

FORESTRY, WILDLIFE & FISHERIES QUARTERLY NEWSLETTER



March-May 2021

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Wet Firewood is Illegal?

Dr. Adam Taylor

Every spring I remind people that it is the time to start preparing firewood for the winter. It takes a long time for the wood to dry thoroughly and the amount of water in the wood (the moisture content) is the most important factor in providing a safe, clean and efficient fire. This advice to use only dry firewood may be helpful but in England it will soon be the law! The Air Quality (Domestic Solid Fuels Standards) (England) Regulations will require that all firewood be dried to 20% moisture content or less before being sold in small amounts (e.g. the firewood bundles that you see for sale at local gas stations and grocery stores). When sold in larger amounts, the law will require firewood suppliers to inform their customers of the following:

This wood is not suitable for burning until it has been dried. You should not burn wood until it has a moisture content of 20% or less.

Wet wood contains moisture which creates smoke and harmful particulates when burnt. As well as being harmful to your health and the environment, this can damage your stove and chimney and is an inefficient way to heat your home. Dry it in a sunny, well-aired space for at least two years, keeping rain off in the winter.

Radial cracks and bark that comes off easily suggests wood that is ready for burning. Test the wood when you think it is ready for burning, ideally with a moisture meter. First calibrate the meter and then measure a freshly split surface to get the best reading.

In Tennessee, we can expect to achieve sufficiently dry firewood after one summer's worth of aging, provided the wood is protected from rain and exposed to good airflow. But otherwise, this is good information: wet wood is hard to burn, provides less heat, and results in smoky fires that pollute the air and leads to creosote accumulation that can cause chimney fires.

When firewood is well-dried, it will often have cracks on the end from the associated shrinkage but the best way to determine moisture content is with a meter. In my opinion, the meter does not need to be calibrated – these meters are neither precise nor accurate with wet wood – if any of these meters reads 20% or below the wood is dry enough.

Wet firewood is not illegal in Tennessee; in fact, wet firewood is only too common in those small bundles, as many disappointed campers have discovered. Many bundles of firewood are now sold as 'heat treated' or 'kiln dried'; however, these treatments are applied to kill insect pests and are no guarantee of dry wood.

There are good reasons to (voluntarily!) take the time to ensure that your firewood is dry – so start planning for next winter (or your fall camping trip) right now.

Wildlife Management Calendar for March/April/May

Dr. Craig Harper

Wildlife Notes

March

White-tailed deer finish shedding antlers

Cottontails begin breeding

Skunks are breeding

Bears emerge from dens

Spring squirrel litters are born

Male wild turkeys begin strutting and gobbling

Bobwhites begin pairing up

Male ruffed grouse begin drumming

Mourning doves begin nesting

Crows are nesting

Male woodcock courtship flights can be observed at dusk

Wood ducks and Canada geese begin nesting

Bald eagles hatch

Barred owls and screech owls are nesting

Bluebirds select nest cavities; males establish territories at nest boxes

Purple martins begin to arrive

Tiger salamanders searching for ephemeral ponds in February and March

Southeastern chorus frogs, spring peepers, American toads, Southern leopard frogs, and crawfish frogs are calling and breeding

April

White-tailed deer antlers begin new growth

Black bears emerge from dens

Bobcat kittens are born

Peak ruffed grouse drumming and wild turkey gobbling

Peak nesting for wild turkeys and ruffed grouse in late April

Northern bobwhite begin nesting

Wood ducks and Canada geese are nesting; early clutches hatch by end of April

Bluebirds are nesting; early clutches hatch by end of April

Neotropical songbirds arrive and males establish territories in mid- to late April

Hummingbirds return

May

Most groundhogs, beavers, raccoons, and chipmunks are born in May

Wood duck broods begin to appear

Peak of dove nesting season

Northern bobwhite nesting peaks May – July

Wild turkey hens are incubating eggs; turkey poults begin to appear

Grassland birds are nesting; do not mow fields now!

Neotropical migrant songbirds have arrived and are nesting

Fowler's toads, northern cricket frogs, and gray treefrogs begin calling

Habitat Management

March through early April is a great time to burn woods and fields where appropriate to facilitate management objectives

Burn woods to maintain a diverse understory structure and increase forage and soft mast

- Understory response in closed-canopy woods will be relatively sparse
- Overstory should be thinned to allow at least 20 – 30% sunlight to stimulate understory

Burn old-fields and other early successional communities by early April to maintain forbs, grasses, brambles, and scattered shrubs

- Secure burning permit and develop burning plan with Tennessee Division of Forestry
- Make sure firebreaks are in place
- Get help from experienced personnel if you don't have experience burning
- Burning fields is much more beneficial for wildlife than mowing!

