



FORESTRY, WILDLIFE & FISHERIES UPDATE NEWSLETTER

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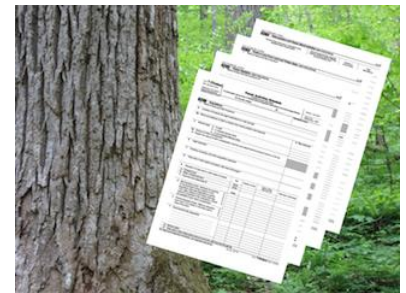
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FWF Faculty and Staff Directory
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Timber Tax Time!

Larry Tankersley, Extension Specialist, Forestry



If you sold timber last year, you'll need to figure out how to settle up with Uncle Sam. It is important not to pay too much; we have two ways to save on taxes from timber sale proceeds. First, if you inherited the timber or have otherwise owned it for more than 12 months, your proceeds should qualify for long-term capital gains treatment. What this means is that you should qualify for taxation at tax rates lower than the rate for you ordinary income. If your ordinary income puts you in the 10 or 15% tax rate then you don't owe any taxes for the long-term capital gain. Folks in the middle income brackets (25%, 28%, 33%, and 35%) owe 15% on their long-term capitals. Folks in the highest ordinary bracket (39.6%) are required to pay 20% on their long-term capital gains. Note your tax savings by filing your timber sale proceeds as long-term capital gains vs. ordinary income; 10 to 20% depending on your ordinary rate.

The second way we can save taxes on timber sale proceeds is by reducing the “gross” or total amount that you made by your “cost or other basis” this phrase on the tax form means that you can deduct any costs that you incurred in order to sell the timber such as legal fees or consulting fees. Consider that you paid an attorney \$200 and your consultant 10% of the timber proceeds on a \$30,000 for a total cost of \$3,200. In this case you would subtract \$3,200 from \$30,000 and only long-term capital gains taxes on \$26,800.

Your basis in timber is the same as a “basis” on other capital assets however many of us don’t establish that timber basis when the timber becomes ours. Your timber basis is the amount that you paid for the timber at purchase. The difficulty for most timber purchases is that we also buy the land the trees are sitting on. The value of the timber and the value of the land must be evaluated as separate assets and the purchase price “allocate” between the two. The University of Tennessee has a publication that discusses the price allocation procedure and other issues related to timber basis at the following web address:

<https://extension.tennessee.edu/publications/Documents/PB1691.pdf>

Returning to our previous example, if you purchased the timber a couple of years ago and determine that the amount you paid for the timber at that time was \$6,800. You would add this to the \$3,200 and subtract \$10,000 from the \$30,000 and only pay taxes at long-term capital gains rates on \$20,000.

These tax savings are designed by the Federal government to be incentives for growing more timber for the country and Tennessee. If you sold timber in 2014, you should discuss these incentives with you tax preparer. For additional information, Linda Wang with the US Forest Service has prepared “Tax Tips for Forest Landowners for the 2015 Tax Year”. Check it out at the following website:

http://www.fs.fed.us/cooperativeforestry/library/revised_taxtips2015.pdf

If you get a group together, I’d be proud to visit and conduct a workshop on Timber Taxation. Please do not hesitate to contact me at 865-974-7977 or ltanker1@utk.edu and I’ll do my best to help you out. Remember tax evasion is against the law, but tax avoidance is a great sport!

Resources

- [Tax Tips for Forest Landowners for the 2015 Tax Year](#)
- [USDA Forest Service Forest Taxation website](#)

Related URLs

- <http://www.timbertax.org>
- <http://www.sref.info>
- <https://extension.tennessee.edu/publications/Documents/PB1691.pdf>
- http://www.fs.fed.us/cooperativeforestry/library/revised_taxtips2015.pdf

“ILLEGAL” Logging – Are Things Getting Better?

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Illegal harvesting of trees in Tennessee is the rare exception. Due to the strong rule of law in the United States, most timber harvests here are perfectly legal. This is not the case in other countries around the world, especially in areas where deforestation is of particular concern such as the Congo basin region of Africa.



