MISSOURI TIMBER PRICE TRENDS

April-June, 2013, Vol. 23 No. 2
Missouri Department of Conservation, Forestry Division

Doyle (North) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.		# of Rpts.
Veneer								
Walnut, Black	$5,430	$1,050	$3,155	$1,845	$2,415	26	Doyle - MBF	6
Sawlogs								
Ash	$260	$30	$95	$95	-	35	Doyle - MBF	6
Elm	$220	$70	$75	-	-	16	Doyle - MBF	3
Hackberry	$80	$80	$80	$80	-	18	Doyle - MBF	3
Hard Maple	$290	$30	$90	$90	-	87	Doyle - MBF	6
Hickory	$290	$30	$95	$90	-	115	Doyle - MBF	12
Mixed Hardwoods	$315	$50	$145	$160	$80	683	Doyle - MBF	16
Oak (mixed species)	$310	$35	$155	$150	$145	1,196	Doyle - MBF	14
Post Oak	$220	$130	$170	$185	-	15	Doyle - MBF	6
Red oak (group)	$600	$70	$120	$120	$85	958	Doyle - MBF	17
Soft Maple	$210	$150	$190	$190	$200	361	Doyle - MBF	5
Walnut, Black	$2,000	$500	$1,325	$730	$770	218	Doyle - MBF	17
White oak (group)	$800	$130	$210	$195	$175	1,627	Doyle - MBF	17
Stave Logs								
White oak (group)	$500	$150	$240	-	-	35	Doyle - MBF	3

International (South) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.		# of Rpts.
Sawlogs								
Hickory	$260	$50	$170	$155	$135	266	Int. - MBF	18
Mixed Hardwoods	$365	$80	$225	$225	$230	975	Int. - MBF	13
Oak (mixed species)	$250	$70	$175	$165	$140	1,694	Int. - MBF	20
Post Oak	$160	$40	$125	$90	$90	54	Int. - MBF	8
Red oak (group)	$325	$160	$240	$210	$185	5,409	Int. - MBF	20
Shortleaf Pine	$260	$55	$125	$135	$145	77	Int. - MBF	11
Walnut, Black	$890	$125	$680	$560	$225	28	Int. - MBF	3
White oak (group)	$325	$125	$230	$210	$180	607	Int. - MBF	21

Doyle – BF (North) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.		# of Rpts.
Veneer								
Walnut, Black	$5.43	$1.05	$3.16	$1.84	$2.42	26	Doyle - BF	6
Sawlogs								
Ash	26¢	3¢	10¢	9¢	-	35	Doyle - BF	6
Elm	22¢	7¢	8¢	-	-	16	Doyle - BF	3
Hackberry	8¢	8¢	8¢	8¢	-	18	Doyle - BF	3
Hard Maple	29¢	3¢	9¢	9¢	-	87	Doyle - BF	6
Hickory	29¢	3¢	9¢	9¢	-	115	Doyle - BF	12
Mixed Hardwoods	31¢	5¢	15¢	16¢	8¢	683	Doyle - BF	16
Oak (mixed species)	31¢	3¢	16¢	15¢	15¢	1,196	Doyle - BF	14
Post Oak	22¢	13¢	17¢	18¢	-	15	Doyle - BF	6
Red oak (group)	60¢	7¢	12¢	12¢	9¢	958	Doyle - BF	17
Soft Maple	21¢	15¢	19¢	19¢	20¢	361	Doyle - BF	5
Walnut, Black	$2.00	50¢	$1.33	73¢	77¢	218	Doyle - BF	17
White oak (group)	80¢	13¢	21¢	19¢	18¢	1,627	Doyle - BF	17
Stave Logs								
White oak (group)	50¢	15¢	24¢	-	-	35	Doyle - BF	3

International – BF (South) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.		# of Rpts.
Sawlogs								
Hickory	26¢	5¢	17¢	16¢	13¢	266	Int. - BF	18
Mixed Hardwoods	37¢	8¢	22¢	23¢	23¢	975	Int. - BF	13
Oak (mixed species)	25¢	7¢	18¢	17¢	14¢	1,694	Int. - BF	20
Post Oak	16¢	4¢	12¢	9¢	9¢	54	Int. - BF	8
Red oak (group)	32¢	16¢	24¢	21¢	19¢	5,409	Int. - BF	20
Shortleaf Pine	26¢	6¢	12¢	13¢	14¢	77	Int. - BF	11
Walnut, Black	89¢	13¢	68¢	56¢	22¢	28	Int. - BF	3
White oak (group)	32¢	12¢	23¢	21¢	18¢	607	Int. - BF	21

Published timber prices are based on a rolling average of reports received over the last four issues - that is, one year. Refer to the column headed "# of Rpts." to get a gauge of how accurate the average prices may be. ("# of Rpts." refers to the number of sales including a particular species and may sum to more than the number of sales.) Changes since last quarter and last year should be read with caution as the number of reports varies each year and quarter. This report can only be used as a general guide for determining market value of timber. General market and economic conditions, as well as local considerations such as accessibility, terrain, sale size, and tree size and quality also affect the price paid.

Please see the map on page 7 for a definition of reporting regions, which have changed.

All prices and volumes are reported in either International ¼" MBF Scale or Doyle MBF, depending on the region of the state.

To convert volume from Int.-MBF to Doyle MBF, divide by 1.2. To convert prices from Int.-MBF to Doyle MBF, multiply by 1.2. To convert from MBF to BF (prices or volume), divide by 1,000.

Foresters reported stumpage prices resulting from 91 timber sales containing 16,504 MBF located throughout the state. There were 53 reports from Private lands and 38 reports from MDC lands. There were 75 reports from MDC foresters and 16 reports from Consultant foresters. We would particularly like to thank these Consulting Foresters: Lohmann, Suchland, Yarnell, Kinerk, Lumb, and Dwyer.