Refer to *Introduction to prescribed fire in Southern ecosystems, US Forest Service publication SRS-054*, for additional information on the use of prescribed fire

Refer to the publications below for more information:

[*Managing early successional plant communities for wildlife in the eastern US*](#)

[*Considerations for wildlife and fire in the southern Blue Ridge*](#)

[*Forest Stand Improvement: considerations for wildlife*](#)

Refer to [*Landowners' guide to wildlife food plots, PB 1874*](#), or [*Wildlife food plots and early successional plants*](#) for seeding rates and additional information

Burn large piles of debris created following logging operations or land clearing operations

- Although such piles may be used by a variety of wildlife, they are denning magnets for mammalian predators, such as coyotes, raccoons, skunks, opossums, and armadillos; and even though these animals play an important role in our natural world, their numbers are excessive in many areas and actually reduce or suppress numbers of other species that may be focal species for management, such as wild turkey and white-tailed deer
- Large debris piles (I call them “coon condominiums”) that have soil incorporated in them are particularly problematic
- Obtain burning permit from TDF before burning; recognize these piles will burn for days; try to burn when weather over next few days will facilitate smoke dispersal

Disk fields before spring green-up to encourage fresh forb and grass growth and improve the structure at ground level for many wildlife species, such as young bobwhite and wild turkey

- Disking is an excellent way to set-back succession, especially if you can't burn, but even if you can burn, disking after burning will stimulate additional annual forbs that provide excellent forage, seed, and cover for many wildlife species
- Disk sections of the field in block design or strips, rotating such that each block is disked every 3 – 4 years
- Blocks of 2 – 5 acres generally are better than relatively narrow strips—makes it more difficult for predators to find nests
- If you disk strips, they should be at least 50 feet wide

If you can't burn or disk fields, mow in late March/early April – just before spring green-up

- If you have any interest in wildlife, do not mow during the growing season or you will disrupt nesting and reduce fall recruitment of wildlife that use early successional cover in summer
- Furthermore, hold off on mowing fields in late summer/early fall; instead allow wildlife to use the cover through winter and mow in late winter/early spring just before spring green-up
- Depending on your objectives, disk after mowing to facilitate litter decomposition, improve travel for small wildlife and stimulate the seedbank

Fertilize/prune fruit trees in March for increased production

- This is for trees out in the open, not those in woods
- Fertilizing oaks in woods is a waste of time and money; to increase mast potential for trees in the woods, refer to Forest Stand Improvement (FSI) activities

Spray tall fescue, orchardgrass, and other perennial cool-season grasses in late March – mid-April

- Spraying now is not as effective at killing these grasses as spraying in fall after a couple frosts, but approximately 70% reduction in grass coverage can be expected following spring sprayings
- Spray a glyphosate herbicide @ 2 quarts per acre (with surfactant) when grass is about 10 inches tall and actively growing in late March/early April (just prior to warm-season plants germinating or sprouting)
- After grass is killed (2 – 3 weeks after spraying), burning or disking will consume or incorporate dead material and stimulate the seedbank
- When disking in the spring, a preemergence application of imazapic (6 – 12 ounces of Plateau) may be necessary after disking to control johnsongrass, crabgrass, broadleaf signalgrass, and other undesirable nonnative grasses that germinate in late spring

Refer to [Managing early successional plant communities for wildlife in the Eastern US](#) for additional information on eradicating perennial cool-season grasses and other undesirable species

Plant trees/shrubs for wildlife in March

- Where lacking, hedgerows can be established across large fields with soft-mast bearing trees and shrubs as well as some evergreens for increased cover value
- Planting a small orchard (6 – 12 trees) at end of hedgerows or in “odd” areas is a good practice for many wildlife species
- Apple, pear, crabapple, persimmon, wild plum, elderberry are good choices

Refer to Table 1 in [Managing wildlife around your home, PB 1868](#), for a list of other trees and shrubs to consider

Finish Forest Stand Improvement (FSI) activities by early March

- Stimulate growth among oaks, beech, blackgum, cherry, persimmon, mulberry, and other mast producers by killing surrounding competitors
- Girdle unwanted trees and spray wound with imazapyr or triclopyr
- A solution of 50% of Garlon 3A (triclopyr), 40% water, and 10% Arsenal AC (imazapyr), mixed in that order, is very effective at killing a broad spectrum of trees
- Work should be finished by early March; later in March and April is not a good time to girdle and spray because herbicide may be washed out of girdle when sap is flowing; otherwise, any time of year is good for this activity

Keep bird feeders full

- Black-oil sunflowers are a favorite of many birds
- Thistle seed is preferred by goldfinches
- Suet provides energy for lots of birds during winter
- It is very important to clean feeders regularly to reduce disease outbreak

Refer to [*Managing wildlife around your home, PB 1868*](#), for information on specific feeders and seed for birds

Continue strip-mowing or silage chopping grain fields to provide seed for various birds through late March

- This is a beneficial practice for some birds, such as mourning dove and songbirds, that only feed on the ground. It is not necessary or desirable for species such as wild turkey and white-tailed deer that can get at seed while on plant, even corn on the cob. Seed that remains on the plant remains sound much longer than seed dropped on the ground, which deteriorates quickly.