Illegal logging and deforestation are important global problems and governments around the world have been taking action to prevent the global trade in illegally-sourced wood products. In 2008, the USA's Lacey Act, which forbids the importation of endangered animal products, was expanded to include wood products that couldn't be verified as legally harvested. The European Union, Japan and Australia have since passed laws with similar intent.

The Lacey Act now requires that American companies provide evidence of legal harvest when they import wood. This can be a challenge when importing wood from countries considered at 'high risk' for producing illegal wood products, such as Indonesia, Brazil and Russia. There have been several high-profile enforcement actions of the Lacey Act, including ones that targeted Gibson Guitar and Lumber Liquidators. As a result, American wood importers are now much more aware of the need to verify the legality of their wood supply.

A recent report from the Union of Concerned Scientists¹ suggests that the Lacey Act amendment has substantially reduced the importation of questionable wood into the United States. They found that imports of lumber and paper have declined substantially in the years since the Lacey Act amendment, and thus the amount of illegally-harvest timber has gone down also. However, the *proportion* of the remaining imports coming from 'high-risk' countries has actually gone up in recent years. Of course, it is possible to have legally-sourced wood coming from 'high-risk' countries but it is difficult to know if the level of 'risk' in these 'high risk' countries is improving. Thus, the true impact of the Lacey Act in deterring international trade in illegal wood is difficult to determine, despite the significant impacts it has had on the way American wood importers do business.

The United States is an important contributor to the global trade in wood products, and its role is expanding. Wood products originating in the US are generally assumed to be legal. Governments around the world are trying to reduce imports of illegal wood – thus far with uncertain success – and this could be a competitive advantage for American exporters.

Reference:

The Lacey Act's Effectiveness in Reducing Illegal Wood Imports (2015).

Related URLs

http://www.ucsusa.org/global-warming/stop-deforestation/lacey-acts-effectiveness-reducing-illegal-wood-imports#.VqfXL_k4GUk

When Planting Bottomland Oaks, Landowners Should Examine the Soil

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Over the past several decades, federal incentive programs have encouraged the planting of bottomland oaks. Landowners are involved in these programs that are designed to protect water and soil resources and play a major role in sequestering atmospheric carbon. Programs such as the Conservation Reserve (CRP) and Wetlands Reserve (WRP) Programs have been marginally successful in bottomlands because conventional tree planting procedures are often followed – procedures that prove problematic in wet soils. High water tables, soil drainage and compaction, and regular flooding make selecting the right trees difficult. Even slight changes in topography (a foot or less) can have a dramatic effect on survival and growth of seedlings.

Researchers at the University of Tennessee were curious to see if there is a soil property that can be used to accurately predict which oaks would perform best on these sites. Specifically, we examined soil



“Soil samples showing mottled (left) vs. unmottled (right) soil”

“mottling.” Soil mottling occurs when soils are frequently wet for long periods of time. In water-logged soils oxygen moves through soil too slowly to aerate the soil. This causes the natural red colors in soil to become gray spots (or mottles). Gray spots are a good indicator of soil wetness. Foresters and Soil Scientists can use a soil probe to extract a plug of soil and evaluate the degree of mottling. The more mottling (or graying) in the soil, the wetter it will be. Sometimes mottling results from flooding, but more often, from a high water table. Not all trees can tolerate wet soils

A variety of species can be planted in bottomlands. However, due to their economic and ecological values, most landowners focus on oaks. There are a variety of bottomland oaks native to the U.S., but some of the more common ones are listed here.

Red Oak GroupWater oak (*Quercus nigra*)Willow oak (*Quercus phellos*)Pin oak (*Quercus palustris*)Nuttall oak (*Quercus texana*)Shumard oak (*Quercus shumardii*)Cherrybark oak (*Quercus pagoda*)Page 3**White Oak Group**Overcup oak (*Quercus lyrata*)Swamp chestnut oak (*Quercus michauxii*)Swamp white oak (*Quercus bicolor*)Bur oak (*Quercus macrocarpa*).

