



# Forestry, Wildlife and Fisheries Update Newsletter

Department of Forestry, Wildlife and Fisheries  
George Hopper, Professor and Head

July 2003

*Home Page - <http://fwf.ag.utk.edu>*

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## *Calendar of Events – 2003*

### **Timber Topics - Franklin County Extension Office**

*Contact- Ed Burns at 931-967-2741 or [eburns2@utk.edu](mailto:eburns2@utk.edu)*

<b>July 22</b>	“Management for the Future”, <i>Bob Baker</i>
<b>July 29</b>	“Wildlife Management”, <i>Craig Harper</i>
<b>Aug. 5</b>	“Management Practices for Hardwoods and Pines”, <i>Larry Tankersley</i>
<b>Aug. 12</b>	“Selling Timber for Top Dollar / “The Benefits of a Forestry Landowner Assoc.” <i>Shaun McMahan and Brian Roberts</i>

<b>Aug. 14</b>	<b>Sawmill Tour - Fayette County Forestry Association</b> <i>Contact - Jamie Jenkins at 901-465-5233 or <a href="mailto:jjjenkin1@utk.edu">jjjenkin1@utk.edu</a></i>
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<b>July 30-Aug. 1</b>	<b>TFA Annual Meeting</b> Airport Marriott, Nashville
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<b>Sept. 4</b>	<b>Master Logger Course Begins</b> PCA Training Center, Counce <i>(Every other Thursday for 10 weeks)</i>
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<b>Sept. 19-20</b>	<b>The American Paulownia Assoc. Conference - Paris, TN</b> <i>Contact - Pat Estes 731-593-567</i>
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<b>Sept. 30</b>	<b>Timber Tax Workshop</b>	Holiday Inn/Cedar Bluff, Knoxville
<b>Oct. 1</b>	<b>Timber Tax Workshop</b>	Ellington Ag Center, Ed Jones Aud., Nashville
<b>Oct. 2</b>	<b>Timber Tax Workshop</b>	Doubletree Hotel, Jackson
<b>Oct. 16</b>	<b>Master Logger Continuing Ed.</b>	PCA Training Center, Counce
<b>Oct. 30</b>	<b>Master Logger Continuing Ed.</b>	Bowater Credit Union, Calhoun

## **Forestry, Wildlife and Fisheries Faculty Receive Awards of Excellence**

Dr. George Hopper, Professor and Head

The USDA Cooperative Extension Service Southern Region recently presented 3 faculty members of the UT Department of Forestry, Wildlife and Fisheries five awards for programming excellence. The recipients were in competition with all natural resource specialists in the southeast.

Larry Tankersley received the Regional Project Award for his participation in the multi-state live satellite workshop titled the "Master Wildlifer Program."

Craig Harper was awarded for the best Proceedings Paper titled "Invertebrate Availability for Wild Turkey Poults in the Southern Appalachians." Dr. Harper also won the best Extension Publication for development of "The Hunter's Guide to a Successful Hunt Lease."

Extension Forester David Mercker received 2 awards, one for best Technical Advisor for his work with the Tennessee Forestry Association in establishment and support of County Forestry Associations. The other award was for Outstanding Youth and Teacher Education in developing the "Deaf Children's Forestry Field Day."

Dr. Tom Hill attended the 2003 National Association of Agricultural Agents annual meeting in Green Bay, Wisconsin where he received the Distinguished Service Award. This award is presented to Extension workers for outstanding programs in their profession over a period of years.

Congratulations to these four faculty members.

## **Tree Seedling Orders**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

Landowners can order tree seedlings for the 2003 fall and 2004 spring planting seasons starting July 1 announced the Tennessee Department of Agriculture (TDA), Division of Forestry.

The Division of Forestry grows a variety of high quality hardwood and softwood tree seedlings and makes them available to landowners at low cost for reforestation, wildlife management and conservation purposes. More than 20 million seedlings are produced each year.

According to East Tennessee nursery supervisor Paul Ensminger, there are two important changes in the program this year— the availability of new species and the minimum quantity that can be ordered.

"In the past, a purchaser could only buy seedlings in increments of 500. This year, we are offering 24 hardwood species that can be purchased in increments of 125," said Ensminger. "However, a person can still order any species we offer in increments of 500."

New varieties available this year include Ninebark, Kentucky Coffee Tree, Buckeye, Mulberry and Water Tupelo.