Spray weeds in cool-season food plots before weeds get too large

- Most cool-season weeds are best killed when sprayed before they reach 3 inches tall

Refer to [*Landowners' guide to wildlife food plots, PB 1874*](#), or [*Wildlife food plots and early successional plants*](#) for seeding rates and additional information

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

- Applications of lime require about 6 months before full effect on pH is realized

Spray Chinese privet and Japanese honeysuckle

- Spraying the green foliage of these species in winter before more desirable species leaf-out prevents harming dormant desirable species
- 5% solution of Garlon 3-A or 1% solution of glyphosate herbicide works well for Honeysuckle
- 3% solution of glyphosate herbicide or 1% solution of Arsenal AC work well for privet
- For privet too large to spray foliage, cut stem and treat cut stump surface with 20% Arsenal AC or 50% Garlon 3-A; alternatively, stems may be treated with basal application of 20% Garlon-4 with commercially available basal oil as a penetrant

Complete drawdown of fields flooded for waterfowl by late March if they are to be planted in spring; they may remain flooded through spring and into summer if you wish to provide habitat for various waterbirds and amphibians.

Conduct drumming counts for ruffed grouse in mid-April

Plant firebreaks for additional forage, seed, bugging opportunities

- Alfalfa, perennial clovers, chicory, and annual lespedezas can be planted in mid- to late February
- Warm-season plantings can be completed later in May

Spot-spray undesirable plants in old-fields and other early successional communities in May

- This is a great method to improve the composition and structure of early successional areas and does not destroy cover for nesting or rearing young
- Drive across field with tractor and sprayer as you would when mowing; spot-spray undesirable species on either side of tractor with a spray gun as you drive slowly across field; don't roll your eyes—this technique works
- Composition of field will change over time, developing into an early successional area with desirable plant species
- Roundup and other glyphosate products work well
- PastureGard works particularly well for controlling sericea lespedeza

Spray native warm-season grasses that were planted and have become too dense mid-May/early June

- Planted native warm-season grasses, especially big and little bluestem, indiangrass, and switchgrass, commonly become dense and rank, provide poor structure at ground level, and inhibit the seedbank from germinating
- Spray with glyphosate herbicide at 2 qts/ac to reduce grass density; burn if possible after grass cover has died to consume thatch, improve structure at ground level and release the seedbank to increase forb coverage

Wildlife damage/population management

Skunks are on the move

- Skunks mate in February and March (litters of 3 – 10 usually born in May)
- Live traps work well
- Once skunk is trapped, approach slowly, cover with a tarp, carry to water source (in truck bed), and drown the skunk
- It is illegal to release a live skunk or raccoon on someone else's property without written permission

Black vultures may be problematic as calves are born

- Try scare tactics using firearms and pyrotechnics as soon as vultures appear during calving season—persistence is necessary
- It is against the law to shoot a vulture without a permit. Contact USDA-Wildlife Services (866-487-3297) for severe problems and information on obtaining a permit

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

Set traps correctly to catch moles!

- Make sure surface runway (tunnel) is active before setting traps
- Excavate 6-inch by 6-inch square exposing runway and determine exact depth of runway
- Replace dirt firmly, but not compacted
- Set trap at exact depth so mole will be caught

Vole activity may be more apparent as there is increased activity planting gardens, flowers, and shrubs in April. Pine voles, in particular, eat bark from roots, bulbs, tubers, and seeds in and around flower gardens and shrubbery

- Flowers may be protected by placing ¼-inch mesh galvanized hardware cloth under and around flower beds
- Zinc phosphide-impregnated baits are effective when placed in the runway or in burrow openings
- Snap-traps baited with peanut butter and bird seed also are effective; place baited snap-traps under some type of cover, such as an open-ended box approximately 3 – 4 inches in diameter, to prevent catching birds and other non-target species

Put up chicken-wire fence at least 6 inches belowground and 2 feet aboveground around vegetable gardens to repel rabbits

- March/April is a good time to do this before planting your vegetable garden
- Plant “alternative” forages for wildlife outside the fencing to satiate the appetite of deer, groundhogs, and rabbits, further helping to keep them out of the garden

Refer to [Managing wildlife around your home, PB 1868](#), for additional wildlife damage management information

How Do Acorns Develop?

Dr. David Mercker

Dr. Jennifer Franklin

Each year during the spring months as the days get longer and warmer, the forest comes alive with new plant growth. Conditions needed for growth (warmer temperatures, moisture, extended day length, etc.) scarce over the winter months reappear, and stimulate new life. Plants respond at their own pace to these changes as flowers are born. For oak trees, as leaves begin to unfurl, flower buds also expand and bloom. Ultimately, a crop of acorns will mature from these flowers and disperse into new habitats.

Oaks and many other trees have both the male and female flowers on the same tree. Potentially every tree of reproductive age is capable of producing acorns, and the majority of female flowers are pollinated by the male flowers of other oak trees. In contrast, other trees, such as persimmon and white ash have the male and female flowers on separate plants, and only those trees with female flowers produce seed.