At the end of six growing seasons, we found the species that performed best on the water-logged soils include: Nuttall, overcup and pin oaks, followed closely by willow oak. The others were much more sensitive to wetness, and should only be planted as the soil drainage improves.

When landowners are considering planting bottomland oaks, they should evaluate their soil to determine the degree of mottling. Because internal drainage so greatly affects tree survival and growth, the importance of matching species-to-site in bottomlands is paramount. The oaks examined here not are native throughout the entire U.S. Rather they are more common in eastern and southeastern regions. Therefore, it is very important for landowners to seek localized knowledge of tree requirements for each species, long before planting begins. For that, first see a forester.

Related URLs

For a copy of the study results, refer to:

<https://utextension.tennessee.edu/publications/Documents/PB1800.pdf>

What is the Loud “Pow” Noise in My Woods?

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During cold winter months, when the sun is shining brightly, you can, on occasion, hear a loud “crack” sound in the woods. It might be startling, especially when you know that no one is trampling the woods – not a hunter, not a sledge and wedge, nothing. So what is this sound that resembles a sudden, very large caliber rifle shot?

Frost cracks! These peculiar sounds occur on warm winter days when the sun’s rays warm the bark and wood directly beneath the bark causing both to expand.



Photo credit: Bob Bricault, MSU Extension

However, deeper into the tree, where the warmth cannot penetrate, the wood does not similarly expand. Tension is the result and at weaker points, the wood splits. Depending on the extent of the tension, the sound can be quite loud. “Pow!”

Frost cracks most commonly occur on the south and west sides of a tree, where warmer afternoon rays strike. The cracks create a long, linear opening that originates near the tree base extending upward. Once occurring, cracks can be reopened with each successive event - closing during the growing season - but aggravating again in following winters. Though normally not harmful to a tree, the wounds can become an entry point for insects or pathogens. Lumber volume is little affected, but quality can suffer.

Reference:

(Earnst, D. 2012. The Woodland Steward).

Establishing Mixed Shortleaf Pine – Hardwood Stands

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Historically, before the advent of fire control and the Smokey Bear campaigns in the 1950s, shortleaf pine-hardwood forests were abundant on average to poor productivity sites of the Cumberland Plateau, foothills and side slopes of the Blue Ridge Mountains, and the Piedmont region. These forests are defined as having pine basal areas of 25 to 75% per unit area (Sheffield et al. 1989). Frequent fire created seedbed conditions of bare, mineral soil to allow successful seed germination and seedling growth and some control of understory and midstory vegetation.



An example of a shortleaf pine – hardwood mixed stand in Tennessee

Shortleaf pine-hardwood forest types have transitioned to predominantly hardwood forests due to natural succession, southern pine beetle outbreaks, and the absence of fire, which is often necessary to naturally regenerate shortleaf pine. Many of the former mixed stands do not have a shortleaf pine seed source to perpetuate the species. Thus, to create these species mixtures, artificial regeneration of shortleaf pine is necessary through planting.

Shortleaf pine-hardwood mixtures are attractive management options for landowners compared to other management practices such as pine plantations and pine savannas which tend to have high establishment and maintenance costs and require large acreages to be economically feasible. Most private landowners in the area who own less than 50 to 100 acres of land have a bias against pine plantations, whatever the species, and pine-hardwood mixtures landowners more species diversity and wildlife habitat options (Masters 2007) as well as wider markets for various forest products.

Pine-hardwood mixtures are a transitional forest type that will eventually succeed to longer-lived hardwoods (Olson and McAlpine 1973). Without disturbance to allow the shorter-lived pine to re-establish in more open canopies, the pine will diminish. The disturbance, whether burning, harvesting or weather-related, has to be timed with a good seed-producing year which occurs fairly infrequently. Good shortleaf seed crops occur every 3 to 6 years (Lawson 1990) and often do not coincide with the disturbance event.

