



FORESTRY, WILDLIFE & FISHERIES UPDATE NEWSLETTER

JUNE 2011

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HARDWOOD ANALYSIS AND TRENDS (HAT) – JUNE 2011

David Mercker, Extension Specialist II

The hardwood industry has operated at an unusually slow pace during the first part of 2011. As such, **HAT** has been short on news to report. The recession and lackluster recovery caused some sawmills to close, while those remaining have curtailed production to remain in-line with demand. Eastern US hardwood production is off approximately 40% since robust 1999. The demand for hardwood lumber, “remains soft, with little prospect of a near-term recovery” (HMR, April 2011).

The housing market is in a precarious situation. According to the Commerce Department, sales of new homes in February fell to their lowest level since records began (*USA Today* 3/24/2011). Sales of new homes have continued to decline since the expiration of the federal tax credit last year. Home values are declining. As this happens, homeowner equity drops, further accelerating the number of homeowners becoming “upside down” on their mortgage. More foreclosures result, in turn perpetuating the problem. Creditors are then forced to sell foreclosed homes even lower, forcing the value of nearby properties to drop again. The cycle continues and a bottom is desperately needed. One prominent business network claimed that when this is over, home prices will have experienced a greater percentage drop in value than during the Great Depression. Let’s hope not.

Added to this problem is the higher cost of logging and transporting due to the recent surge in fuel prices. Mills are hesitant to invest in log and standing tree inventories without a more optimistic outlook. It is a tough time, all around.

International business has increasingly become a driver in lumber sales. In 2010, exports accounted for 37% of all grade lumber sold. Likely this trend will continue, especially with the Asian and Indian markets.

HAT wishes another story could be told. We are in a new norm. Sideways is the new “up.” Waiting to return to the highs of a decade ago is pointless. Trees will still grow and should be cut and converted to usable products. Landowners should still sell trees when they are ready. If not, some trees will perish, forest health will be compromised and additional growth will be sacrificed. Timing a harvest is becoming a more difficult mark to hit though. Therefore, as always, first seek a professional forester.

Summarized with permission of the Hardwood Market Report, Memphis, TN.

STATUS OF FOREST CERTIFICATION IN TENNESSEE

David Mercker, Extension Specialist II

Much has been written, discussed, implemented and discarded regarding the highly controversial subject of *forest certification*. In Tennessee, with our 540,000 private forest landowners, progress has been stuck in the “wait and see” mode for some time. spurts are regularly followed by pauses.

A major pause began in 2008 at the onset of the recession. But lately another spurt has begun, motivated by manufacturer-driven demand for more certified paper products. Recently a meeting of interested parties occurred in Nashville. Representatives from a number of forest product/consuming businesses (from around the country) were present and stressed their commitment to purchase fiber from third-party certified forests. A clear conclusion of the meeting was that Tennessee needs to ramp up efforts in this area by increasing certified forest acreage.

Demand is developing for certified paper products. In time, demand will expand to solid wood products, including hardwoods, the mainstay of the Tennessee forest products industry. Some existing pulp and paper mills in the region will be expanding the base of certified forests surrounding their mills. Hardwood mills located within these regions will notice the growing certified acreage and will then seek *chain-of-custody* so they too can capture emerging certified hardwood markets. Foresters are being trained as third-party verifiers, to assure that forests in the region are managed to acceptable standards. The model will then expand throughout most of the southeast.

Very steady, forest certification moves forward. It's not likely that landowners whose forests are certified will receive a significant increase in price for their timber. Although, wood procurement foresters indicate that if their certified fiber quota has not been reached, they may have to pay more for the certified wood - just to “satisfy their customers.” Further, it has been reported from an industry in the area, that they may begin procuring certified wood from Minnesota (via rail) for the same reason. That should tell us something . . .

Forward-thinking wood industries, consulting foresters, landowners and loggers should be considering their position. For right or wrong, certification is likely to become the way of doing business. Tennessee could be left unprepared unless we are able to significantly increase our certified forest acreage.

LOOSE AND EXFOLIATING BARK ON TREES

Wayne K. Clatterbuck, Professor of Silviculture and Forest Management

Several inquiries have been received this spring from forest landowners, homeowners, extension personnel and the media concerning an abundance of bark at the base of the tree and loose and easily peeled bark on the tree. Most of the occurrence is with white oak, but has been observed in other species with long, thin, platy bark. Many ask if squirrels could be the culprits in their activities of scurrying up and down the bole as well as gnawing and cleaning their teeth. According to one source, incisors of squirrels can grow up to 6 inches per year, thus they are constantly chewing and gnawing to keep their teeth short.

Although squirrels may contribute some to bark loosening, the growth of the tree trunk or bole is the primary cause. Especially in the spring, when moisture is plentiful and the sap is rising to support newly formed leaves, the larger earlywood pores (xylem) are formed. The bark is dead tissue or cells located outside the living cambium. As the tree expands in diameter and circumference, the inflexible, dead cells of the bark are pushed further out and are not able to stay attached to the tree trunk. Thus the bark exfoliates.