Flowering in most oaks is triggered by rising temperatures in the spring. Red oaks tend to flower about two weeks earlier than white oaks. The male flowers of oak trees are quite noticeable. Normally by April oaks have produced long, worm-like structures that droop downward off of the base of newly forming branches. These male flowers, called *catkins*, have a number of small flowers arranged like beads on a string along a central stem. These male flowers produce pollen that by mid-April affects many allergy sufferers. Pollen is shed 1 to 2 weeks after the catkins first appear over a period of 3 or 4 days. Pollen shedding is often delayed by rain and high humidity. Pollen shedding will be greatly reduced if a prolonged period of damp weather occurs while catkins are on the trees, resulting in a poor acorn crop.

The female flowers are much less noticeable, requiring a magnifying glass for identification. They are also located on newly forming twigs at the base of emerging leaves, and are easily overlooked because they closely resemble leaf buds. Female flowers are mainly found in the upper portion of the crown, so they are rarely seen by the casual observer. These flowers appear approximately a week later than male flowers, just as pollen begins to be shed. The female flowers have 3 very small, reddish *stigmas* which resemble small pedestals and rise up from the *ovules* located at the base of the female flower. These stigmas receive pollen grains from the male flowers, and an acorn is formed.



Fig. 1. Swamp Chestnut Oak acorns
Acorn crop produced by Swamp
Chestnut Oak (*Quercus michauxii*).

Fig. 2. Male Oak Flower
Male flowers of Southern Red
Oak (*Quercus falcata* Michx.).



Fig. 3. Germinating Acorn
Germinating water oak acorn
(*Quercus nigra* L.).

Year-to-year acorn production is very unpredictable, due mainly to external factors, and also genetic make-up of that particular oak family. Freezing temperatures during the flowering period kill the flowers, often resulting in small acorn crops. Acorn production can also be limited by: high wind and excessive rainfall (affecting pollen distribution and damage to male flowers), insects (such as weevils that feast on the contents of acorns), nutrition, humidity, and soil moisture. Oak trees often abort acorns during periods of stress, thereby conserving resources such as water and nutrients. This benefits the tree by redirecting resources away from seed production and into more critical life-sustaining processes. Most species of oaks begin producing acorns at about 20 years old, peak production occurs from about 50 to 80 years, and then acorn production tapers off after 80 years. Certain trees typically produce more acorns than others – a phenomenon that deer hunters are keen on following. Healthy trees with dominant crowns (crowns decidedly higher and larger than those of surrounding trees) often will produce more acorns than unhealthy, suppressed trees. Genetics of the tree also plays a large role in the quantity of acorns produced. Trees with highly productive parents are also likely to produce good acorn crops. A year of heavy acorn production may use up much of a tree's stored nitrogen, and few acorns may be produced the following year while the tree's nutrient stores are replenished.

As a general rule, acorns from species in the white oak group tend to taste sweeter than the bitter acorns from the red oak group (containing tannic acid). Another difference between the groups is that acorns from the white oak group mature in one year, whereas acorns from the red oak group mature two years after the flowers are pollinated. As a result, red oak acorn production can be affected by conditions that occurred over two years of weather events.

Very few acorns survive to sprout and produce a new oak tree; most serve as a source of food for wildlife, insects, and fungi. Acorns are important food and source of protein for blue jays, wild turkeys, ruffed grouse, squirrels, chipmunks and other rodents, deer, and black bear. Oak trees have a high aesthetic value and produce valuable forest products too. Perpetuation and sustainability of the oaks is important and begins with flowering and germination of acorns.

Enhanced Biodiversity within Native Grass Pastures

Dr. Patrick Keyser

Increased interest in soil health, wildlife conservation, and continuing declines in pollinator populations have all drawn attention to strategies for enhancing biodiversity for grasslands. This is particularly true for grasslands planted to native species such as switchgrass or big bluestem. For native grasslands, the obvious way to improve the diversity within a field is to include native forbs and legumes in the planting. Easily said, harder to do. Which native species? When should they be planted? How should they be planted?

Research addressing these questions, especially where the native grass field in question is a pasture, has been limited to date. To help answer these questions, a project was initiated at the Northeast Tennessee AgResearch and Education Center near Greeneville. The project is being supported by a grant from the Natural Resources Conservation Service under their Conservation Innovation Grant (CIG) program. The goals of this project have been to determine which native forbs and legumes can be successfully established within pastures, which will persist, not become pests, produce flowers that will benefit pollinators, and contribute to cattle forage production.

Two pastures, one composed of lowland switchgrass and the second, a big bluestem/indiangrass blend, were overseeded with a 12-species blend of native forbs and legumes during spring 2017 (Table 1). Starting in 2018, the pastures were grazed each summer for about 12 weeks. Paddocks within these pastures were grazed all season, remained ungrazed, or were rested for 3 weeks in either the early, middle, or late portion of the grazing season. We used this approach rather than adjusting stocking rates because experience has shown that under light stocking rates, natives can easily become over-mature. Too, these treatments mimicked a rotational system in terms of the timing of rest intervals.