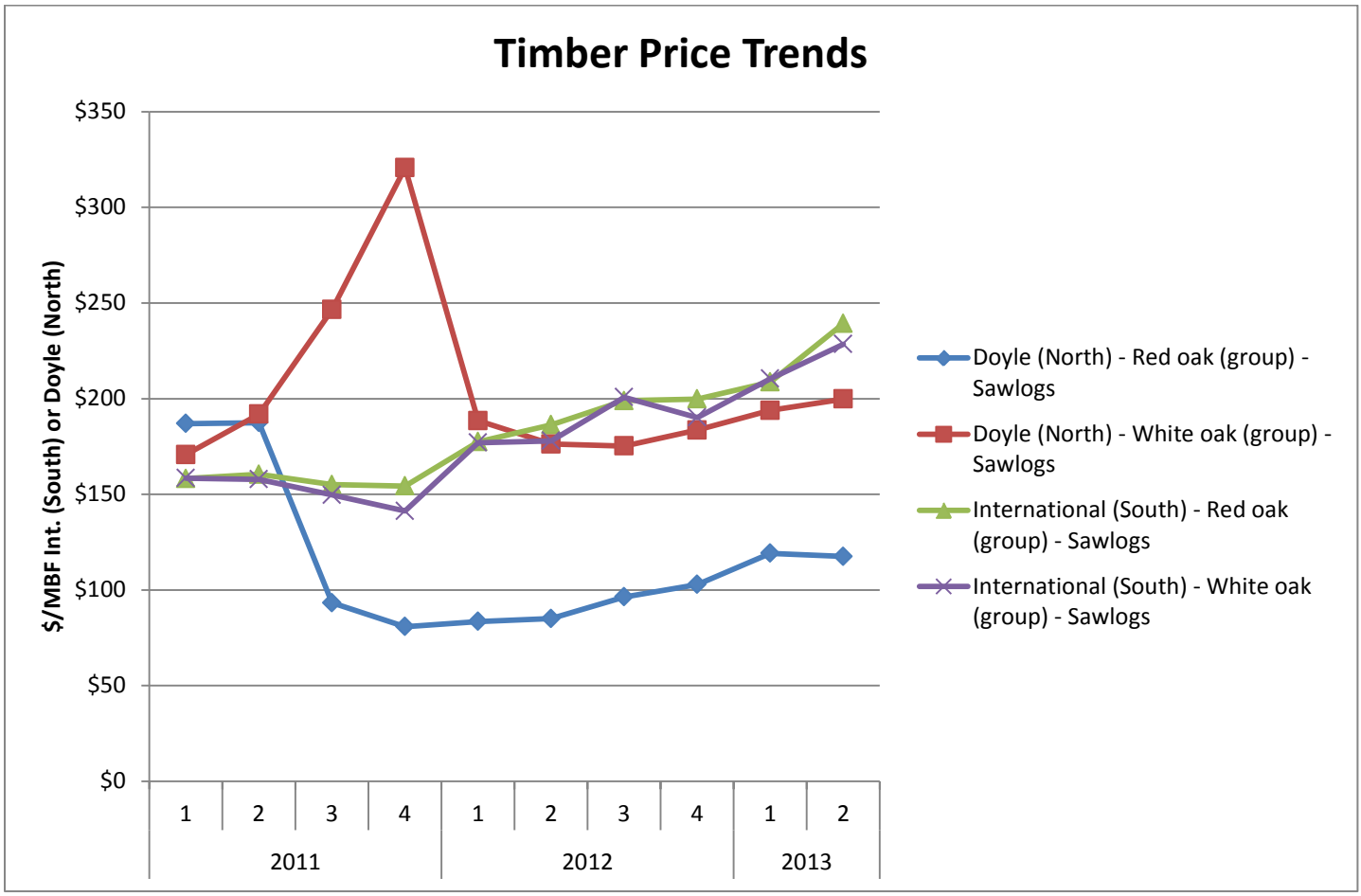
Editor's Note

We've made some changes with this issue of the Missouri Department of Conservation's *Timber Price Trends*. Due to a slow economy, and the voluntary nature of timber sales reporting in Missouri, the number of reports we receive has fallen off in recent years. This has meant that some average prices were based on very few reports! With his issues, we begin calculating average prices based on a rolling dataset of all reports from the past 12 months, with the oldest reports dropping out as new ones come in. This should provide more reports to back up each average price, as well as removing some artificial volatility from the numbers.
We have also reduced the number of reporting regions from 3to 2 (North and South), again upping the number of reports that go into each published price. And each region will report prices in their "native" scale (Doyle or International) with no "Statewide" attempt to merge the two.

We would like to thank the members of MOFRAC who helped with this change in direction, as well as the Missouri Consulting Foresters Association and the Missouri Department of Conservation, both of whom have taken "steps" to encourage more reporting from their members and employees.

Remember that one of the most valuable sources for information on log and timber markets is the local Missouri Department of Conservation Resource Forester or your Consulting Forester. Contact the nearest Forest District office for up-to-date, local advice. The Missouri Department of Conservation's Forestry Division, (573) 751-4115, will be happy to provide you with the name and address of the Resource Forester or MDC Regional Office nearest to you. You can locate a Consulting Forester by visiting the Mo. Consulting Forester's Association web site at: *www.missouriforesters.com* or by visiting the Private Land Assistance page of the MDC website *http://mdc.mo.gov/landown/* and clicking on the "Conservation Assistance Contractors" link.

Tom Treiman and Jason Jensen, Editors



Separately, the Mark Twain National Forest (USFS) reported the following prices for sales in the past two quarters:

Product/Species	Sales	Int. MBF	Price
Miscellaneous (9-11")			
Mixed Hardwood	25	1,259	$23
Oak	20	1,199	$46
Pine	5	787	$15
Posts (5-9")			
Pine	10	1,955	$30
Pulpwood			
Pine	4	263	$10
Sawtimber (11+")			
Mixed Hardwood	32	7,257	$215
Oak	29	8,066	$235
Pine	13	2,642	$60

2Q13 Market Conditions By Jason Jensen

Late winter extended into spring throughout much of the state. The cool wet spring created poor logging conditions that extended through May and the first part of June. As a result log inventories were very low at many mills. Mills trying to rebuild inventory has created intense competition for standing timber especially in the southern portion of the state. Competition combined with improving markets, makes it a good time for landowners to consider selling timber. Nearly all species and product classes showed price increases over the last quarter. Foresters are reporting higher than expected prices on nearly all sales.
Foresters have also reported prices at or above levels before the economic downturn in 2009 as the result of demand and competition.
In the southern part of the state tie markets remain strong. Flooring markets are good as well which has resulted in higher demand for pallet grade lumber. Prices for pallet lumber haven't necessarily increased along with the higher demand however. As a result pallet grade logs and lumber still remain lower than they need to be for anyone from the landowner to the logger to the mill to make much profit.
Stave quality white oak prices remain good especially with the poor logging conditions resulting in low log inventories. The stave industry has expanded their buying further from their mills to compensate for low inventories and high demands for barrels.
In northern portions of the state, demand for red oak lumber has finally picked back up again. That is good news since the red oak market has been very supressed for the last several years. Log inventories were low through the month of June resulting in demand for stumpage and logs. White oak and walnut markets remain strong as well.

Wood Science 101 (10) - Where Does Lumber Come From?

by Chuck Ray

In the early 1970's, the US Forest Service developed a computer program that mathematically calculated the highest volume of lumber that could be sawn from a log of specified dimensions based on what it called the "best opening face". Soon, computerized sawing equipment incorporated this computer algorithm into their equipment along with scanning technology that allowed the log to be spun and scanned prior to sawing, thereby allowing the computer to determine just exactly where that first critical cut should be made. The resulting "face" of the log then, would produce the widest pieces of lumber, and subsequent narrower lumber would be produced as the log is turned. The sawyer, or the computer he operated, determined where the best first cut would be. The cut was made just at the edges of the top piece of bark, producing a "slab" from which the top two narrow boards were re-sawn. Then, once the slab was sent on its way the third and fourth boards from top were sawn and sent on to an "edger" where the square edges of the boards were formed as the rounded corners were sawn away. The log was then rotated and sawing continued on the next face, with most of the pieces in this case being sent on to a "re-saw" or a "gang-saw" to produce the narrower strips.

Not long after the computerized saws were capable of producing the highest amount of lumber, or "yield" from a log, technologists figured out how to allow the mill operators to assign market values to the different sizes of lumber in "value tables" built into the software. This allowed the mill operator to then produce not the highest "yield" of lumber in board feet (one board foot is equal to a square piece of wood 12 inches long, by 12 inches wide, by 1 inch thick), but the highest value of lumber in dollars based on ever-changing current lumber market values.

This system works well for softwood lumber, for which most of the value is determined by the dimension of each piece. But in hardwood lumber production, the real value of the lumber is determined by the internal characteristics of the log...the number and size of knots and other defects, the coloring and figuring of the wood, and the surface area of "clear units" in each piece of lumber. These characteristics are determined again by the sawing technique used for each log. The three most common methods of sawing hardwood logs are called "plain or flat sawn" (the most common and highest yielding method), quarter-sawn (the most popular for certain applications where highly figured wood is desired and for sawing staves used for barrels), and rift sawn (used when straight-grained lumber is highly desired).