Ensminger recommends that landowners get their orders in early as the demand for seedlings, especially hardwoods, is increasing. He also recommends that landowners consult their local forester on which varieties are best suited for their site. Seedlings are delivered beginning in December through April.

Order forms can be obtained at local TDA forestry offices, or by calling the East Tennessee Nursery toll-free at 1-877-TN-TREES (868-7337). A directory of local forestry offices, order forms, a catalog and other helpful information are available on TDA's Web site at [www.Tennessee.gov/agriculture/forestry](http://www.Tennessee.gov/agriculture/forestry)

For more information contact: *Wayne Clatterbuck at (865) 974-7346*  
[wclatterbuck@utk.edu](mailto:wclatterbuck@utk.edu)

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### **Plan Now to Improve Woodlots for Wildlife**

*Craig Harper, Associate Professor, Wildlife Management*

Woodlots can be enhanced for many wildlife species by killing and/or removing certain individual trees. Late summer is the optimum time to selectively kill undesirable trees as they begin to prepare for autumn and transport nutrients from the crown down to the root system. Trees can be killed by girdling and spraying the wound with a selective herbicide. When performed during late summer, the effectiveness of the herbicide is increased, which helps to ensure the tree dies.

It can be difficult to understand how some trees actually can provide better wildlife habitat dead than alive. By selectively removing certain trees, crowns of remaining trees are able to grow and increase in size. For mast producers (e.g., oaks, black cherry, and persimmon), this allows increased production over time. Meanwhile, additional sunlight enters the stand where the tree(s) was killed or removed, stimulating additional herbaceous growth on the forest floor. This herbaceous growth provides forage, nesting structure, brooding habitat, and soft mast for deer, rabbits, various songbirds, wild turkeys, ruffed grouse, and a host of other non-descript species, including many small mammals, reptiles, amphibians, and invertebrates. Dead, standing trees (called snags), are used by a wide variety of birds and mammals (including woodpeckers, wrens, bluebirds, flycatchers, owls, hawks, wood ducks, squirrels, raccoons) for foraging, nesting, denning, and perching.

Non-mast producers (e.g., maples, sweetgum, elms, sourwood, ashes) are not the only trees that should be considered for thinning. Suppressed, poor-formed mast-producers also may be selected for killing/removal. If possible, it is a good idea to identify those trees that are consistent fruit producers. Recent research has identified that approximately 35 percent of the individual white oak trees produce roughly 85 percent of the white oak acorn crop each year.

Although girdling followed with an herbicide application is an excellent way to kill trees, "hacking" a wound per 3 inches of diameter using a hatchet along with an herbicide application also is effective. The recommended herbicide mixture contains 6 ounces of Arsenal AC<sup>®</sup> and 1 quart of Garlon 3A<sup>®</sup> filled to 1 gallon with water. This mixture then can be applied to a tree wound with a small squirt bottle—just enough to wet the wound is all that is necessary.

It is relatively easy to enhance wildlife habitat within a woodlot and it does not have to be at the expense of forestry objectives. Tree selection is up to you! Over time, it is quite rewarding to watch the stand respond to your prescription while use by wildlife increases.

For more information contact: *Craig Harper at (865) 974-7346*  
[caharper@utk.edu](mailto:caharper@utk.edu)

## **Recommendations for Preventing Construction Damage to Trees**

*Larry Tankersley, Extension Specialist, Forest Management*

Construction damage is sometimes hard to explain, “the tree looked fine when the contractor left”. There is no question this is true, however, tree response to construction damage takes time to become obvious to humans. Often, we say it takes a tree “time to starve”.

What is meant by this statement is that larger trees have starch reserves that can be mobilized to supplement photosynthesis. Root damage, that is not always noticed or appreciated during construction, reduces the water collecting capacity of the tree which reduces the amount of energy the tree can collect during a growing season. When base metabolism draws on reserves for several years, before the root system can regenerate, the tree ultimately fails. This phenomenon can take several years and that’s when the county agent or tree specialist is called. This situation is especially frustrating for everyone involved because the tree is dead and removal can be expensive.

Trees specialists recommend four fundamental ideas. These suggestions **must** take place ***BEFORE*** and ***DURING*** construction if we want the tree to ultimately be part of our landscape.