Graduate student Johnny Richwine has worked with the staff at the AgResearch Center to implement this project. Each summer since 2018 Johnny has collected data on these pastures. Although the project will not be completed until fall of 2022, some patterns are beginning to emerge. First, some of the native forbs and legumes did not establish well, but most were established and can be found within the pastures. The second lesson was that cattle readily grazed the native species (Fig 1). That is good news, because if they did not, some of these species could become pests within the pastures. Finally, except when grazing pressure has been particularly heavy (summer 2019 for example), the species that established are doing well and are able to set flowers beneficial to pollinators (Fig 2). There does not appear to be a strong pattern in terms of the persistence of these species based on when the rest comes – early, middle or late summer.



Figure 1. A test pasture showing a healthy mix of both native grasses and native forbs.

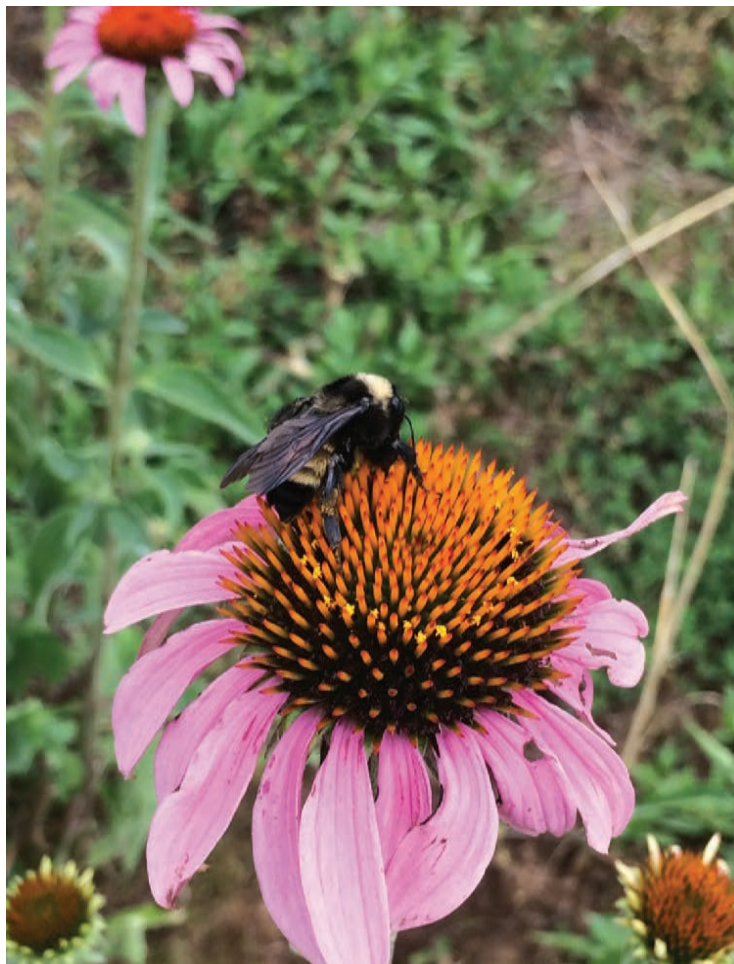


Figure 2.

Even in the presence of grazing, some of the native plants are able to produce flowers that provide a food source for at-risk pollinator species. Credit, J. Richwine.

Table 1.

<u>Category</u>	<u>Species</u>	<u>Perennial</u>	<u>Establishment</u>
Forbs	Black-eyed Susan	Biennial	Good
	False sunflower	Yes	Good
	Lanceleaf coreopsis	Yes	Good
	Maximilian sunflower	Yes	Fair
	Plains coreopsis	Annual	Good
	Purple coneflower	Yes	Good
	Upright prairie coneflower	Yes	Good
	Legumes	Dixie trefoil	Yes
Illinois bundleflower		Yes	Good
Partridge pea		Annual	Good
Purple prairie clover		Yes	Poor
Showy tickrefoil		Yes	Fair

The biggest challenge to have developed is controlling undesirable weeds within the pastures. Carolina horsenettle, for instance, has become common. Herbicides can readily control this and other weeds, but they will also eliminate the desirable species. For now, we are letting everything grow together to see how this battle between a diverse pasture and a weedy pasture unfolds.

Ownership of Forest Land in Tennessee, It Is a Changing or Is It Really Changing?