Creating Better Forestry Certification Programs through Competition

*By: Donald Rieck and Wayne Winegarden**

It is basic Economics 101. Competitive markets create better outcomes than monopolists. Monopolists restrict supply and charge higher prices.

Dynamically, monopolists face fewer incentives to create new products or improve how their products are made. In fact, creating new technologies or processes could undermine a monopolist's current market dominance.

What is true for the marketplace is also true for the regulations governing the actions of the marketplace. An interesting example of this principle is afforded by a current controversy over forestry certification programs.

While consuming timber products requires the harvesting of trees, many consumers, if not the vast majority, value forests and want their timber products harvested responsibly – in a way that sustain our forests.

A sustainable forest is broadly understood as one that conserves biodiversity, protects endangered species, is vibrant, is capable of regenerating, and is managed responsibly. Maintaining a sustainable forest also ensures that the economic needs of the timber industry and its consumers are also fulfilled.

Sound forestry management must balance out all of these competing needs that may, and often do, conflict.

It is extremely difficult, if not impossible, for consumers to know whether the timber was harvested responsibly by examining the final product. Forest certification programs encourage both private and public landowners to manage their forests responsibly and communicate this information to consumers and businesses empowering them to purchase wood products knowing that the timber has been harvested in a responsible manner.

Due to the multiple and competing needs, multiple certification programs have arisen. Each program balances the conflicting needs in timber production differently. Many environmental groups accuse one standard (the SFI standard) of weighing economic needs too heavily. Many forest landowners, however, find another standard (the FSC standard) to be impractical, due to the many differing standards – more than 30 worldwide – and the economic costs created by strict application of this programs' approach in the United States.

As reflected in an April 22 Huffington Post article, environmental groups preach that the FSC standard should be the only regulatory standard – advocating that a single overall regulatory structure should replace the current competitive landscape. The FSC standard does not have any special insights regarding how to balance the many competing needs though. And, should the FSC's standards not correctly balance all of these competing needs, adverse consequences will result.

The FSC standard weighs economic considerations lightly, and consequently creates significantly higher costs for those landowners that adhere to its principles in the United States. The higher costs of producing under the FSC standard are, ultimately, priced into the costs of the products.

More problematic, the price premiums associated with FSC-certified wood do not necessarily correspond with an environmentally-friendly product because FSC's standards vary throughout the world. U.S. foresters end up facing high, costly benchmarks for certification, while their counterparts in Russia and China (among many other countries) can more easily obtain FSC recognition.

Back in the United States, if the costs created by the FSC standards exceed what consumers are willing or able to support, then requiring all domestic forests to adhere to the FSC standards will discourage people from purchasing timber from domestic forests. The consequences for the U.S. economy would be income and job losses. The adverse impacts would not be just economic, however.

U.S. policies that favor FSC wood create incentives to purchase timber from environmentally questionable regions and countries. The consequences from these purchases, though unintentional, are a reduction in the health of global forests and excessive global forest degradation compared to the more environmentally sustainable practices that consumers would support under more balanced U.S. forestry standards.

Here is where competitive Forestry Certification Programs can provide benefits. Striking a balance across all of the competing interests is complex. Imposing a "monopoly-like" regulatory standard across such a diverse and complex industry ensures a regulatory system that will be rife with inefficiencies and could create adverse economic and environmental consequences by forcing small and large landowners to choose a program that's not suited for their land.

Competitive forestry standards avoid this problem by encouraging multiple standards to compete against one another. Just as market competition forces producers to be more responsive to consumers; competitive forestry standards can ensure that regulations are responsive to current and future needs. As a result, the ability to strike the right balance between the interests of consumers and producers is enhanced, as is the ability to maintain vibrant and healthy global forests.

It is this give and take that strikes the right balance between

competing interests and ultimately leads to the most benefits for all parties involved. The benefits generated by competition should not be foregone simply because one group believes one standard is better. As any Economics 101 Professor will attest, encouraging competition for the hearts, heads, and wallets of all interested parties is the most efficient way for any market to function.
*Donald Rieck is Executive Director of the Statistical Assessment Service (STATS); Wayne Winegarden is a contributing editor to EconoSTATS at George Mason University and a senior fellow at the Pacific Research Institute.

Reality Check: US Lumber Prices Off Highs After Supply Surge

By Jon Hurdle

--Cold Weather Also Cuts Construction Industry Demand
--Industry Seen Meeting Demand as Housing Starts Grow

PHILADELPHIA (MNI) - U.S. lumber prices are falling in response to a late, cold spring in some parts of the country, and to a sharp first-quarter production increase by mills that may have overestimated gains in housing starts, lumber industry participants said.

By early May, industry benchmark prices were off their highs for the year so far although much stronger than year-ago levels amid growing evidence of increasing demand for construction of single-family homes and especially multi-family buildings.

Prices may decline further before the inventory buildup is worked off but suppliers are expected to meet growing demand later in the year, resulting in prices that are likely to be little changed from current levels by the end of the year, experts said.

"We saw some over-production in the first quarter," said Mark Jaffe, president of Friend Lumber Co., which sells to builders, home-remodelers, and private customers in Hudson, NH. "People got excited, thinking they were going to have a heck of a year with big gains in housing starts. People thought that the price was going to stay up. It's going to take a little bit of time to work that off."

Jaffe said his sales declined in the first quarter as bad weather in the northeast cut construction activity but he expects the second quarter will be stronger than a year earlier as housing demand picks up, especially for single-family homes, his most important market.

Crow's Composite Price Index, a closely watched lumber benchmark, was $400 per thousand board feet on May 8, down from this year's high of $432 on April 5 but 31% higher than a year ago, according to Bob Berg, principal lumber economist at RISI, an information service for the industry.

Berg forecast the price will average $390 this year, little changed from its current level, as the inventory buildup is absorbed and mills meet anticipated higher demand later in the year.

Lumber producers will easily be able to supply an expected 9% increase in overall U.S. demand for soft lumber this year, resulting in range-bound prices that show little or no increase from where they are now, Berg predicted.

Many lumber mills started 2013 running below full capacity, and are now starting to add shifts and restart plants that were idled in response to the stalled housing market of recent years.

"Further gains in prices are going to be hard to get," he said.

In the construction industry, the biggest growth is expected in the multi-family housing sector where demand for lumber is seen increasing by 58% this year, driven by demand for apartments from people, especially the young, who can't get mortgages, are struggling to find entry-level jobs, or are burdened with student loans, Berg said.

But the strong increase in demand for multi-family housing doesn't necessarily result in commensurate gains for lumber sales because a typical single-family home uses about three times as much wood as does an apartment.

Lumber demand for single-family home construction is expected to grow by a more moderate 26% this year but to a level - 10.9 billion board feet - that's about 10 times the demand expected for the multi-family sector, according to the RISI forecast.

Berg said the group raised its single-family lumber demand forecast at the start of 2013 to reflect an upward revision in expected housing starts to an annual rate of 1.04 million.

Although first-quarter lumber production was vigorous, many mill owners have an underlying caution about the durability of demand because of doubts about the economy stemming from the continuing fiscal problems of the U.S. government, and growing signs of economic stagnation or slowdown in Europe and China, Berg said.

"They are optimistic but they are conservative," he said.