1. Organize site activities. Where will we be parking, unloading trucks, mixing concrete, grading, cutting, filling, loafing, etc. All of these activities can potentially damage a tree.
  
1. Minimizing land disturbance. Limit grade changes, trenching, and other soil disturbances and consider revising site plans according to the desire to protect the trees. Root damage is easy to do! Roots spread well beyond the “drip line” and are closer to the surface than we might think.
  
1. Separate the tree(s) from the construction zone. Fences may look funny but they let everybody know we are serious about protecting the enclosed area. Trees should be given as much room as possible. The “drip line” is a suggested minimum. Fences prevent machinery from damaging the tree’s trunk, but they also prevent soil compaction, excavation, and piling in the root zone. Geotextiles and a deep layer mulch disperse weight and allow air flow where activity must take place.
  
1. Tree Maintenance. Good tree care is important any time but before and during construction some items may help. Consider pruning, low hanging branches are vulnerable to damage from trucks and other machinery. Apply a slow release form of nitrogen. Monitor soil moisture before, during and after construction and consider watering. Aeration is also important. Vertical mulching before construction promotes tree vigor. After construction, compacted areas and filled areas should be aerated.

Of course, no one should apologize for removing a tree. Trees that cannot be adequately protected are usually cheaper to remove before construction than afterwards.

Trees add significant value to our surroundings. Many people are willing to pay for the extra effort to protect trees during construction. With appropriate consideration trees can be protected. Adapted from Ed Macie and the Society of American Foresters.

For more information contact: *Larry Tankersley at 865-974-7346*  
*latankersley@utk.edu*

*David Mercker, Extension Assistant, Forest Management*

Most private forest landowners are accustomed to seeking bids when marketing their timber. Often the expertise of private forest management firms are employed to handle their timber sale in a *turn key* fashion. Other landowners choose to merchandise their timber themselves, including marking, measuring, appraising and advertising.

One essential tool in this process is the **timber bid prospectus**. This is the advertisement instrument which summarizes the trees for sale and includes the conditions of the bid opening and sale closing. The bid prospectus is a cluster of sheets of paper (or one large sheet folded several times) that is mailed out to Master Loggers, saw and pulp mills, procurement foresters and timber brokers, inviting their bid on the selected trees. To maximize timber sale income, exposure of the trees to a large audience is important. Items included in the bid prospectus are also equally significant.

Often there's a tendency to include more than is needed in the prospectus. Because of the postage investment in mailing, bulk must be minimized. However, the following items should be included in all notices:

- the names of all owners of the timber and a statement that the timber is free and clear of all debt (or a qualification of release of mortgage holder if not);
- Summary of trees for sale and how they are designated (marked in orange paint, etc);
- Property location, both a legal description and general directions;
- Bid date, time and location and whether bidders must be present or if call-in bids will be allowed;
- Type of sale (seal bid or auction);
- Terms of payment (lump sum, partial payment with residual, pay-as-cut);
- Length of contract (how long will the purchaser have to remove the timber);
- Best Management Practices (BMP) adherence (practices that protect soil and water);
- Liability disclaimer;
- Right to reject any and all bids;
- Disclaimer on quantity and quality of timber.
- Maps with location of the timber and identifying log landing areas.

Selling timber is a business, and should be approached carefully and implemented patiently. Unless a landowner is experienced in the process, expert professional assistance should be sought. For additional information on this subject, refer to The University of Tennessee Agricultural Extension Service publication #PB1607 - Landowner's Guide to Timber Sale Contracts, by Clatterbuck and Tankersley.

For more information contact: *David Mercker at (731) 425-4717*  
*dcmercker@ext1.ag.utk.edu*

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**Surf to: <http://www.tnforestry.com/loggers.html>**

*David Mercker, Extension Assistant, Forest Management*

**Is Your Logger a Tennessee Master Logger?** The state of Tennessee, lead by the Tennessee Forestry Association (TFA), began a volunteer logger training program in 1998. Since then, approximately 3,000 loggers have participated in an intense 5 day educational series focusing on water quality (BMPs), silviculture/threatened and endangered species, safety (OSHA), business management and CPR/first aid. In addition, to maintain Master Logger status each logger must attend 8 hours of continuing education during a 2 year period.

Though a voluntary program, many wood using industries in Tennessee require that loggers supplying logs to their mills must have attended the Master Logger program. The TFA maintains a list of Master Loggers for each county. Before allowing a logger to commence logging on your or your constituent's land, it is advisable to check with the TFA website to confirm that the operator is a Master Logger.