Dr. Wayne Clatterbuck

According to the most recent statewide land-use statistics in Tennessee, about 54% of the land or about 14.4 million acres is classified as forests. About 12% (1.7 million acres) of the forest land is in public lands (Cherokee National Forest, Great Smoky Mts., Big South Fork, State Parks, State Forests, State Wildlife Management Areas, military installations such as Fort Campbell, TVA, Corp of Engineers, etc.) and about 88% or 12.8 million acres are owned privately by individuals, partnerships and corporations that do not own wood processing facilities. Wood-using industry which once owned more than 1.5 million acres 15 years ago has divested their forest land base and presently controls less than 100,000 acres. With some 450,000 private forest ownerships in Tennessee ranging from a few acres to thousands of acres, most private tracts are fairly small averaging 25 to 30 acres. Recent forest inventories indicate that the total amount of forest land in Tennessee has not changed substantially from 1999. However, the amount of forest land in the different ownerships is changing.

Since 2000, most privately-owned lands (larger tracts) and particularly forest industry-owned lands, have been sold to others. While some of these lands have been bought by state and federal governments, the majority has been sold to timber investment management organizations (TIMOs) or to non-profit organizations for conservation purposes. The more-valued, prime real estate (considered higher and better use economically) is partitioned and sold for development. The history of these TIMOs is short-term management (usually less than 10 to 15 years), selling the land as land prices escalate and profits can be made.

What is the impact on forest land in Tennessee? Large blocks of land are being sold, harvested, then partitioned, and sold into smaller tracts. Without the larger blocks of forest land of the corporate forest landowners, hunters will need to find their hunting enjoyment on smaller tracts of land owned by private individuals. Hunting opportunities will probably be fewer because of the varied objectives of private landowners. Ecosystem services and management are much more difficult to achieve in smaller ownerships where land is managed as tracts instead of larger ecosystems.

Alternative land uses are being implemented which will take some forest land out of production, more or less permanently. As more urban dwellers and retirees find rural Tennessee a hospitable place to live, the population is increasing and more land is needed for expanding development and infrastructure. This increased development was predicted in the Southern Forest Resource Assessment conducted by the Forest Service in 2002, and Tennessee was one of the prime centers of conversion of forest land to other uses. Although some forest land is diverted to non-forest uses, primarily development, concomitantly, some former non-forest

land, primarily abandoned agricultural land, is being newly-classified as forests, compensating somewhat for land being withdrawn from forests.

Even with the changing ownerships of forest, will there be that much effect on forest land use or management? The TIMO's interest is to provide a profitable return to their investors. Most of the TIMOs have fiber arrangements with the mills. Forest management might actually be more proactive to achieve better returns. Their interest is to be wise stewards of the land because they are planning to divest the land and forest at a profit. So, even with the ownership changes, forests will probably be retained except for those tracts that are considered for better and higher economic uses.

One concern that I have is whether private landowners (both large and small) will be able to keep their land in forests considering more highly-valued uses and economic pressures. Generally, timber has paid all the bills because it has a monetary value. However, as timber markets become more scarce, property taxes and management costs increase and considering the time required to grow a forest product, timber may not be a profitable enterprise without realizing benefits from other sources. Society realizes many benefits from private forests: clear water, clean air, recreation values, pretty views that we all take for granted, but the landowner is not compensated for these values. Known as ecosystem services, there may be a time in the near future where these benefits must be accounted for to keep land in forests. A few attempts with carbon credits and the reduction or elimination of estate taxes are steps in the right direction. What is a pretty view or clean air and water worth? Today, society is relying on landowners to provide these benefits free-of-charge. To keep land in forests, these intrinsic values may need to have a monetary return to private landowners.

Opportunities abound for forest management and protection. Forests still cover more than 50% of Tennessee. Realizing that more than 88% of the forest land in Tennessee is privately-owned, how will landowners and non-landowners develop a vision for the conservation (wise-use) of our forest land for generations to come? The times are changing and our forests are changing and the environment is changing based on climate variability. This process must be open and all perspectives considered to ensure the forests of Tennessee are managed well and profitably. This includes having competitive markets for forest products. Generally, land is valued at its most valuable use. If forests cannot pay for themselves, then many of our forests will be converted to more highly-valued uses, which usually include development.

Guidelines for Marketing Forest Products

Wayne K. Clatterbuck

1. Follow a marketing procedure, do not merely sell your timber.

Selling is easy; just accept the first offer you receive. Marketing, on the other hand, involves selling in a competitive market to assure that you will get the best possible price for your timber. Conduct some planning and pre-sale work before advertising for competitive bids from prospective timber buyers. Approach your sale in a business-like manner. Refer to the following [UT Extension publication](#) for elements of a marketing plan.

2. Become knowledgeable about local market conditions, measurement units, and prices.

Check to see if there is an organized Forest Landowner Association in your county. If you have one, consider joining. Ask your neighbors about recent timber sales in the area. Take advantage of the marketing experience of other landowners. Be careful, however, when comparing prices because many special conditions such as timber size and species, logging conditions, markets and haul distance affect timber prices. Become familiar with the various sale procedures and measurement units for pulpwood, sawtimber, and specialty products that may be available like poles, piling, veneer, plywood, and crossties. Your county Extension office or Division of Forestry Area Forester can help you to learn about markets in your locale.