So far this year, demand for lumber hasn't matched mills' optimistic expectations, said Tim Cornwell, general manager of structural lumber for Blue Link Corp., a national distributor of building materials.

The recent increases in housing starts fanned a seasonal surge in lumber production that hadn't been seen since before the housing crash, and supply seems to have got out ahead of demand for now, Cornwell said.

"In 2013, the expectations for housing were euphoric," he said. "We had the first spring bought since the housing market fell, and the outflow hasn't matched what's being bought."

Prices for some grades of lumber have fallen by as much as 25% and could fall further before stabilizing, Cornwell said. "It's pretty ugly now," he said. "Building activity is strong but inventories are rising. We've got to work through these inventories before prices stabilize."

Some markets such as Texas and Florida have being doing well in response to recent warm weather but in many areas construction has been held back by cold, wet weather, such as in Denver which recently had a heavy snowfall, Cornwell said.

He said it's too soon to tell whether the industry will meet construction demand in the traditionally busy third and fourth quarter.

"The question is whether production will come to match demand at the end of the year," he said.

Shawn Church, editor of Random Lengths, a publication that tracks lumber industry prices and trends, said there's growing confidence that housing starts will hit around 1 million units this year, and that the lumber industry will meet that demand.

Year to date, U.S. lumber production is up 10% while that in Canada is up 5%, Church said. The Random Lengths Framing Lumber Composite Price, a closely watched industry benchmark, hit $396 per thousand board feet on May 3, down from its recent peak of $451 on April 5 but sharply higher than $329 a year ago.

"There is still plenty of optimism that the U.S. is going to produce 900,000 to 1 million housing starts this year," he said. "The big question now is whether the industry is producing enough, and it looks like it is."

The U.S. Labor Department is scheduled to release producer price data for April at 8:30 a.m. on May 15.

Editors' note: Reality Check stories survey sentiment among business people and trade associations. They are intended to complement and anticipate economic data and to provide a view into specific sectors of the economy.

Tractors in the Woods

Harvesting timber, clearing land and fence rows, and cutting and transporting firewood are common tasks on farms and rural property. When done by trained loggers or foresters using machines designed for working in the woods, these tasks can be done with minimal risk. But when attempted by untrained or inexperienced farmers or rural property owners using machines designed for farming or property maintenance, the same tasks have an increased risk of a serious injury or fatality.

Pennsylvania farm fatality reports from recent years have identified numerous fatalities involving tractors that were being used for pulling down trees and limbs, pulling tree stumps, dragging logs, clearing saplings and brush from fence rows, or for collecting and hauling firewood. For example, one farmer was killed when the log he was dragging from the woods caught the edge of a field’s dead furrow and pulled the tractor over backwards onto him. Over 50% of these incidents involved tractor upsets while dragging trees, logs, tree tops, or brush. Nearly forty percent of the incidents involved falling trees due to lodged trees, wind gusts, or falling limbs (widow makers) from overhead. The remaining fatalities involved chain saw kick-back.

Recognize Hazardous Trees

One way to increase safety is to be aware of hazardous situations associated with trees. For example, danger trees present a hazard to persons due to conditions of the tree such as deterioration or physical damage, and the direction of lean of the tree. Snags are standing dead trees. They are very unpredictable and can easily be caused to fall. Lightning and storm damaged trees, and trees damaged through logging operations may have broken limbs resting in the canopy. These are called widow makers and they can fall without warning. Trees with portions of disease or rot, such as a dead limb, or that are lodged or hung up on another tree can also drop unexpectedly. These overhead hazards can drop at any time.

Spring poles are small trees or limbs bent under the weight of a

larger tree which has fallen upon them. If these are improperly or mistakenly cut they can release with lightning speed and yield a fatal blow to bystanders.

Leaning trees pose special felling skills. A severely leaning tree may split or barber chair, or twist and fall in an unplanned direction. Recognize the dangers each situation can present and plan your cutting work accordingly. Workers should inspect trees along the edge of the woods and fence rows, along woods roads and trails plus other wooded locations for danger trees. Do not fell trees within a two (2) tree height distance of a danger tree. You may unknowingly create further hazards by working near the danger tree. Secure the services of a trained professional who has experience dealing with danger tree environments.

Farm Tractors: Not Recommended for Woodlots

While farm tractors can be used safely for a variety of purposes, using them in the woodlot poses significant risk and is not recommended. Most farm tractors are not appropriately equipped for use in woodlots and this directly contributes to many fatal injury incidents. It is important to understand the differences between a farm tractor and heavy duty logging equipment found in the timber industry.

Farm tractors are not equipped for woodlot tasks. If the tractor is small enough to maneuver between trees and stumps, it probably lacks the power or stability to safely do the work. If the tractor is large enough to do the work, it may not fit under low hanging branches or between trees and stumps. Additionally the typical farm tractor will be missing some key components that protect not only the operator, but the tractor itself. Even if the tractor is equipped with a ROPS, protection from falling trees or limbs or branches that may poke into or intrude into the operator space is inadequate.

Here are the components of a timber harvest "tractor" (usually called skidders), that are missing on a typical farm tractor

- A heavy steel skid plate to protect the machine's underside and allow it to "slide" over stumps and rocks
- Protective grill for the radiator
- Engine side guards
- 10-12 ply, flat-side walled tires with valve protection plates welded to the rims and rim to tire securement
- Tire chains for soft ground or snowy, icy conditions
- Front-end weights to improve stability during dragging of logs
- A 10 lb. ABC fire extinguisher
- A spark arrester exhaust system
- A Category II FOPS* (falling object protective structure) with seat belt
- A protective grill for the rear window of the FOPS cab to prevent winch cables and hooks from flying through the back of the cab
- Protective side grills in the FOPS to prevent poking/ intrusion hazards
- Higher ground clearance
- Lateral stability due to axle rotational allowances
- Nearly equal front/rear axle weight distribution

*Category II FOPS meet OSHA requirements and have been ISO (International Standards Organization) tested to withstand penetration into the operator cab of a 500 lb. weight dropped from 17 feet.

Tractor manufacturers producing farm and timber equipment have manufactured their products for safe use in specific applications. The intended use of farm tractors when used in woods management activities should be limited to specific applications such as fire wood transport or stationary work, such as log splitting, propulsion, or operating elements with PTO, hydraulic, or electrical systems. Any forestry applications, such as pushing, dragging and loading of logs, should be left to logging machines. Retrofitting normal farm tractors for timber harvest operations, even when technically possible, would likely prove to be cost prohibitive. Planning for logging activities should include safety considerations including specialized training for that task, using equipment designed for the job, and evaluating the use of contractors equipped and trained to do the logging or clearing work needed.

Hazards of Dragging and Pulling Stumps, Logs and Limbs

In addition to farm tractors being ill-equipped to work safely in the woods, descriptions of fatal injury incidents suggest many people engage in unsafe work practices with their tractors in the woods. As mentioned earlier, over 50% of the fatal incidents in Pennsylvania involved farm tractors overturning from dragging or pulling trees, logs, and limbs. If this task is not approached correctly, numerous hazards to the operator are created. For example, attaching a chain or cable to a point higher on the tractor than the drawbar increases the risks of a rear overturn if a log catches on a rock, stump, or

ground depression. Soft, muddy soil can increase the loading on the tractor and contribute to the overturn as well. The tractor can rear over backwards in less than a second. Running over a stump, rock or tree trunk with one rear tire, especially while already on sloped ground or turning, increases the risk of a side overturn. Additionally, logs, when pulled across a slope, can roll to the side with great force with an increased risk of tractor rollover.

