Forestry, Wildlife & Fisheries Update Newsletter

Department of Forestry, Wildlife and Fisheries *October 2005*
George Hopper, Department Head *Website: http://fwf.ag.utk.edu*

In This Issue

Dates to Remember

October 25 - 26	FWF Inservice Training	Natchez Trace State Park
October 27 - 28	FWF Inservice Training	Cumberland 4-H Center
November 1	Forest*A*Syst	Henry County
November 2	Visual Impacts of Logging Master Logger Continue Education	Counce

Notes From the Web - Private Forests.org

Samuel Jackson, Web Coordinator, Extension Forestry

In partnership with the USDA Forest Service's Forest Stewardship Program, the Nature Conservancy has developed a website that provides information on plant and animal conservation to private landowners. The website, http://www.privateforests.org, provides a range of educational information, links to state resources, and other information.

One section of the site is called "Forest Management 101" and provides information on Best Management Practices (BMPs), wildlife, fragmentation, forest health, recreation, and other topics that cover a large portion of issues that can arise when managing private lands. A second section of the site provides links to other sources of information and assistance within the state. There are links to various Tennessee programs that provide assistance and information to private forest landowners.

The site provides an extensive library of publications and documents that go even further in depth about managing natural resources. There is even a discussion area for you to share ideas and information with other site users. Check out Privateforests.org today. You may learn something!

For more information contact: *Sam Jackson at (865) 974-2946 or* samjackson@utk.edu

Craig Harper, Associate Professor, Wildlife Management

Habitat Management

Spray perennial cool-season grasses (e.g., tall fescue and orchardgrass)
- October through early November is the optimum time to kill these grasses!
- spray in preparation to plant native warm-season grasses next spring and/or to release the seedbank
- use 2 quarts Roundup or 12 ounces of Select with 1 pint methylated seed oil (rates are per acre) if field is dominated with cool-season grasses and/or if orchardgrass is present
- use 12 ounces of Plateau or 32 ounces of Journey with 0.25 percent non-ionic surfactant (per acre) if desirable forbs are present and tall fescue is dominant grass
- refer to *A Landowner's Guide to Native Warm-Season Grasses in the Mid-South*, PB 1746, for additional information on eradicating perennial cool-season grasses

Burn and disc old-fields for brood habitat
- will stimulate forb growth next spring
- will reduce grass dominance where nwsg have become too dense
- will reduce woody encroachment by sweetgum, elms, and other non-desirable woody saplings in the field
- don't be afraid to burn; prepare adequate firebreaks by discing around the perimeter of the field and burn against the wind
- Smokey Bear appreciates your efforts!

Disc firebreaks around fields and woods before the ground freezes so they will be ready to burn next March /April
- discing now will stimulate forbs next spring
- winter wheat can still be sown, if desired, or leave fallow

Begin dormant planting native warm-season grasses
- don't plant too deep – no more than ¼ inch!
- don't forget pre-emergence weed control next April/May; it is critical!

Establish hedgerows across fields with soft-mast bearing trees and shrubs
- also plant in blocks at end of fields or in "odd" areas
- crabapple, persimmon, wild plum and others are good choices
- refer to *Improving Your Backyard Wildlife Habitat*, PB 1633, for a list of other trees and shrubs to consider

Fertilize/prune trees/shrubs for increased soft mast production

Continue to strip-mow or silage chop dove fields to provide seed and hunting opportunities
- strips can be disced and top-sown with winter wheat (2 bushels per acre) to provide additional forage opportunities
- migrating doves appreciate your efforts and the late dove seasons can offer great shooting

Spray perennial forage food plots for weed control if necessary
- refer to *Growing and Managing Successful Food Plots for Wildlife in the Mid-South*, PB 1743, for specific information

Soil test now for spring plots
- applications of lime require about 6 months before full effect on pH is realized

Flood waterfowl impoundments
- a depth of 8 – 12 inches is ideal for dabbling ducks

Continue Timber Stand Improvement activities
- stimulate growth among oaks, beech, cherry, persimmon, and other mast producers by killing surrounding competitors
- girdle unwanted trees and spray wound with a mixture of Garlon and Arsenal AC
- use 1 quart Garlon 3A and 6 ounces Arsenal AC filled to 1 gallon of water