The website is located at: <http://www.tnforestry.com/loggers.html>.

For more information contact: *David Mercker at (731) 425-4717*

**DisplayText cannot span more than one line!**

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### **Effects of Flooding on Trees**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

April showers bring May flowers. These showers also bring floods that may be detrimental to trees. The major floods along the Mississippi River in 1993 and the Tennessee River this spring are examples. When major rivers overflow, the backwater may also flood the smaller tributaries. A few days of inundation during the dormant season has little effect on trees. However, flooding during the growing season, especially during and after leaf out, can be harmful to trees. Flooding results in poor soil aeration because the oxygen supply to flooded soil is severely limited. Oxygen deficiency is likely the most important environmental factor inhibiting growth and promoting injury in flooded trees. Most trees will tolerate flowing water for a few days during the growing season (aerobic conditions), but will not tolerate standing or puddled water (anaerobic conditions) during the dormant or growing season.

Once trees are stressed by floods (symptoms are leaf chlorosis, defoliation, reduced leaf size, sprouting and crown dieback), secondary organisms, particularly opportunistic fungi, insects and disease invade the hosts and further weaken the tree. These symptoms may progress and eventually lead to tree death especially with repeated flooding each year. Generally, though, flooding does not occur every year and the stress symptoms may subside indicating the tree has recovered.

Some trees tolerate flooding more than others. The following list is a flood tolerance guide for planting trees or managing forests in flood prone areas.

**Trees more tolerant to flooding:** boxelder, red maple, water oak, willow oak, water hickory, pecan, sycamore, water tupelo, baldcypress, sweetgum, green ash, sugarberry, persimmon, Nuttall oak, pin oak, cottonwood, overcup oak, willow, silver maple.

**Trees intermediate to flooding:** sugar maple, hawthorn, holly, elms, bur oak, blackgum, swamp white oak, white ash, Shumard oak, cherrybark oak, river birch, honeylocust.

**Trees intolerant to flooding:** redbud, dogwood, black walnut, mulberry, shortleaf pine, loblolly pine, black cherry, sourwood, white oak, post oak, black oak, sassafras, black locust, northern red oak, shagbark hickory, mockernut hickory, pignut hickory.

For more information contact: *Wayne Clatterbuck at (865) 974-7346*  
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### **The Right Kind of Firewood**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

Now is the time to stockpile wood to burn in your wood stove or fireplace during those cold, blustery days of winter. Burn seasoned wood for best results.

Unseasoned wood, or what many folks call green wood, should be obtained now for use this winter. Freshly cut wood can easily contain close to half of its weight in water. Unseasoned wood takes 4 to 6 months to dry out.

How can you tell if the wood is properly seasoned? A few tell-tale signs include:

- Bark. In seasoned wood, it should practically fall off the log when you handle it.
- Cracks. Seasoned wood has cracks and checks from the middle of the log.
- Weight. Seasoned wood weighs less than an unseasoned piece of the same size because it contains less moisture.

Wood pieces should be stacked perpendicular to each other so air can pass through freely. Stack wood at least 10 feet from the exterior of your home. The closer the firewood is to the house, the greater the chance that insects will visit your structure and damage it.

The kind or species of wood can also make a difference. All species of wood have a similar energy content per unit weight. The problem is that firewood is purchased on a volume basis (rick, cord or truckload), not on weight. Therefore, a cord of less dense poplar or pine will yield far less warmth than a cord of red oak. Some higher density woods to use for firewood are oaks, beech, black locust, hickories, and sugar maple.

With the weather events that have occurred this spring and early summer in Tennessee, many trees have blown over or have broken branches. Now is the time to think about using this wood (if the correct species) in the stove or fireplace for the coming winter. Allow the firewood to season or dry out this summer for the best burning and heating during the cold, winter months.

For more information contact: *Wayne Clatterbuck at (865) 974-7346*  
[wclatterbuck@utk.edu](mailto:wclatterbuck@utk.edu)

## **Fast-Growing Trees**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

Many homeowners desire shade from large trees to provide some degree of cooling during hot summer days. Often, new buildings and developed properties on former agricultural land are devoid of shade trees. In other cases, large trees that have provided shade for years have declined, been damaged in storms and other weather events and eventually have died and been removed. Owners often prefer a source of shade quickly for their homes and properties. Fast-growing trees could be the answer. However, there are some inherent problems with fast-growing trees that should be considered.