Shortleaf pine seed do not remain viable from one year to the next. Thus, if exposed mineral soil and weather conditions are not favorable for seed germination when a good seed year occurs, the site often becomes overgrown and not receptive for seed in future years. The seed tree regeneration method for shortleaf pine often fails because favorable seed years and disturbances do not coincide.

Shortleaf pine is one of the few pine species with the ability to sprout from dormant buds located on a basal crook when the stem is killed (Guldin 1986). Burning will allow resprouting from the basal crook which may give shortleaf pine a growth advantage and a survival mechanism compared to other species. However, most hardwoods also sprout and can compete with shortleaf pine. The tradeoffs between pine and hardwood establishment, growth and development in mixed stands are poorly understood, even though these stands were widespread before fire suppression activities. Burning certainly had a role, but how burning impacted the mixed composition of these stands is not known.



Shortleaf pine seedling sprouts after a burn. Note the top-killed residual stem.

Research, information and procedures in establishing shortleaf pine-hardwood stands are inadequate, especially when a shortleaf pine seed source is no longer available. Thus, specific guidelines or recommendations based on research are absent on how to establish these mixed stands. A few of the questions that are being investigated include:

1. What is shortleaf pine seedling survival rate with prescribed fire? Does the time or season of the year affect sprouting and survival? Preliminary results indicate the survival rate of 1- to 3- year-old seedlings is 40 to 45 percent and that season of burning had little effect on survival (Clabo 2015). These results suggest that if burning is used to promote shortleaf pine seedling establishment, more of than half of the seedlings die and thus planting rates should be doubled to achieve the prescribed number of seedlings.
2. What is the best site preparation method to establish planted shortleaf pine among naturally regenerating hardwood species: burning, herbicide, or combinations of burning and herbicide? How does shortleaf pine grow and develop compared to hardwood sprouts of various species? Burning and herbicide treatments will have different impacts on different hardwood species.
3. Is it possible to establish shortleaf pine seedlings not only in even-aged stands with hardwoods, but in residual hardwood stands that have an open overstory component, i.e., creating a two-aged stand? How does shortleaf pine establish and develop in such conditions? Two-aged stands provide some overstory presence and mast potential for wildlife while establishing both planted pine and natural hardwood regeneration in overstory openings.

Although the answers to these questions at this time are not available in the literature, historically these stands were present and provided varied management scenarios based on ownership objectives. One of the most common scenarios was to have a mixed stand where the pine could be harvested early to provide an intermediate income leaving the hardwoods for longer rotations. However, the opposite could also take place, harvesting the hardwood for fiber markets and leaving the shortleaf pine for quality sawlogs or poles.

Mixed species gives landowners many options, especially on marginal or cutover forest land that is presently poorly stocked or with degraded residual trees of limited value or habitat.

A new University of Tennessee Extension publication (PB 1751) is now available at county Extension offices and online) for more specific information on establishment and management of shortleaf and other species of pine, especially in mixed pine-hardwood associations.. <https://extension.tennessee.edu/publications/Documents/PB1751.pdf>

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Masters, R.M. 2007. The importance of shortleaf pine for wildlife and diversity in mixed oak-pine forests and in pine-grassland woodlands. In: Kabrick, J.M., Dey, D.C., Gwaze, D. Eds. Shortleaf Pine Restoration and Ecology of the Ozarks: Proceedings of a Symposium. Gen. Tech. Rep. NRS-P-15. Newtown Square, PA: U.S. Dept. of Agriculture, Forest Service, Northern Research Station: 35-43.

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Sheffield, R.M., Birch, T.W., Leatherberry, E.C., McWilliams, W.H. 1989. The pine-hardwood resource in the eastern United States. In: Waldrop, T.A. ed. Proceedings of Pine-Hardwood Mixtures: A Symposium on Management and Ecology of the Type. Gen. Tech. Rep. SE-58. Asheville, NC: U.S. Dept. of Agriculture, Forest Service, Southeastern Forest Experiment Station: 9-19.