Attempting to drag logs or to pull or push limbs down with a front-end loader can also be hazardous, especially if the bucket is raised high to accomplish the task. Raising the bucket raises the center of gravity of the tractor allowing the tractor to tip over sideways more quickly. A front-end loader also moves the center of gravity forward. Raising a bucket and pushing on limbs or tree trunks applies elevated forces that readily overturn almost any farm tractor.

Dragging and Pulling

Not all tree cutting activity takes place deep in the woods. Cleaning up fence rows or expanding field acreage by cutting trees is common. These trees may be felled safely, but still must be dragged for processing for firewood or burning.

There are equipment and practices that significantly increase the safety of dragging and pulling logs and trees with farm tractors. Skid cones, log arches, 3-pt. mounted grapples and 3-pt winch equipped skidding implements can be reasonably purchased for use. Any device which prevents the log from twisting or rolling out of control while being dragged will increase safety to the operator.

Log dragging practices that reduce risk are:

- Only use tractors with FOPS protection. If the tractor has a ROPS cab, a protective grill should cover the rear window. If the tractor uses a 4-post type of FOPS, the rear opening should be covered with a grill.
- Use slider hooks or bell chokers to attach to the log and place them within one foot of the end of the log to reduce the need to re-choke the log and to insure they will stay in place.
- If only chains are used for dragging logs, the chain should be attached only to the drawbar.
- Chains being used for dragging logs should not be so long that they will catch on the rear tire when the tractor is turning right or left.
- Be sure that on-the-ground helpers are clear of logs and cable before winching or dragging logs
- Use of arches, grapples and winches are much preferred for any dragging operation.
- If log arches, grapples or winches are used, their size needs to match the size and power of the tractor. Be sure to check manufacturer's recommendations.
- With PTO driven winches, be sure to keep PTO guards in place.
- Use a remote controlled winch to prevent winch cables and chokers from striking the operator should the cable or choker fail.
- Lower all 3-pt mounted equipment and lock brakes before dismounting the tractor.
- Inspect and replace damaged cable. Ensure cable splices, hooks and eyes are installed correctly and that these components have the same strength standards as the cable.
- Use personal protective equipment of hard hat, eye protection, steel-toed work boots and leather gloves when dragging logs and working with steel cable.

Chain Saw Reminders

No one needs a certificate of training to purchase a chain saw. Yet these tools are powerful and potentially lethal. Chain saw kick-backs from improper use results in traumatic injury and death. Fire hazards exist if re-fueling is not done correctly. Log sections can roll onto the chain saw operator or helper who stands in the wrong position. Take time to get training in chain saw use. The Missouri Forest Products Association sponsors the Professional Timber Harvester course in Missouri. The training provides excellent instruction on the safe and efficient operation of a chainsaw.

Summary

Hazards exist in working in our farm woods. Danger trees exist in all wooded areas. They can fall or be blown over at any time regardless of your activity. Recognize these trees and what they look like.

The standard farm tractor is not equipped to minimize hazard exposures to the operator or damage to the tractor during woods work. Some operational practices by tractor operators handling trees and logs add risk of injury to them and to their tractor.

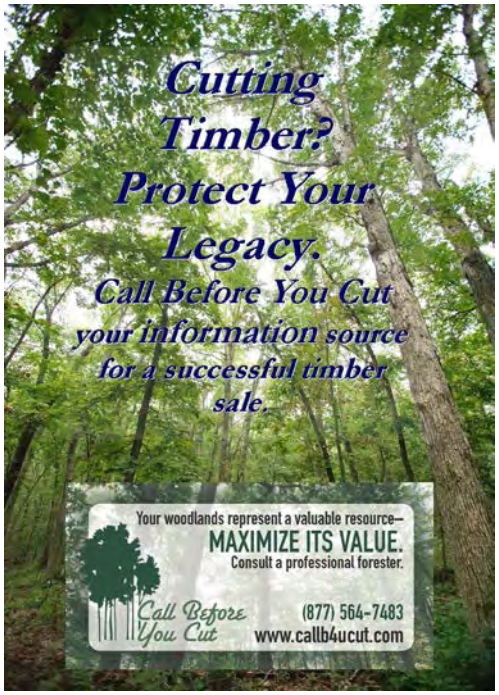
Farm tractors cannot be reasonably and economically modified to adequately increase their safe use in the woods. Farm and rural land owners should carefully consider and evaluate: a) their need to cut down trees, move logs and clear land; b) hazard recognition and abatement strategies; c) required safety practices, and d) budgeting for professional timbering services before beginning farm woods activities.

Deciding to cut specific trees for whatever purpose exposes the operator to chain saw injury or death. Take time to become a safe chain saw operator or use a trained person's talents to work for you.

Remember that farm tractors are not recommended for forest or woods activities.

Dennis J. Murphy, Extension Safety Specialist
Lee R. Stover, Wood Products Extension Specialist
William C. Harshman, Extension Assistant
Modified for application in Missouri by Jason Jensen

Missouri Timber Price Trends tracks market prices for Stumpage. Reports on the Stumpage Market are received from Missouri Department of Conservation Resource Foresters and private consulting foresters. Stumpage refers to timber sold on the stump and does not reflect delivered mill prices. These reports should serve as a general guide to track stumpage prices. Landowners should not use this report to replace a timber inventory and marketing assistance as methods of conducting a sale. Missouri Department of Conservation Resource Foresters will be able to provide information on current, local market conditions. Details of all private sales and delivered prices are kept confidential.



The logger plays a critical role in the harvesting of your timber sale. The Master Logger Certification (MLC) program can make your choice of selecting a logger easier. The MLC program can help provide piece of mind for the landowner. Master Loggers are professional, properly trained, and meet the highest standards placed on the industry today. The MLC program is a performance based program that recognizes both training and experience. To find a Master Logger in your area visit the following website: http://www.moforest.org/MLC/mmldirectory.html

The Professional Timber Harvester (PTH) program provides four levels of chainsaw safety training and provides instruction on use and implementation of "best management practices" and forest management. PTH trained loggers possess the knowledge to harvest your timber while insuring that your residual trees, soil, and property are properly cared for. To locate a PTH trained logger in your area visit the following website: http://www.moforest.org/loggersindex.php

Tom Treiman and Jason Jensen, Editors

Private Forest Owners Make Significant Contribution to U.S. Economy, New Report Shows

WASHINGTON, DC, June 27, 2013 – The National Alliance of Forest Owners (NAFO) today released new data confirming the strong value forest owners provide to the U.S. economy. "The Economic Impact of Privately-Owned Forest in the United States" reveals forest owners support 2.4 million jobs, $87 billion in

payroll, $223 billion in sales and 5.7 percent of all U.S. manufacturing. In addition to the full report, NAFO's **interactive U.S. map** provides a convenient snapshot of individual state data.

"Private forest owners are a driver of the U.S. economy by providing millions of jobs while producing a broad range of goods and services that improve quality of life in every home and community," said Dave Tenny, NAFO President and CEO. "Private forest owners are able to provide these substantial benefits because they recognize that responsible management today yields sustainable economic and environmental benefits over the long term."

The report, conducted by Forest2Market, is an update to NAFO's inaugural report in 2009. It provides national, regional and state-specific data on jobs, payroll, sales, acreage ownership and contribution to overall manufacturing and gross domestic product. Data is based on 2010, the most recent and complete year for which data is available.