Build brushpiles from thinned trees and pruned limbs
- put large limbs on bottom and small limbs on top for crevice space and overhead protection

Clean out bluebird boxes to allow more room for roosting bluebirds when cool weather arrives
- 10 or more bluebirds may roost in a single box on cold nights

Clean out wood duck boxes and replace old wood shavings with fresh shavings
- screech owls and squirrels may use the boxes through fall and winter
- repair/install predator shields if necessary

Put out bird feeders and keep them full
- it's not too early
- refer to *Improving Your Backyard Wildlife Habitat*, PB 1633, for information on specific feeders and seed for birds

Wildlife damage/population management

Close crawl spaces under the house and check for openings in the attic
- helps keep snakes, skunks, and squirrels from getting into places where they are not welcome
- rodents are beginning to cache food for the coming winter; take action now to keep them out of your house
- glueboards are very effective in trapping mice, snakes, and lizards looking for a warm place inside your basement or garage

Blackbirds and starlings have gathered into large winter flocks
- don't allow them to roost in your trees; if they start, they'll form a habit
- repel them with noise makers (shotguns, firecrackers, banging metal pans together)
- be persistent

Deer season is underway
- allow hunters access to your land if you have a problem with too many deer
- shoot the females (does); concentrating on bucks does little to control overpopulation
- in many overpopulated areas, it is necessary to kill 1 doe per 10 acres (sometimes more) before the population is reduced to acceptable levels
- where Quality Deer Management is desirable, reduce the population so plenty of forage is available, shoot does to even the sex ratio, and allow bucks to reach 3 ½ years of age before shooting them (refer to *Quality Deer Management: Guidelines for Implementation*, PB 1643, for additional information)
- take a kid hunting!

They're Not Giant Spider Webs! Fall Webworms Return!

Sam Jackson, Extension Forester and Web Coordinator

Fall is that time of year when we begin to see fall webworm webs in the branches of trees in our yard or woodlot. Don't, however, be alarmed that there is another insect to worry about. Unlike the Gypsy Moth or the Hemlock Wooly Adelgid, the Fall Webworm is not necessarily a destructive defoliator, as most of its damage occurs in the fall when leaves are beginning to be shed anyway. The pest can, however, affect the aesthetics of your trees.

The larvae or caterpillar itself is around 1 to 1 ¼ inches long and is covered by fine silky hairs. There is generally a black stripe on the back and yellow stripes on the sides. As with all caterpillars, the larvae will pupate into a moth. An adult moth will be white with dark spots on the wings and usually does not exceed 1 ¼ inches in length.

The adult moths appear in early summer and lay hairy masses of eggs on the undersides of tree leaves that will hatch and begin to develop in approximately two weeks. It takes another six to eight weeks for the larvae to mature into the worms and webs we commonly see. Depending upon how early adult moths appear during the year, there can actually be two different generations webworms produced in the same year.

In the south, common host trees include persimmon, pecan, sourwood, ash, black walnut, hickory, and oak. In all, some 100 tree species are known to host the fall webworm. As the larvae begin to appear, you will notice leaves that have been "skeletonized." These leaves are the result of the defoliation that the larvae cause while they feed. In most cases, the defoliation is not bad enough to warrant some type of insect control and occurs in a time of the year where leaves are dying anyway. If webs become an aesthetic or defoliating problem, there are a few control options. If only one web exists in a tree, that limb can be trimmed off and the nest destroyed. However, if a tree is badly infested, chemical control applied by a licensed professional may be necessary. Naturally, these insects are heavily impacted by weather and other biotic factors which help control their population.

View photos of the fall webworm at http://www.forestpests.org/northeast/fallwebworm.html. Remember, don't confuse the Fall Webworm with the Eastern Tent Caterpillar, which appears in the spring and is almost twice as large.