3. Get professional forestry help in preparing for a timber sale.

Seek assistance from a professional forester for your timber management needs just as you seek a doctor for your medical needs. Most foresters know through experience the markets available in the area for forest products, whether local, regional or export. A successful timber sale involved several steps. A professional forester can assist you in developing a timber sale plan that provides for the future as well as the present. Make personal contacts with foresters from the different companies, consulting firms or public agencies in your area and choose a forester that you trust and serves your interests. [UT Extension publication PB1860](#) explains timber sale procedures.

4. Know how much timber you have and where it is located.

The value of your timber cannot be determined if you do not know what types and species you have, where it is located, or how much (volume or number of trees). How long has it been since you walked over your timberland or checked the boundary lines? Are there any disputes about the location of the property lines between you and adjacent landowners? Hire a forester to determine by actual measurement the amount and approximate value of the timber before the timber is sold.

5. “Bank on the stump” until market conditions and prices are satisfactory.

Growing trees will not spoil on the stump and cost of storing them is relatively low. Timber does not have to be sold just because it is merchantable. Trees will add valuable growth each year, even when the market is unfavorable.

6. Obtain the best possible price.

Advertise for competitive bids on your timber, but reserve the right to refuse any and all bids. Fair market price is that price agreed upon by a willing buyer and a willing seller, neither being compelled to enter into the transaction. Advertising for competitive, sealed bids is the best marketing process. Do not go back and forth between two buyers bargaining with the other one's last price offer. They will usually find out what you are doing and stop bargaining all together.

7. Improve the condition of your timber stands with the harvest.

Obtaining the most money should not always be the primary objective in making a timber sale. Every merchantable tree could be cut on your property rather than making an improvement cut, but another sale may not be conducted for many years. Protect the future productivity of your timber stands, especially the remaining trees and sensitive areas like streams and erodible areas.

8. Maintain good records for your timber account on all sale activities and costs.

As a forest owner, three permanent record keeping accounts should be maintained: timber, land, and equipment. Capital expenditures for timber purchases and improvements are the cost basis for the timber account. A portion of the timber cost basis can be recovered through depletion each time timber is sold. A current inventory of all your timber is needed prior to a timber sale to determine the amount of depletion per thousand board feet or per cord that can be recovered. Site preparation and tree planting costs can be more quickly recovered using Federal Reforestation Tax Incentives. For more information on record keeping, consult the following [UT Extension publication](#).

9. Coordinate the efforts of a forester and an attorney in drafting a timber sale agreement or contract.

Every timber sale should have a written, binding agreement between the buyer and seller. A reputable buyer will not discourage you from seeking legal assistance. A legal agreement protects both the buyer and the seller from misunderstandings. Every contract will be different. There is no “standard” contract that covers every situation. Make sure the contract covers unusual circumstances, local conditions, or specific provisions that are desired by you and the buyer. An example of various aspects of a timber sale contract is at the following web link. <https://extension.tennessee.edu/publications/Documents/pb1607.pdf>

10. Check your tax situation before you make a timber sale.

Extra income from a timber sale could raise your taxable income dramatically.

Owners should plan for the additional taxes BEFORE spending the revenues from the timber sale. With recent tax law changes, capital gains tax rates are lower than ordinary income tax rates. However, landowners must satisfy certain criteria to qualify for capital gains treatment of timber sale income. Aside from reducing your tax rate, claiming timber incomes as a capital gain, can be useful for other reasons: (1) capital gains can be used to offset capital losses, and (2) capital gains are not subject to self-employment tax. Ask your attorney or accountant to help you plan ways to reduce your risk and tax burden- BEFORE you make a timber sale.

Having a successful and profitable timber sale takes planning. Be familiar with the information required and processes of timber sales to have a positive experience.

Tennessee's Champion Tree Program Update

Dr. Sharon Jean-Philippe

Robert Walker Fowler

Since 1940 a nonprofit conservation group named the American Forest has maintained a list of the largest documented, living tree specimens found across the continental United States. More than 800 trees, both native and naturalized, have received champion recognition since the program's inception.

In the 1970s, Tennessee launched its own Champion Tree Program in order to recognize large tree specimens which meet the American Forest standards. Since the onset of the program, more than 250 native Tennessee specimens have been identified, nominated, and recorded. The program tracks not only current champions, but runners-up and other notable specimens.

Despite the goals of an annual re-inventory, assessment, and vetting of new nominations, the Tennessee Champion Tree Program went through a stagnant period in which records were not updated. Then, in the summer of 2016, a collaborative effort was undertaken to reinvigorate the program. A temporary internship program was created for University of Tennessee undergraduate and graduate students whose educational interests aligned with the program. Through the resulting Champion Tree Internship, students had the opportunity to assist with the state re-inventory of champion trees, and with updating Tennessee records regarding current champion trees.

In the internships first year, UT students and faculty were able to digitize existing nominations and champion records. Champion tree pictures, measurements, and nomination processes were moved online. Interns were also tasked with locating and reassessing champion trees in the western and middle parts of the state. Of the 191 target trees from transcribed records, 37 trees were located. The summer internship concluded before champions from East Tennessee could be verified.