Strong markets for working forests enable forest owners to make investments in forest stewardship that result in the following:

- The U.S. grows more trees than it harvests. USDA reports that the standing inventory (volume of growing trees) in U.S. forests has grown by 50% between 1953 and 2011.
- For the past 100 years, the amount of forestland in the United States has remained relatively stable, at around 755 million acres, thanks to improvements in markets for forest products and reforestation efforts.
- More than half of the freshwater supply, 53 percent, originates on forestlands. Outside of the Western region of the U.S., state and private lands provide 89 percent or higher.
- 20% of US forestland is under some type of conservation program, which is almost twice the world average of 11%.
- Assessments of biodiversity on the nation's forests have found that the annual rate at which species are listed as threatened or endangered has declined fivefold.
- Private working forests are essential to achieving our national renewable energy and climate change objectives.
- Energy from forest biomass accounts for roughly 22.2% of renewable energy consumption nationally.
- The EPA reports that carbon storage in U.S. forests continues to increase, offsetting about 14% of annual U.S. emissions from burning fossil fuels.

Economic Contribution Category	All Timberland	Ownership Type	
		Private	Public
Timberland Acres	462,850,601	337,946,530	124,904,071
Total Employment (Direct, Indirect & Induced)	2,804,721	2,410,463	394,258
DII Payrolls (Direct, Indirect and Induced)	$ 102,135,695,976	$ 87,320,875,520	$ 14,814,820,456
Total Timber Sales and Manufacturing Shipments	$ 261,857,585,670	$ 223,007,804,934	$ 38,849,780,736
Contribution to Gross Domestic Product	$ 118,984,000,000	$ 101,995,923,248	$ 16,988,076,752
Forest Products Contribution to Total Manufacturing	$ 97,610,000,000	$ 83,459,005,631	$ 14,150,994,369
Forest Products as a Percent of Total Manufacturing	6.68%	5.71%	0.97%

Housing Market Update – May 2013

Posted on June 27, 2013 *by LeAndra Spicer*

The housing market recorded a number of milestones over the past month, indicating a recovery is in full effect.

Home Prices

The S&P/CaseShiller Home Price Index reported home prices rose at a record rate in April as both the 10-City and 20-City Composites posted the highest monthly gains in the history of the index. From March to April, prices in the 20-City Composite rose 2.5 percent for the fourth consecutive month of year-over-year returns. Prices in the 10-City Composite rose 2.6 percent. Between May 2012 and April 2013, the 20-City Composite saw average home prices increase by 12.1 percent, while home prices in the 10-City Composite rose at a rate of 11.6 percent.

Table 1: New Residential Construction

	Housing Permits[1] (millions)	Housing Starts[1] (millions)	Housing Completions[1] (millions)	NAHB Housing Market/Builder Confidence Index[2]
2012: 05	0.806	0.711	0.613	24
2012: 06	0.785	0.757	0.628	28
2012: 07	0.839	0.741	0.673	29
2012: 08	0.827	0.749	0.686	35
2012: 09	0.921	0.854	0.651	37
2012: 10	0.908	0.864	0.741	40
2012: 11	0.933	0.842	0.677	41
2012: 12	0.943	0.983	0.672	45
2013: 01	0.915	0.898	0.720	47
2013: 02	0.952	0.969	0.727	47
2013: 03	0.890	1.005[r]	0.810[r]	46
2013: 04	1.005[r]	0.856[r]	0.696[r]	41
2013: 05	0.974[P]	0.914[P]	0.690[P]	44
2013: 06	NA	NA	NA	52

[1]Source: U.S. Census Bureau and U.S. Department of Housing and Urban Development, seasonally adjusted

[2]Source: NAHB/Wells Fargo Housing Market Index (HMI)

[r]=Revised

[P]=Preliminary

NA= not available

Building Permits

While the record-setting rise in home prices garnered most of the attention, an upwardly revised number of housing permits pushed April permits past the one million mark. May permits also remained strong at 974,000. New housing permits are considered a strong leading indicator of future market performance.

Housing Starts & Completions

Housing starts recovered from the significant drop posted in April to reach a healthy 914,000 privately-owned starts in May. Housing completions declined for the second straight month, though only slightly, dropping from 696,000 in April to 690,000 last month.

Builder Confidence

Despite an ongoing shortage of qualified, skilled laborers, rising prices, steady buyer demand and low inventories have contributed to increasing optimism among builders. Up from the 44 recorded in May, builder confidence rose to an impressive 52 in June. The eight-point jump marked the highest month-to-month increase recorded in over a decade and led to the highest rating seen in seven years. Confidence ratings above 50 indicate builders consider current conditions as good for sales.

Table 2: New and Existing Home Sales

	New Home Sales[2] (millions)	New Home Median Sales Price[2]	New Home Inventory[2] (months)	Pending Home Sales Index[1]	Existing Home Sales[1] (millions)	Existing Home Median Sales Price[1]	Existing Home Inventory[1] (months)
2012:05	0.369	$239,200	4.7	100.2	4.59	$180,300	6.5
2012:06	0.360	$232,600	4.8	100.0	4.41	$188,800	6.4
2012:07	0.369	$237,400	4.6	102.6	4.60	$187,800	6.3
2012:08	0.374	$253,200	4.6	101.8	4.84	$184,900	6.0
2012:09	0.384	$254,600	4.5	102.8	4.78	$178,300	5.4
2012:10	0.365	$247,200	4.8	103.8	4.83	$176,900	5.2
2012:11	0.398	$245,000	4.5	103.3	4.96	$179,400	4.8
2012:12	0.396	$258,300	4.5	101.3	4.90	$180,200	4.5
2013:01	0.458	$251,500	3.9	105.2	4.94	$173,600	4.3
2013:02	0.445[r]	$265,100[r]	4.1[r]	104.1	4.95	$173,600	4.6
2013:03	0.451[r]	$255,000[r]	4.1	105.7	4.94	$184,300	4.7
2013:04	0.466[r]	$272,600[r]	4.0[r]	105.2[r]	4.97	$192,800	5.2
2013:05	0.476[p]	$263,900[p]	4.1[p]	112.3[p]	5.18	$208,000	5.1

[1]Source: National Association of Realtors, existing home sales data is seasonally adjusted

[2]Source: U.S. Census Bureau and U.S. Department of Housing and Urban Development, new home sales data is seasonally adjusted

[r]-Revised

[p]-Preliminary

Home Sales

Sales of new single-family homes also improved, reaching numbers last seen in July 2008 as they gained momentum for the third straight month. New home sales increased 2.1 percent to a seasonally-adjusted annual rate of 476,000, up 29 percent compared to May 2012 when new home sales numbered just 369,000. Still, new home sales remain well below the 700,000 annual mark most economists consider healthy.

Existing home sales also recorded numbers not seen for quite some time. The National Association of Realtors (NAR) reported sales of previously owned homes numbered 5.18 million in May. Sales of existing homes had not topped the 5 million mark since November 2009, when the home buyer tax credit was nearing expiration.

Despite the record-setting rises in home prices recorded in April, the median price of a new home fell from $272,600 to $263,900 in May according to the Census Bureau. Meanwhile, the NAR reported that the median price of an existing home rose for the third consecutive month, reaching above the $200,000 mark to settle at $208,000.

Tight inventories have no doubt contributed to the price increases. A five-month supply of existing homes and a four-month inventory of new homes remain below the six-month supply considered balanced between supply and demand.