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# # #

Instruction for Chainsaw Operators

David Mercker, Extension Specialist, Forest Management

Many homeowners will soon be heading to the shed to pull out their chainsaw for cutting firewood, clearing around deer stands, or just fall pruning in their landscape. Chainsaws are a great helpmate. To many of us, the sound and smell of operating one is quite reviving. It is amazing the quantity of work that can be accomplished in short time, with centrifugal force and a sharp chain.

And that's the key, a *sharp* chain. It doesn't matter what brand or model of saw, the saw is only as good as the chain. Chain maintenance is critical. The following are some "sharp" suggestions for chainsaw owners.

1. **Know when to sharpen the chain** – dull chains bring loss of power and cutting speed, higher fuel consumption, and excessive wear on the guide bar, sprocket, and engine (not to mention operator fatigue); A sharpened chain will feed itself into the wood, rather than having to be

pushed; The operator should see chips of wood, rather than fine sawdust, when cutting (an indication of a sharp chain).

2. **Consult the operator's book** – when selecting a chain, follow the recommendations of the manufacturer with regard to size, pitch, profile, and filing angles and depth.

3. **Sharpening cutters** – find the cutter with the shortest top length, which will be the dullest tooth; Using the correct diameter (round) file, file this tooth to a sharp edge, up to where the chrome plating has worn away; Next file all other cutters to equal its length; File all teeth facing one direction first, then switch to the other direction; File from the inside to the outside of the cutter (with a forward stroke only).

4. **Filing depth gauges** – The depth gauges (also called rakers) help to clear the saw chips; If the rakers are too high, the chain will operate as if dull; If the rakers are too low, the chain will bite too deeply into the wood, damaging the chain and increasing the chance of kickback (a dangerous situation); Sometimes the rakers wear in proportion to the cutters and won't need filing.

5. **Use a professional periodically** – After five times of personal sharpening, it is recommended for a chain to be professionally sharpened to restore cutting angle and height of rakers.

As always, use common sense when operating a chainsaw. Safety equipment for ears, eyes, head, hands, feet, and legs is necessary. It is best if all skin is covered. Operators should avoid clothing that is too loose fitting. When you sense bodily fatigue, stop and rest before resuming.

(Reference: Randy Scully, product services manager for Stihl Inc.).

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# # #

Log Home Design and Durability

Adam Taylor, Assistant Professor, Wood Products Management

Building with logs offers the opportunity to live in a unique and beautiful house. Log homes are a symbolic connection to a rural, more self-sufficient past and they also can offer good performance in terms of fire and earthquake resistance and heating and cooling costs. However, log wall construction presents some special challenges in terms of design and durability.

Wood shrinks when it dries. In the "stick-built" frame construction that is standard building practice, shrinkage is not an important consideration when designing a structure; wood shrinks very little along the grain, so a stud in a wall will change very little in length as the wood dries. In contrast, wood shrinks substantially across the grain. In a wall built from logs this means that the height of the wall will change as the individual logs shrink. Depending on the wood species and other factors, log walls can shrink by as much as ½" per foot of height after assembly. Wall openings for windows and doors must allow for this settling, and plumbing connections need to be flexible.

The long-term durability of a log home also depends on a proper initial design. The over-riding principle is keeping the wooden parts of the structure dry. This includes having a roof with large eaves and gutters, and building a foundation that keeps the logs well away from the ground. In areas where wood cannot be kept dry – posts in the ground, decks and exposed railings – rot-resistant materials should be used. These can include preservative treated wood or naturally durable wood species such as cedar.

Maintenance of a log home is similar in principle to that of any building. Periodic inspection and repair is needed to keep the original design working. For example, gutters should be kept clean and vegetation trimmed away from the walls to help keep the building dry. Any signs of water infiltration or pest infestations should be investigated and fixed before they turn into big problems. Also, while wood finishes should not be relied on to prevent rot, regular application of stains and water-repellent finishes can help to preserve the appearance of log walls.

There is a long history of building with logs in Tennessee. Today, the state boasts the highest concentration of log home manufacturers in the nation and is home to thousands of log buildings ranging from simple cabins to grand mansions. With proper design, the appropriate use of durable materials and regular maintenance, a log home can provide many years of comfort.