In the summer of 2019, the Champion Tree Internship was restored and students were able to finish verifying the presence and condition of champion trees from old state records. Of the target trees, 27 living specimens were found, remeasured, and retained on the updated champion tree records.

In 2020, with old the state records updated, UT interns were able to move forward with verifying newly nominated trees across the state. Out of 74 newly nominated trees, 27 were found and had their champion status verified. Often these nominated trees are lost to storm damage, development, and advanced age. Several nominations were found and verified as runner-up, but fell short of champion status.

The Champion Tree Internship is continuing to offer internship opportunities to interested students. As of 2021, students are working to update records with the newly minted champions, and sorting through new nominations in order to measure and confirm them this summer.

Setting up a Timber Basis Is Your Best Hedge Against Losing a Valuable Asset When the Storm Comes

Mr. Larry Tankersley

Several years ago I was visiting with a couple showing me their new property. They had recently retired to Tennessee and bought 75 acres of land that included 70 acres of woods with good stocking of a variety of trees including a large percentage of white oak.

It was obvious they were very proud of their purchase, and rightly so, the “spirituality index”; overall beauty and “feel”, was apparent.

Being myself, I couldn't help but mention that the timber was potentially valuable and that they should consider establishing a “timber basis” to document the purchase of the timber and its contribution to the lump sum price that they had paid for the property. The longer I discussed timber as a capital asset and setting up an account, using IRS Form T, the more uncomfortable they became. Finally they both insisted that they did not buy the timberland as an investment and that they would never consider selling the beautiful, spiritual trees. Of course, I agreed with their assessment of the beauty of the forest and encouraged them to enjoy and we parted after a nice hour or so.

Earlier this year, I received a call from the husband, informing me that the timber had recently blown down in one of the many tornadoes that Tennessee has sustain this year and that they would like to claim a casualty loss on their next tax return. After expressing my condolences for their loss, I ask if they had established the timber basis as I had suggested years ago. Unfortunately, he said that they had not. The conversation for me became difficult, because while we are allowed to claim casualty losses on timber damaged by a tornado, the claim is limited to the value they had paid for the timber years ago; without documentation of the timber basis, it is very difficult to complete IRS Form 4684, where the second line asks for the “adjusted basis” of the lost asset.

I mentioned to the caller that he is allowed by the IRS to calculate a “retroactive basis”, the value of the basis from several years ago, it is difficult and can be expensive to engage a professional forester to determine how much the trees were worth at the time of purchase and run the calculations to “allocate” the sales price between the timber and the land.

This is a tragic story of “you can't have your trees and the money that they are worth as wood products, too”. The difficult part is that trees ultimately pass from the earth, and as current owners we may or may not be around to witness this passing.

When to harvest a beautiful stand of trees is a difficult one. If you don't consider your forest to be a financial investment/commodity that is your prerogative, but when the blow over in a storm why do they suddenly become one? This is truly a conundrum that is best addressed with a management plan that discusses the various risks associated with your particular forest.

Enjoy your woods and let us know if we can help.

Don't Pay Too Much Tax on Timber Sale Income!

Mr. Larry Tankersley

Income from timber sales is considered the “disposition of a capital asset” and most tax preparers understand how to report capital gains. There are no specific tax people who specialize in timber taxes as it is not that common but a good tax preparer does understand that depending on the facts and circumstances of the ownership and sale, the income can qualify as a long-term capital gain. Ask your tax preparer if they understand capital gains and will file your return reflecting that. Schedule D is typically used and if the sale qualifies as a long-term capital gain be sure to calculate your tax bill accordingly. This may require use of the “Qualified Dividends and Capital Gains Worksheet” to separate your ordinary income from capital gains. Long-term capital gains are taxed at lower rates than your ordinary income. For most of us, the maximum tax on a long-term capital gain is 15% but folks in lower ordinary brackets may not be liable for any tax or maybe just 10%. Of course folks in the highest ordinary tax brackets may owe 20% on long-term capital gains.

Your timber income is considered “long-term” if you have owned it for more than one year prior to the sale or if you inherited it. Timber that is given to you as a gift can also be considered a long-term asset if you and the giver combined have owned it for more than a year. An example of this might be someone who owned the timber for eight months, gave it to you and you held it the remaining four months.

It is important to note selling logs is not the same as selling timber. Timber is still attached to the stump when the “contract” is finalized. Selling a load of logs is considered ordinary income, be sure to have an agreement for the timber sale before the trees are converted to logs.

For more information on Timber taxation see the fact sheet prepared by Dr. Linda Wang, a tax specialist with the U. S. Forest Service, Tax Tips for Forest Landowners for the 2018 Tax Year at: <https://www.fs.fed.us/spf/coop/library/taxtips2018.pdf>

Of course you are always welcome to give me a call at 865-974-7977.



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