Fast-growing trees usually have weak and brittle wood that tends to break and create maintenance problems during wind and ice storms. The junctions of branches with the trunk of the tree are usually weak points where branches break. Once branches break at these major junctions, much of the tree crown is lost and the tree has difficulty healing from the damage. These trees are often so badly damaged and unsightly that it is best to replace them.

Fast-growing trees are normally short-lived. Shade will be provided quickly and may last for several decades. However, these trees usually mature within 20 to 30 years and then begin to decline. The shade, even though provided quickly, will not be sustained over a long period.

Fast-growing trees usually become large trees and require a large amount of growing space, both above and below ground. For many properties, these trees expand beyond their current environment, resources and available space. Once the tree no longer has the space or resources for further growth, the tree begins to decline. Often the space available for these trees is limited because of poor placement choices. Make sure that the right tree is planted in the right place. Refer to UT Extension publication SP 511, ***Plant the Right Tree in the Right Place***, for further information.

Although fast-growing trees may be desirable as a quicker source of shade, most of these trees have inherent problems that will increase both their maintenance and costs for the long term. The following list contains several fast-growing trees that can be grown to satisfy a shading objective. However, these trees also have problems (e.g., susceptibility to insects and disease, brittle and weak wood, branch angles that promotes crown breakage, fruiting structures, shallow root systems, or space limitations for large size) that homeowners should consider before selecting the tree. Contact your local county Extension office for more information about these trees: silver maple, boxelder, Leland cypress, ash, sweetgum, yellow-poplar, eastern white pine, sycamore, cottonwood, pin oak, Bradford pear, willows.

Everyone desires the beauty of trees and the shade that they provide, but potential problems that are inherent with fast-growing trees are often overlooked. Assess the qualities of each of these trees and weigh whether their short-term faster growth is acceptable when compared to their potential problems.

For more information contact: *Wayne Clatterbuck at (865) 974-7346*  
[wclatterbuck@utk.edu](mailto:wclatterbuck@utk.edu)

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## **Improving Pond Habitat for Fish**

*Tom Hill, Professor, Fisheries Management*

There are several practices that can greatly improve the habitat for fish in farm ponds. The end result of course, is more pounds of fish are available for recreational fishing and, ultimately, more food for the table.

Pond size should be closely matched to the watershed area. Generally, more area is needed if the watershed is wooded. If the watershed is too large, a diversion ditch around the pond will be needed to keep the pond from flushing too often. You cannot fertilize or treat effectively with herbicides when large amounts of water routinely exit the pond.

Aquatic weed growth occurs most often in shallow water that is too clean. Pond banks should slope rapidly (2:1 or 3:1 ratio) to a depth of 2.5 feet. If a good phytoplankton bloom is maintained, submerged aquatic plants cannot easily become established because they will not receive needed sunlight. Chinese grass carp stocked at 15 per surface acre can also help control algae and aquatic plants.

Livestock should be kept away from the pond. They erode the banks making shallow areas that quickly become infested with aquatic weeds. Fields next to ponds should have a buffer of sod or grass 50 to 100 feet wide. This practice will greatly reduce pond sedimentation and possible pesticide contamination that can kill fish.

Proper fertilization regularly with a high phosphate fertilizer increases available food along the food chain so a pond supports more pounds of fish. However, if total alkalinity of the water is below 20 ppm, fertilization will not stimulate a good plankton bloom. Take a bottom mud sample, dry it and have the U. T. Soil Test Lab check to see how much lime is needed. Apply the recommended amount of lime over the entire pond bottom during the winter.

A simple method of knowing when to fertilize a pond is based on water clarity. Light penetration can be measured using a Secchi disk. An optimum bloom allow light to a depth of 18 to 24 inches.

Fish attractors provide a place for some small fish to temporarily escape predation. In so doing, larger fish are attracted to a site known by the angler. Trees, stake beds, rock or block piles and tire reefs are all good attractors. Place no more than three per acre and have the openings large enough for big fish to pass through. Structure with small openings serves as cover for small fish and allows too many of them to escape predation.