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# # #

Timber Taxes 2005

Larry Tankersley, Extension Assistant, Forest Management

Timber is standing, logs are not. Timber is a capital asset, logs are a personal asset. Proceeds from a timber sale are a capital gain. Proceeds from selling logs are ordinary income.

This is an important distinction. Capital gains are not subject to self-employment taxes. Ordinary income is subject to self-employment taxes.

Capital gains can be considered long-term capital gains and as such are taxed at lower rates. If you are in the 15% or lower ordinary income tax bracket you pay only 5% on your long-term capital gains. If you are in a higher tax bracket (25% or greater) your long-term capital gains rate is 15%, maximum, regardless of ordinary income tax bracket.

Your timber is considered by the IRS as "income-producing" property. As a timber owner you are considered by the IRS as either an investor in timber or "in the business" of growing timber. This distinction determines how we handle expenses associated with day-to-day timber ownership. How we handle our day-to-day timber ownership becomes the "facts and circumstances" that determine whether we are in the business or investors.

As investors business expenses become investment expenses and are itemized deductions subject to the 2% of adjusted gross income limit on Schedule A, Itemized Deductions. Expenses can also be added to your basis in the timber.

Expenses for people in the business of growing timber are deductible each year on a Farm Income form, Schedule F or a Sole Proprietor form Schedule C.

Facts and circumstances include your purpose for owning the timber, how often you conduct timber sales, the proportion of income derived from timber sales, frequency of activity associated with managing the timber, possession and use of a written management plan, etc. From these items you can decide if you are an investor or in the business of growing trees, and file accordingly.

Income/cash flow are often used by many tax preparers to determine your "profit motive" required to declare "in the business". It is common in the timber growing business to have several years with no income. This does not preclude a "profit motive" as long as we can say that the value of the standing trees is increasing through physical growth and price increases in the wood market. Of course claiming excessive expenses would also call to question one's profit motive.

Reforestation expenses are those aimed at establishing another "rotation" of timber. These expenses include site preparation either for natural regeneration or planting, seedlings or seed, and planting or sowing. Reforestation Tax Incentives allow you to deduct up to $10,000 per year from your income for establishing a new stand of timber. This deduction is available to investors and persons in the timber growing business.

Reforestation expenses in excess of $10,000 are eligible for amortization over the next 84 months. This is a tax deduction for current year and the next seven years until the expenses are recovered. Reforestation tax incentives are available to timberland owners.

As a capital asset, timber requires record keeping. Most important is the notion of basis. A basis is the dollar amount that you have in the timber. How much you have in the timber is easiest described as what you paid for it. When we buy timberland we are purchasing land and timber.
Keeping up with your timber basis is important because it is deducted from sale proceeds when we determine the amount of our capital gain. This is considered a depletion deduction.

A basis is also the limit that we can deduct when our timber is damaged in a casualty event such as a tornado, ice, a timber theft or condemnation. Establishing a timber basis is explained in
UT Extension Publication 1691, at http://www.utextension.utk.edu/publications/pbfiles/PB1691.pdf.

Timber taxes are very interesting for some folks. And can certainly save us money by knowing a few key items. The website: timbertax.org is the National Timber Tax Website and is recognized as the most comprehensive site for studying timber tax issues. Of course, irs.gov is the Internal Revenue Services's site and also contains a lot of information to say the least.

Let me know if I can help.

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# # #

Charcoal Production for Iron-Making has Influenced Tennessee's Forests

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

Tennessee was a center for the production of iron before and after the Civil War prior to coal being widely available. The four elements required to produce iron were abundant in much of Tennessee: (1) iron ore deposits that could be easily accessed from the surface or the side of bluffs, (2) limestone that was used as a slag material during the smelting process, (3) Large tracts of timber that supplied the wood for charcoal, and (4) water/river transportation before railroads were built.