This is a natural process that occurs every year, but becomes more acute when trees are rapidly growing in the early spring when moisture is plentiful and the temperatures are warmer than usual. The trees are growing well because of the excess of growth resources.

The same process occurs in trees with thick, tighter bark, but this bark is more corky and flexible. This bark is able to hang on the tree, retain more flexibility, and exfoliates much more slowly than those with thinner, platy bark.

Thus, an abundance of bark at the base of the tree is not necessarily an indication that something is wrong with the health of the tree. Most of the time, the tree is just growing faster because of an abundance of moisture and favorable weather and the bark is making room for an expanded girth of the tree bole.

HERBICIDES AND THE FOREST ENVIRONMENT

Wayne K. Clatterbuck, Professor of Silviculture and Forest Management

Herbicides are used to control unwanted vegetation such as grasses, brush and undesirable trees that impact or interfere with the growth of more desirable trees. Application of herbicides in forestry and wildlife management has raised many questions about their impact on the environment, especially water quality, non-target plants, fish and wildlife, and human health.

Many people equate herbicides with poisons and toxic substances. While most any substance administered in excessive quantities can have a detrimental effect on the environment, the toxicity (the degree to which substances are poisonous to humans or other life) of most of today's forest herbicides is low and poses little or no threat to man or animals in formulations and volumes commonly prescribed and applied. Most forest herbicides in common use today actually have a lower oral toxicity than similar amounts of table salt or aspirin and can be purchased at most hardware and home improvement stores. Generally, forest herbicides are applied once or twice in 30 to 60 years primarily to establish forests and give trees a favorable start, compared to agricultural herbicides that may be applied one to several times a year, every year.

Research shows that most of the herbicides used in forestry and wildlife habitat bind themselves to soil particles and tend not to move in the soil. Even for those few herbicides that are soil active when excess water is present, they do not persist long in the natural environment of the forest. Sunlight (photodecomposition), soil microbes, breakdown by plants (metabolism), and adsorption by soil colloids, all chemically break down herbicides into other substances relatively quickly after application. Most persist for only a few days or weeks. Thus, rapid decomposition of herbicides helps to reduce the potential hazards often associated with their use.

A number of safeguards are established to ensure the safe use of forest herbicides. Before any herbicide can be sold, it must be registered for use by federal and state government agencies. These herbicides are intensively researched to document both positive and negative impacts. These data are used by government agencies to determine if herbicides can be used without detrimental impacts to the environment. Specific precautions, instructions, and limitations regarding selection, mixing, application and cleanup are also contained on herbicide container labels. Commercial applicators must take written tests and be chartered and licensed to purchase and apply herbicides.

If carelessly or improperly applied, herbicides may cause harm to the environment as may any substance applied in excess, especially if applied directly to water or non-target crops or in other than recommended amounts. Carefully follow label instructions for the herbicide used. Conversely, when properly used according to label instructions, herbicides do not cause detrimental effects and are valuable tools for achieving timber and wildlife management objectives in a safe and cost-effective manner. Herbicides are increasing being used instead of mechanical equipment to control unwanted species. Herbicides leave a much smaller environmental footprint on the land compared to mechanical equipment that disrupts soil through manipulation or compaction.

CARBON IMPACTS OF WOOD PRODUCTS

Adam Taylor, Associate Professor, Forest Products

The release of carbon dioxide (CO₂) during a product's manufacture and use is sometimes referred to as its 'carbon footprint.' Coal, oil, natural gas and wood all contain solid carbon that becomes CO₂ gas when the material is burned for energy. Because CO₂ release contributes to climate change, and because of the need to conserve our energy resources, there is a desire to reduce the footprint of products and to choose products with a smaller carbon footprint.

The carbon footprint of a product can be calculated by measuring and categorizing all of the energy inputs. Calculating the carbon footprint of wood products requires special consideration for three reasons:

1. **Bio-fuel** Wood residues are often burned for energy during the manufacture of wood products. Because the carbon dioxide released when this wood is burning was recently absorbed from the atmosphere by the growing tree (during photosynthesis), this fuel is considered to be 'carbon neutral'. This 'bio-fuel' usage reduces the carbon footprint of wood products
2. **Carbon Storage** Carbon dioxide gas is absorbed from the atmosphere during photosynthesis by the growing tree. This carbon is converted to wood, bark and other parts of the tree, which are about ½ carbon by weight. If the tree rots or burns, the solid carbon in the wood is released again to the atmosphere as carbon dioxide gas. However, as long a wood product is in service, it is keeping potential carbon dioxide gas out of the atmosphere. This 'carbon storage' of wood products reduces the carbon footprint of wood products.
3. **Substitution** There are alternatives to wood products for most applications. However, almost all of these non-wood alternatives require more energy for their manufacture and the energy used is almost entirely *fossil* carbon – carbon that has been stored in coal, oil and natural gas for millions of years. When fossil carbon energy sources are used they contribute to the carbon footprint. If a wood product, with a smaller fossil carbon footprint, is used in place of a non-wood alternative, we can consider this to be a savings of carbon. This 'substitution effect' reduces the carbon footprint of wood products.