Fish habitat in many ponds can be improved with aeration. Supplement aeration requires about 1 hp of aeration per surface acre of pond. The aerator is not needed continuously, but helps avert fish kills when running at night or during extended periods of cloudy days when too dense algae blooms are present.

For more information contact: *Thomas K. Hill at (865) 974-7346*  
*[tkhill@utk.edu](mailto:tkhill@utk.edu)*

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## **Sealing Leaks in Ponds**

*Tom Hill, Professor, Fisheries Management*

Summer is the peak time for building farm ponds in Tennessee. Pond site investigation prior to construction usually spots problem sites, but there are cases where permeable areas cannot be readily detected before construction. Ponds built in such areas are of little value since they have low water most of the year. There are some practices that can help leaky ponds hold water.

Sealing a pond bottom by compaction with clay is the simplest and least expensive method. This technique is not reliable unless a wide range of soil particle sizes are present. At least 15 percent of the soil should be clay and silt; this allows a better seal to form. Where sufficient clay is unavailable in the pond site, a borrow area close enough to permit hauling at a reasonable cost can often be located.

Bentonite has been used successfully to seal leaky ponds having a high proportion of coarse-grained particles and insufficient clay particles. Bentonite absorbs several times its weight of water and swells 8 to 20 times its original volume. When applied at rates of 1 to 3 pounds per square foot, mixed with the coarse-grained material and thoroughly compacted, the saturated particles of bentonite fill the pores and the pond bottom becomes nearly impervious to water. In some cases where leaks have been pinpointed, bentonite applied with water still in the pond has been successful in reducing seepage.

In areas, where large quantities of calcium are present in the soil, a widely used method of seepage control is the application of sodium carbonate (soda ash). The sodium disperses the soil aggregates and causes clay particles to stick together and plug the pores. Research has shown that 2,000 pounds of soda ash per acre disked into the top 3 to 4 inches of soil should seal most ponds. No compaction is necessary after the soda ash is disked into the soil.

If you have a pond with a fluctuating water level, do not give up on it. Excessive seepage is a problem that can be helped in many cases. A publication, **SP 374-Y Renovating Leaky Ponds**, has more detailed information and is available from UT Extension.

For more information contact: *Thomas K. Hill at (865) 974-7346*  
*tkhill@utk.edu*

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## Tennessee Forest Products Market Report

### 1st Quarter 2003

	East <u>Tennessee</u>	West <u>Tennessee</u>	Statewide <u>Average</u>
<u>Stumpage</u>			
<b>Pine Sawtimber \$/MBF Doyle</b>	<b>245</b>	<b>292</b>	<b>268</b>
Oak Sawtimber \$/MBF Doyle	326	358	342
MXD HDW Sawtimber \$/MBF Doyle	232	179	205
Pine Pulpwood \$/Ton	7.27	9.02	8.14
HDW Pulpwood \$/Ton	6.73	6.98	6.85
 <u>Delivered</u>			
<b>Pine Sawtimber \$/MBF Doyle</b>	<b>349</b>	<b>500</b>	<b>424</b>
Oak Sawtimber \$/MBF Doyle	482	447	464
MXD HDW Sawtimber \$/MBF Doyle	298	275	287
Pine Pulpwood \$/Ton	21.09	23.44	22.27
HDW Pulpwood \$/Ton	21.12	25.25	23.18

#### Note:

This information is for educational use only by the University of Tennessee Agricultural Extension Service. Price information is adapted by permission from *Timber Mart-South*, a copyrighted publication by F.W. Norris, Highlands, NC. and is not to be copied for public distribution.

#### Explanatory Notes:

**Prices:** Prices given in this report are average prices in the current issue of *Timber Mart-South*. Prices for specific timber stands or products may vary significantly from the average prices listed due to location and accessibility of the timber, volume per acre, area included in the sale, restrictions placed on the harvest, size, quality and species of the stand or delivered product, and local demand.

Stumpage price is the price of timber standing in the woods.

Delivered price is the price of harvested products paid at the mill or the loading point (with no freight included).

Prices for sawtimber are given in dollars per thousand board feet (\$MBF) based on the Doyle log rule. The Doyle rule is the predominate rule for measuring tree and log volume in Tennessee. To convert prices to International rule, multiply the price by .61. This rule is for average values and cannot be used to convert individual log or tree volumes.

For more information contact: *David Mercker, Extension Assistant, Forest Management*  
 dcmercker@ext1.ag.utk.edu

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