Iron furnaces and forges were located in many areas of Tennessee: eastern mountains, escarpment of the Cumberland Plateau, and the Western Highland Rim. Names of many communities that attest to the importance of ironworks include Pigeon Forge, Laurel Bloomery, Forge Creek, Union Forge, and Cumberland Furnace. Charcoal was the only fuel available for iron smelting and forging. Vast timber reserves were necessary to produce sufficient quantities of charcoal. Generally one ton of charcoal was required for each ton of iron produced. Oak, hickory, beech and maple were preferred types of wood for charcoal production because the wood was dense and produced a hotter burning fire.

> "an early chronicler of the [iron] industry estimated to keep a furnace with a 12-ton-per-day iron production going for a year required the cutting of 500 acres of forest, and that to keep one going permanently ... would required about 16,000 acres (25 square miles) per furnace allowing 30 years for timber to grow back before the next cutting. In the year 1873, there were 11 furnaces in blast on the [Western Highland] Rim, producing iron at the rate of 50,000 tons per year. In order for all of these furnaces to operate on a 'permanent' basis, then something on the order of 375 square miles of timber would have been necessary to support them" (Luther 1977)

Needless to say, much of the forested landscape in east Tennessee and the Western Highland Rim were affected by the iron production. Each charcoal hearth (where the wood smolders into charcoal) was composed of 22 cords of wood (a cord of wood is a stack that is 4 feet high, 4 feet wide and 8 feet long). Most tracts of mature forest contain 20 to 30 tons per acre. Some areas were harvested successively because with the manual labor of the time, the charcoal-makers preferred small-diameter trees, usually less than 16 inches. Larger trees were just too bulky and heavy to carry to the charcoal hearth. Larger logs would also require splitting for use in the charcoal hearth, another time consuming and laborious activity. Thus, many of larger trees probably were not harvested for charcoal, but may have been harvested for other purposes or even left alone.

Charcoaling was just one activity that has altered the composition and structure of our original forests. Most of these charcoaled sites regenerated from seeds and sprouts and became forests that we have today, i.e., regenerated and developed from a disturbance. For example, much of Montgomery Bell State Park in Dickson County was a result of the iron-making and charcoal production of the area.

Many other wide-spread disturbances such as chestnut blight; frequent fires; building of the railroads; harvesting wood for fuel, products, and building structures; windstorms; ice storms; etc. are disturbances which have contributed to the forests that we have today. The forests in Tennessee, except for a few, small isolated tracts, have been influenced by some disturbance whether human-induced or weather-related. The forests are not pristine or so-called "natural," without human disturbance. The forests are a result of the mosaic of disturbances and the subsequent management and protection by landowners, whether public or private. Even in one of the forested areas that we treasure most, the Great Smoky Mountain National Park, more than 90 percent of the park area was either partially or completely harvested before park acquisition. Many of the roads and trails in the park were previous logging trails or logging railroad beds.

Citation: Luther, E.T. 1977. Our restless earth. University of Tennessee Press, Knoxville. 94 p.

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# # #

Trees for Tennessee Landscapes Publication Series
Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture

Eight new Extension publications for the *Trees for Tennessee Landscapes* series for urban forests are now available.

SP628	Choosing "Sewer-Safer" Trees
SP656	Shade and Flood Tolerance of Trees
SP657	Impacts of Air Pollution on the Urban Forest
SP658	Lightning Protection for Trees
SP659	Cabling, Bracing and Other Support Systems for Trees
SP660	Lichens and Vines on Trees
SP661	Bacterial Leaf Scorch in Landscape Trees
SP662	Guidelines for Buying Trees.

A copy of each of these publications will be sent to all Extension and Division of Forestry offices within the next month. Presently, there are 47 publications within this urban publication series. Additional copies of the publications may be requested from the UT Extension Supply and Services Office. Publications are also online at http://utextension.tennessee.edu/publications/forestry/default.asp

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# # #

Hardwood Analysis and Trends (HAT)– October 2005
David Mercker, Extension Specialist, Forest Management

This is an abbreviated edition of **HAT -** due to unchanged market conditions from the previous weeks. Of the six hardwood species included in **HAT**, there have been no price changes to #1 common lumber throughout the Appalachian region. This includes: red and white oaks, cherry, hard maple, black walnut, and poplar. The mid to lower grades of oak continue to receive pressure from over supply and languishing demand. More detail will follow next month.

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