Table 3: Loan Applications and Interest Rates

Week Ending	Loan Application Volume Index[1, 2]	Purchase Applications Index[1, 2]	30-Year Fixed Rate Mortgage Interest Rate[3]	30-Year Fixed Rate Mortgage Points (80% LTV)[3]
May 31	-11.5%	-2.0%	4.07%	0.35
June 7	5.0%	5.0%	4.15%	0.48
June 14	-3.3%	-3.0%	4.17%	0.41
June 21	-3.0%	2.0%	4.46%	0.35

Source: Mortgage Applications Survey, Mortgage Bankers Association

[1]Seasonally adjusted

[2]Change from previous week

[3]30-year fixed conforming loans (balances of $417, 500 or less), 80% LTV.

Mortgage Rates

Following Chairman Ben Bernanke's announcement that the Federal Reserve will scale back bond purchases as the economy continues to strengthen, long-term borrowing rates continued along an upward trajectory. Mortgage interest rates continued to raise for the seventh consecutive week, reaching 4.46% for a 30-year fixed rate mortgage, a level not seen since August 2011.

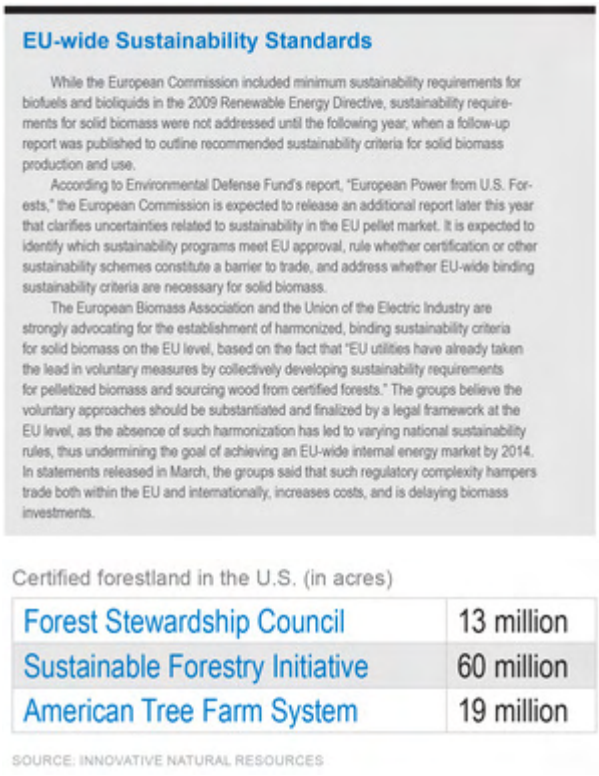
The steady increase in interest rates has led to talk of waning demand for new and existing homes in the near future. Higher mortgage rates could slow the housing market's current momentum; yet because interest rates remain low when compared to historical levels, most analysts do not think increasing rates will negatively influence the housing recovery.

The effects of higher home prices and rising interest rates are expected to continue to play out over the summer.

Certification Uncertainty

The United Kingdom's biomass sustainability criteria may impact U.S. biomass exporters, particularly policy requiring forest certification.

By Anna Simet | May 06, 2013



EU-wide Sustainability Standards

While the European Commission included minimum sustainability requirements for biofuels and bioliquids in the 2009 Renewable Energy Directive, sustainability requirements for solid biomass were not addressed until the following year, when a follow-up report was published to outline recommended sustainability criteria for solid biomass production and use.

According to Environmental Defense Fund's report, "European Power from U.S. Forests," the European Commission is expected to release an additional report later this year that clarifies uncertainties related to sustainability in the EU pellet market. It is expected to identify which sustainability programs meet EU approval, rule whether certification or other sustainability schemes constitute a barrier to trade, and address whether EU-wide binding sustainability criteria are necessary for solid biomass.

The European Biomass Association and the Union of the Electric Industry are strongly advocating for the establishment of harmonized, binding sustainability criteria for solid biomass on the EU level, based on the fact that "EU utilities have already taken the lead in voluntary measures by collectively developing sustainability requirements for pelletized biomass and sourcing wood from certified forests." The groups believe the voluntary approaches should be substantiated and finalized by a legal framework at the EU level, as the absence of such harmonization has led to varying national sustainability rules, thus undermining the goal of achieving an EU-wide internal energy market by 2014. In statements released in March, the groups said that such regulatory complexity hampers trade both within the EU and internationally, increases costs, and is delaying biomass investments.

- Certified forestland in the U.S. (in acres)

Forest Stewardship Council	13 million
Sustainable Forestry Initiative	60 million
American Tree Farm System	19 million

- SOURCE: INNOVATIVE NATURAL RESOURCES

Sustainably sourcing biomass fuel isn't something that's taken lightly in the U.K., and the country is proving it by developing the first nationwide mandatory biomass sustainability standards. As its Renewables Obligation continues to ramp up, the amount of biomass that power utilities will require may significantly increase, and the U.K. is determined to ensure that feed stocks are sourced responsibly.

The RO, a policy mechanism similar to a state renewable portfolio standard in the U.S., requires licensed electricity suppliers in the U.K. to source an increasing amount of electricity from renewable sources. Biomass, particularly imported wood pellets, is an attractive replacement for facilities using coal, and imports from North America are increasing at a rapid rate.

Currently, the country sets general restrictions for biomass materials sourced from land with high biodiversity value or high carbon stock, including primary forest, peatland and wetlands. But this approach has proven untenable over the past two years, according to Suz-Anne Kinney of Forest2Market, as there has been some disagreement over definitions, and because current forest certification schemes alone are not sufficient to meet the criteria.

The U.K. Department of Energy and Climate Change proposed new sustainability criteria last September and a comment period wrapped up at the end of November, but the official standards are yet to be released. As proposed, a biomass power facility would have to demonstrate that 70 percent of the wood used to manufacture the pellets it procures has chain-of-custody (COC) certification, from the forest of origin to the final user. "In order to demonstrate compliance, a supplier must provide independent COC certification of the timber or timber products by one of the major certification schemes," explains Kinney. "In the U.S., especially in the South where the majority of industrial pellet mills is or will be located, widespread certification of this type is not common. As mills purchase wood from dozens of different dealers, brokers or loggers who buy the timber from hundreds of landowners, the scope of any project to increase certification will require significant resources."

So the big question is: will part of the criteria include this requirement of third-party verification of raw

material? While it may sound suitable on the exterior, such a requirement may pose significant challenges to U.S. biomass exporters, and some believe sets unachievable expectations.

Certification and Ownership

"The problem is that there is a very low percentage of timberland that is actually certified, so it would be very difficult to procure 70 percent of material from certified forests," explains Seth Walker, RISI bioenergy economist. "In the U.S., less than 25 percent is certified, and in the South, it's 22 percent. Actively managed and harvested timber, less than a quarter of it is certified."

According to Robert Simpson, senior vice president of Sustainable Forests & Forest Product Certification at GreenWood Global Consulting, sourcing 70 percent of pellet feedstock from certified sources "will be impossible, unless you have a very large supplying force nearby," he says. "If you're depending on many ma and pop forest owners, it'll be very difficult."

And that's largely the case for biomass sourcing in the Southeast, where about 67 percent of commercial-value forests are privately owned. The forest industry owns another small portion, Simpson says, and the federal government an equal portion. "Interestingly, out of the 134 million acres of procurable and useable forestland in the Southeast, only 3 percent have long-term management plans," says Simpson. Furthermore, only 13 percent have formal management advice.