Factors That Impact Stumpage Prices

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Timber prices and pricing for stumpage or standing timber often confuses many landowners. Stumpage price is the price paid to the landowner for their timber. Mill price is the price mills pay for the logs delivered to the mill which includes logging, transportation and logging profit. Often we receive inquiries from landowners where stumpage price differs significantly between adjoining or nearby properties leading the landowner to assume that the price is unfair, not reflective of the timber present, or unethically derived. This assumption is usually not true because the timber on each property is quite different (even when nearby) varying in volume, quality, and species composition. Accessibility and past management or treatment also influence prices paid for timber. Market forces (supply and demand) at any particular time or location impact what can be paid for timber. If a mill has an oversupply of logs in their inventory, prices paid for additional volume are less while the opposite also occurs. When inventories are low and mills need more logs, they may pay higher prices. Timber buyers evaluate all these factors when determining a price that they will offer for timber

Outlined below are a few factors that impact timber prices. Landowners should be aware of these various factors when evaluating whether the price bid for timber is reflective of the timber present, current markets and costs of logging and transport from the stump to the mill.

Timber size: Large trees are more profitable to cut, log, and process in mills.

Generally, smaller trees take the same or greater amount of work to cut, load and transport to the mill. The price of pulpwood is much lower than price for sawtimber per same unit volume.

Timber quality: Tall straight trees with few limbs or knots are more valuable. Trees with defects such as fire scars, disease cankers, crooks, hollows, or knots lower value.

Volume/acre: Larger trees and more volume per acre are more economical to log than sparse, scattered trees.

Access: All-weather roads that meet weight limits for bridges and the road surface for transport of logs are less costly compared to building roads for access that could have weight concerns especially during wet weather.

Ground conditions: Wet stands/soil commonly found in drains and valleys may only be logged during dry conditions. Stands on higher ground are more well-drained and can be logged most any time of year.

Property boundaries: Marked property lines or timber that is marked requires less planning time than unmarked property lines. Lawsuits could ensue if property lines are not assessed properly.

Sale agreement: Sealed bids encourage competition between buyers and usually bring higher values than oral bids.

Harvesting: Larger, complete cuts are more economical for the logger. Partial cuts require more time and roads to avoid damaging remaining trees.

Time of year: Prices when log inventories are low or when demand for a product is greater usually increases prices. Prices for timber that can be accessed most any time of year are usually higher (more flexibility) compared to areas that are difficult to log during wet weather.

Market conditions: A product in demand usually has greater timber price. Excess wood in mill inventories may lower stumpage prices.

Special equipment: Loggers with newer, more specialized equipment may pay better prices because of increased efficiency of the equipment.

Knowledge of the factors affecting stumpage prices is necessary by both the seller (landowner) and the buyer to determine a market price. Some mills may have an ample supply of logs and pay a lower price compared to a mill that needs logs to supply an order quickly. Thus there will be some price variation between buyers. Competition sealed bidding where reliable timber estimates have been made usually generate the greatest stumpage process. A timber sale contract is good business to establish the conditions of a sale through a legal document. Thousands of dollars of timber should not be sold on a hand-shake agreement. We do not buy or sell vehicles or homes without a written agreement; timber should not be any different.



Why Use Native Warm-Season Grasses? Heifer Development

Patrick Keyser, Professor, Native Grasslands Management

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In September (2015), I addressed the question of *why* producers might want to use native warm-season grasses in stockering and/or backgrounding programs. I want to continue on this theme of *why* we might use these grasses in forage programs. Because native grasses produce large amounts of forage and strong gains at a low cost, they can be a good tool for heifer development. After all, this very important - and expensive - phase of cattle (beef and dairy) production is dependent on good quality feed, which makes up the bulk of development costs.

Achieving adequate gains from weaning until puberty is a key to successful heifer development. Depending on weaning weight and birth date of the calf in question, average daily gains (ADG) need to be 1.4 – 1.8 lb per day. Keep in mind though, that gain does not have to be consistent throughout the weaning-breeding period. So if feed is available that provides low-cost, accelerated gains for a portion of that time, it can make an important contribution to successful development. Likewise, during pregnancy, higher quality feed can supplement forages that produce lower gains.



