference
between "Green" and
"Red" farm machinery.

Timberland Investment Outputs

Editor's Note: The following article refers mostly to softwood timber in the South, but the basic principles apply elsewhere.

When timberland is considered an investment, an understanding of how forests grow and how timber products are produced is necessary to ensure the things produced are at an optimum. Most of the cash flow from a forestry investment will be from timber sales. Timber sale revenue is a function of current stumpage prices, but it is also a function of the amount of wood removed from the forest; this is called forest yield.

Forest yield and site index

Yield is just that, what the forest yields in timber products. Pulpwood is usually expressed in cords (a 4-by-4-by-8-foot rick of wood) and sawtimber in board feet (a 1-inch-by-1-foot board contains 1 board-foot). Since it is the amount of timber you expect from a forest, yield (and stumpage price) also reflects the revenue you expect to receive from the forest. Computer software models and tables can provide expected yields. Two key elements affect the timber yield that can be expected from a forest: site index and stocking.

Site index describes the quality of forestland for growing trees (soil productivity). Site is always in reference to a particular tree species; for example, loblolly pine sites or white oak sites. Few species grow equally well on the same site. Specifically, site index is the average total height of the dominant trees in a forest stand at an index age.

In the South, for instance, an index age of 50 years is commonly used for natural pine stands and 25 years for pine plantations. If forestland has the capacity to grow dominant loblolly pines to an average total height of 90 feet in 50 years, it is classified as "site index 90 land for loblolly pine, base age 50." Site index is important because of its dramatic impact on timber yield at harvest. On Virginia's coastal plain, loblolly pine yield by site index for a 20-year-old stand with 700 trees per acre is shown in Table 1.

Table 1. Forest output by site index (cords per acre).

Site Index (base age 25)	Forest Yield (cords per acre)
50	22.6
60	34.5
70	52.9
80	80.9

Because site quality has such a major effect on timber yield, it should be a key element in pricing any forest tract. Higher site index land is worth more than lower site index land for timber production. If forest management capital is limited, the highest site index land should receive investment priority since it provides maximum timber production potential.

Stocking

Stocking is a measure of how many trees are in a forest stand relative to how many are needed to obtain the management objective. There are two common measures of stocking: trees per acre and basal area. Basal area is the cross-sectional area of trees at breast height (4.5 feet above the ground) per acre, measured in square feet (or, the square foot area of the top of all the stumps on an acre of land if all the trees are cut 4.5 feet above the ground).

To meet management objectives, a forest stand should be fully stocked, not understocked or overstocked. In the South, as a rule of thumb, the basal area of a mature forest stand should approximate the 50-year site index of the land. Using this rule, site index 90 land should have a stocking of about 90 square feet of basal area per acre.

Trees per acre is a vague measure of stocking unless you have an idea of tree size and how the trees are spaced in the stand, but it has the great advantage of being easily understood.

Stocking has little effect on total yields of a forest stand if the objective is to simply produce cubic feet of wood. Stocking has a great impact, however, on the timber products available at harvest. A stand must be properly stocked to grow sawtimber. For example, for a 30-year-old loblolly pine stand, stocking differences can account for over 5,000 additional board feet of sawtimber (Table 2).

Table 2. Forest output by trees-per-acre.

Trees Per Acre	All Trees		Multiple Products	
	As Pulpwood (cords)	Sawtimber (board feet)	Pulpwood (cords)	
500	52.6	7,523	32.5	
600	52.7	5,551	37.2	
700	52.6	4,090	40.6	
800	52.2	3,011	43.0	
900	51.7	2,214	44.6	
1,000	51.7	1,628	45.6	

Note that if all wood is produced as pulpwood, stocking has little impact on total timber production. Just about any level of trees per acre will produce about 52 or 53 cords of pulpwood. However, production of sawtimber is dependent on tree density in the forest stand. Nearly five times as much sawtimber can be produced if proper stocking is used. Most forest owners will need a forester to appraise stocking levels. Timberland investors would be wise to consider stocking levels when purchasing timberland.

Biological growth and ingrowth

No matter what the market does each year, a forest still grows. Nationally, the USDA Forest Service shows about 3 percent average annual growth on all timberland, but timberland that investors favor would tend to have higher growth

rates. Factors like improved genetic stock, fertilizer, herbicides and intensive thinning regimes can greatly increase these growth rates. Productive southern pine plantations would be expected have more of a 5 to 7 percent annual growth rate. There are many intensively managed plantations that exceed those growth rates. Biological growth rate of a forest is totally uncorrelated with market conditions. Unlike many other investments, forests have a minimum annual growth that is guaranteed.

Table 3. Southern pine value (\$/ton) by product (dbh range).

Product	DBH Range	Price (\$/ton)
Pulpwood	6 to 7 inches	\$26.48
Chip-n-Saw	8 to 11 inches	\$34.87
Sawtimber	12+ inches	\$47.47
Ply Logs		\$52.22
Poles		\$75.43

As trees continue to grow, they move from product class to product class; foresters call this ingrowth. Table 3 shows how this works for southern pine using Timber Mart-South third quarter, 2008 delivered prices (timber delivered to the mill as opposed to stumpage price, or standing timber). As trees grow and dbh (diameter breast height) increases, the tree changes in terms of potential products. At 6 inches dbh

a tree becomes pulpwood, at 8 inches it becomes chip-n-saw (or small sawtimber), and at 12 inches it becomes sawtimber. The sawtimber class offers extra value based on tree quality (mainly a clean bole and straightness) when potential exists to become ply logs or poles. Just between pulpwood and sawtimber the price difference is 80 percent.

Recently, intensive timber management has greatly increased the growth rates possible on forest sites. Proper and improved genetic stock ensures trees with the maximum potential are planted. Proper thinning systems remove underperforming trees and time the harvests to maximize revenue value. Management systems use fertilizer and herbicide to get the most out of each forest site. Trees quickly move through the products classes and overall rotation ages are shortened, raising rates of returns earned from timberland investments.

Summary

Site index and stocking are two key characteristics that control forest growth and eventually timber investment return. It is not total yield that is important, but how that yield is distributed among timber products.

(Source: *Forest Products Equipment* magazine, April, 2009. Article written by Tom Straka, Professor, Department of Forestry and Natural Resources, Clemson University. For more information or free subscription to *Forest Products Equipment* magazine, please visit www.fpemagazine.com.)

The Trading Post

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

For Sale

Timberjack 380 Cable Log Skidder. 5.9 Cummins. Several extra chokers. Ready to work. \$11,500. Contact: Wayne Chriswisser at (402) 234-2133; or email: W_chriswisser@yahoo.com.

Reeve Circular Sawmill. Includes power unit and two 48-inch insert tooth blades. Contact: R&R Sawmill at (308) 569-2345.

Wanted

Belsaw Woodworking Planer, Model 9103. 12¼". **Bandsaw Lumber Mill.** Push type. Contact: Charles Cressman, 231 Walnut St., Butte, NE 68722-3518. Phone: (402) 775-2468.

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@AWE.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. Certified Stihl chainsaw sales and service. Contact: Tim Schram, Schram Saw and Machine, PO Box 718, 204 E. 3rd St., Ponca, NE 68770, (402) 755-4294.

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

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

Wood Products Web-based Service. WoodIndustryNetwork.com offers services that allow buyers and sellers to communicate through our web-based system to buy and sell their products direct. Most services are free. Contact: (Website) WoodIndustryNetwork.com; or phone: (904) 821-8080.