That's very minimal compared to Europe, according to Simpson, where 77 percent have some type of professional forest management advice. That leads buyers in the European Union to wonder why forest owners in the U.S. aren't certified, when the forests of Europe are regulated and strictly managed. In the U.K, about two-thirds of land is privately owned—very close to the portion that is privately-owned in the U.S.—but both countries differ from the norm, as it is estimated that of the 3.9 billion hectares of the world's forests, 86 percent are publicly owned.

If the U.K. policy comes through as proposed—requiring forest certification—or if an end user demands a high percentage of certified material anyway, it just won't be found, says Simpson. "It's not there, especially for the larger facilities." He recommends smaller family forestland owners contemplating certification to look into group certification, which goes fairly quickly and is less expensive, as it allows multiple forest owners to become certified as a group and share financial costs.

Essentially, the motivation behind the standards stems from the carbon accounting question. "If you cut down trees and don't replant, the carbon story is very different [than if trees are replanted]," says Walker. "There are really two reasons why the U.K. likes certification and sees it as ideal, but at the same time, they know the forests in North America are managed pretty well, and there aren't any major issues with deforestation or bad practices."

That's evidenced by the increasing/stable forest area cover in most U.S. regions. "We have growth exceeding removals, so it's a pretty good story, but it's tough to put that [sustainable] stamp on it," Walker says. One of the main reasons for that is there is a great history of family-owned forests, especially in the Northeast and the Southeast; in the Pacific Northwest there is more federal, state and consolidated land. "So, the Smith family in Virginia has 50 acres of forest and a forester comes in every 10 years and maybe cuts 12 of the 50 acres, in 20 years a thinning, then in 40 years do a clear cut and then replant," explains Walker. "Someone like that isn't going to have any incentive to go through all of the red tape to get that land certified. The biggest indicator of whether land will be certified sustainable, in the U.S., is whether it is owned by a large land owner or financial landowner."

Looking Ahead

If forest certification isn't required, what might be the alternative? "Right now, each of the utilities have to audit their own supply chain, so there might just be some due-diligence requirements, as far as the forest stock around the areas they're procuring fiber from for wood pellets," suggests Walker. There could also be group certification [requirements] where an entire state would become certified to meet necessary standards. "That hasn't happened on a big scale yet, but it has happened on smaller scales," says Walker. For example, FSC worked with a large group of Wisconsin landowners for certification and brought 31,000 new participants into the certification program, more than 2 million acres of privately owned land. "The Nature Conservancy and the SFI (Sustainability Forestry Initiative) are working together to find gaps in the certification program and see if they can fix them," Walker adds, one of which is the small landowner problem.

The National Wildlife Federation is one of those groups working to recruit smaller forest owners to get certified under FSC, and suggests one way to alleviate the cost to smaller landowners is by sharing the cost with the buyer. "We know that in the Southeast and other regions of the country, not all forest owners can afford to get certified, and so we believe that pellet manufacturers and other bioenergy facilities could help cover the cost of assuring regulators and the public at large that their bioenergy sources are truly sustainable," says F.G. Beauregard, NWF Southeast Sustainable Bioenergy manager.

So whether forest certification will ultimately be required is unclear, but in the meantime, what can pellet exporters be doing to prepare for what might potentially be enforced? The first thing is getting chain of custody under these certification schemes, according to Walker. COC verifies company systems for tracking and handling materials used in FSC-certified forest products within the company's operations.
Another major preparation measure is securing a supply contract with a large landowner, particularly a financial landowner. "Despite the majority of the actively managed timberland being owned by smaller landowners, there still are very large tracks owned by financial landowners, and those are mostly certified," says Walker. "So, it is possible to get most or all of your timber from a certified source, if you're located in the right place and can set up the right agreement."

So, are the standards likely to remain as proposed? "My hunch is no, because there has been so much invested…it would really almost halt the industry, a strict standard like that," says Walker. "Again, part of the issue is the whole carbon balance, carbon is actually the main issue; they [utilities] have to show a net reduction of carbon over coal. They're concerned about sustainability on one hand, not wanting to promote any sort of bad forestry practices, but they also want that stamp that says whichever forest the wood came from is managed and has a plan to be replanted."

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Average Fuel Prices as of:
June 3, 2013

Fuel Type	Price/Unit	Heat Content/Unit (Btu)	Price per Million Btu*
Fuel Oil (#2)	$3.46/Gallon	138,690	$24.94
Propane	$3.20/Gallon	91,333	$35.01
Kerosene	$4.01/Gallon	135,000	$29.68
Natural Gas: 1st Tier	$1.01/Therm	100,000	$10.09
Natural Gas: 2nd Tier	$0.96/Therm	100,000	$9.61
Wood (Pellets)	$246/Ton	16,500,000	$14.91
Wood (Cord)	$250/Cord **	20,000,000	$12.50
Electricity	$0.140	3,412	$41.00
Gasoline	$3.62/Gallon	N/A	N/A
Diesel	$4.17/Gallon	N/A	N/A

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MDC Starts New Campaign Focused on Our Trees and Forests

Trees Work. Trees work for your health. Trees work for your family. Trees work for your wallet. Trees work.

The Missouri Department of Conservation has a new educational campaign called Trees Work to increase awareness of the benefits our trees and forests provide. Many Missourians appreciate an oak releasing its tender spring leaves or a maple shading their deck without being aware of the real and valuable benefits those trees are providing for our health, our families, our wallets and our economy. The Trees Work campaign strikes a one, two punch by letting Missourians know all the ways trees and forests are working for them in their everyday lives *and* providing information on what the public can do about it-how they can promote good forestry management no matter how much land they own.

Now, let's get Missouri's trees back on our radar screen. After all, Trees Work!
Be watching for Trees Work activities and information in your area. Visit www.treeswork.org to learn more and get involved. And, help us spread the message that our trees and forests are more than pretty, static things . . . Trees Work!!!

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SOUTHWEST REGIONAL OFFICE ...417/895-6881
2630 N. Mayfair Avenue, Springfield 65803
Rod Tucker, Regional Supervisor x 1630
BOLIVAR OFFICE
412 S. Killingsworth, Bolivar 65613 .....417/326-5189
BRANSON OFFICE
226 Claremont Dr., Branson 65616 .....417/334-3324
CASSVILLE OFFICE
PO Box 607, Cassville 65625.....417/847-5949
JOPLIN OFFICE
201 W. Riviera Dr. Ste. B, Joplin 64804 .....417/629-3423
LEBANON OFFICE
2350 S. Jefferson, Lebanon 65536.....417/532-7612
NEOSHO OFFICE
1510 Business Hwy. 49, Neosho 64850.....417/451-4158
Nate Forbes, District Supervisor x 222

ST. LOUIS REGIONAL OFFICE.....636/300-1953
2360 Hwy. D, St. Charles 63304
Cathy deJong, Regional Supervisor x 4129
POWDER VALLEY NATURE CENTER
11715 Cragwold Rd., Kirkwood 63122 .....314/301-1506
ROCKWOODS OFFICE
2751 Glencoe Rd., Wildwood 63038 .....636/458-2236
Gus Raeker, District Supervisor x 227
MERAMEC WORK STATION
3220 S. Hwy. 185, Sullivan 63080.....573/468-3335
WARRENTON OFFICE
PO Box 157, Warrenton 63383 .....636/456-3368

GEORGE O. WHITE NURSERY.....573/674-3229
14027 Shafer Rd., Licking 65542
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