Because of these three factors, wood products usually have a *negative* carbon footprint, which means their use actually stores carbon. The following table shows a few examples:

Wood Product	Unit	TOTAL CARBON FOOTPRINT (Negative values represent a <i>carbon credit</i>) Units are kilograms of CO ₂
Hardwood lumber	One board foot (12"x12"x1")	-4.2
		-4.1
Softwood lumber	One 2x4 'stud'	-13.0
		-14.9
Hardwood flooring	One square foot	-1.6
		-0.4
Doors	One door	-311.5
Decking	One deck board	-24.5
Siding	100 square feet	-66.3
Utility poles	One 45' pole	-2513.9
OSB	One 4' x 8' sheet, 3/8" thick	-26.3
Plywood	One 4' x 8' sheet, 3/8" thick	-23.9
		-27.3

To put these values in perspective, a car produces 8.8 kg of CO₂ when it burns one gallon of gasoline.

These data are compiled from Life Cycle Assessments (LCA) of the various products. LCA measures all of the inputs and emissions from making and using a product and then estimates the total environmental impact in various categories. LCA are conducted according to internationally accepted standards and the data are reviewed by experts.

Wood is good for many reasons. The small – in fact, negative – carbon footprint is one more reason.

WILDLIFE MANAGEMENT CALENDAR FOR JULY

Craig A. Harper, Professor, Wildlife Management

Wildlife Notes

Blackberries ripen in early July.

July is peak breeding season for black bears.

July is also peak time for the second litter of squirrels.

Lots of quail born in July. **DO NOT MOW** early successional habitat (old-fields)!

Grassland songbirds incubating second nests of season.

Ducks and geese molt in June and July and are flightless for a couple of weeks.

Bullfrog breeding peaks in July.

Habitat Management

Mow and spray perennial forage food plots for weed control if necessary

- refer to [A Guide to Successful Wildlife Food Plots: Blending Science with Common Sense](#), PB 1769, for specific herbicide and additional management information

Burn unharvested wheat fields that have been left standing for doves.

Collect soil test samples from plots to be planted this fall and lime now as needed

Plant wild or browntop millet and/or buckwheat around beaver sloughs and other areas that will be flooded in November for ducks

Construct/repair dikes and water-control structures for flooding fields/woodlands for waterfowl this fall/winter

Spray undesirable woody plants in early successional habitat

- multiflora rose, privet, sericea lespedeza, sweetgum, green ash, and *Ailanthus* are examples of undesirable woody plants in early successional habitat
- Roundup, Garlon 3-A, Arsenal, Cimarron, and PastureGard should be considered
- refer to [Appendix 4](#) in *Native Warm-Season Grasses: Identification, Establishment, and Management for Wildlife and Forage Production in the Mid-South*, PB 1752, for additional information

DO NOT mow old-fields and associated early successional areas!

- destroys cover for wildlife at a time it is needed most (nesting and raising young)
- stimulates grass and leads to reduced forb cover (which means less food and cover)
- increases thatch at ground level and makes travel through the field much more difficult for wildlife
- manage old-fields by burning or disking in late March/early April; **don't mow them!**
- refer to [Chapter 6](#) in *Native Warm-Season Grasses: Identification, Establishment, and Management for Wildlife and Forage Production in the Mid-South*, PB 1752, for additional information on managing early successional habitat

Instead of mowing early successional areas, spot-spray instead

- Roundup and other glyphosate products work well

- Garlon 3-A and Cimarron work well for many undesirable broadleaf plants
- drive across field with tractor and sprayer as you would when mowing; spot spray undesirable species with a spray gun as you see them
- composition of field will change over time, developing into an early successional area with desirable plant species

Wildlife Damage/Population Management

Put up chicken-wire fence 2 feet high around vegetable gardens to protect them from rabbits

Put up a 2- or 3-strand electric fence (one strand 6 inches above ground and the other 6 inches higher) to keep groundhogs and raccoons out of vegetable gardens

To repel deer from vegetable gardens, erect a single-strand electric fence (2 ½ feet above ground) with aluminum tabs attached every 3 – 5 feet.

- Smear peanut butter on the aluminum tabs.
- Deer are attracted to the peanut butter. When they touch the aluminum tabs with their mouths, they learn to stay away.

Nuisance crawdads in the yard may be remedied by pouring boiling water down the spout of the mound

To keep bats out of attics and out from under vinyl siding and other areas, close or cover up all holes and cracks so they can't get in!

- do this at night after bats have left the roost; it may be necessary to open the hole the following night to allow any bats that were trapped inside a chance to leave
- maternal colonies will migrate to hibernation sites in the fall. If you wait until then to close holes and cracks, you will avoid trapping any inside.

“Repel” snakes by cleaning up around the house – mow more often, remove piles of wood, brush, and trash. There is no reliable “repellent” for snakes; only “snake oil”

Refer to *Managing Nuisance Animals and Associated Damage Around the Home*, PB 1624, and visit <http://icwdm.org> for additional wildlife damage management information.

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