Recent research at UT documented that bred dairy heifers (9-11 cwt) grazing native grasses had ADG of 1.64 lb on a big bluestem/indiangrass blend (105-day grazing season), 1.54 lb on switchgrass (61-day basis), and that bred beef heifers had

ADG of 1.15 lb on eastern gamagrass (112-day grazing season). Clearly, these gains are acceptable for the development period, except that eastern gamagrass, because of its lower gains, would be more appropriate during pregnancy. It is worth noting that for these three trials, no nitrogen was applied to any of the pastures, making the cost of gain very minimal.

In fact, in an economic analysis conducted on one of these studies (the other two are still ongoing), cost of gain was \$0.40 per lb for the big bluestem/indiangrass blend and \$0.31 per lb for switchgrass. A separate analysis compared the cost (per head per day) of grazing these grasses to rations based on traditional commodity feeds that provided ADG comparable to the native grasses. The cheapest alternative was \$1.96 for corn silage with dry distillers' grains. Corn silage with soybean meal (the most expensive) was \$2.94, while the native grasses were considerably cheaper at \$0.48 for switchgrass and \$0.79 for the bluestem blend. The low cost of gain on native grasses resulted from their relatively high carrying capacities and rates of gain combined with limited input costs. In addition to the good average daily gains and low cost of that gain, native grasses offer other advantages for heifer development. They are very drought-tolerant perennials and thus, can be reliably available each summer. Also, they do not have any of the negative health or reproductive implications of endophyte-infected tall fescue, which may be most pronounced during summer. Together, these entire factors make native grasses a good option for heifer development in the Mid-South.

Related URLs –

For more information see *Grazing Native Warm-season Grasses in the Mid-South* (SP731-C) at <https://extension.tennessee.edu/publications/Documents/SP731-C.pdf>

Visit our website at <http://nativegrasses.utk.edu>

Why Use Native Warm Season Grasses? ... Stockering and Backgrounding

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I have provided a number of tips and pointers on how to best establish and manage native grass forages over the past two years in this space. I want to switch gears and talk about why we might want to consider using native grasses in a forage program. Although there are many reasons to consider using native grasses, I want to focus on their role in a stockering and/or backgrounding program.

Although the preponderance of fescue-belt producers have spring calving herds, there are many that have herds that calve in the fall. Those fall born calves are typically weaned in mid-spring, perhaps early May. The starting point of this grazing period corresponds very well to typical weaning dates for fall-born calves. At that point, producers have an excellent opportunity to capture additional weight on these animals before marketing them.

Such backgrounding can be readily achieved with native grasses. Studies at University of Tennessee Institute of Agriculture (UTIA) in recent years indicate that for the 112-day summer grazing season (early May – late August), native grasses can average rates of gain of 1.75 – 2.12 lb per day on weaned steers (590 lb starting weight). The lower figures are based on switchgrass and the higher number from indiangrass and big bluestem. Eastern gamagrass has not produced gains above 1.65 lb per day for steers and is not as desirable of a forage for stockering/backgrounding for that reason.

Based on the data from these grazing studies, economists at UTIA have evaluated the trade-off in holding these steers on native grass pastures versus marketing them after weaning in May. Because the rate of gain is high and the cost of grazing is low (approximately \$0.31-0.37 per lb of gain) with natives, net returns are positive. This is despite reduced per unit prices for the larger steers (about 825 lb in late August) and the typical declines in late summer markets. Producers could sell the stockers at any point in the summer depending on markets. Early-season rates of gain with natives are higher still (2.2 – 2.7 lb per day) and producers could still experience favorable returns in selling calves after only 45 or 60 days of grazing natives. For instance, selling the calves in late

July or early August (about 84 days) would capture most of the gain off the native pastures and would avoid declining markets in late August/September.

Because these native grasses are perennials, they are reliably available each spring and summer. Furthermore, because of their high drought tolerance, producers could count on forage even in dry summers. Of course, stocking rates or duration may need to be reduced, depending on the severity and duration of the drought. The low cost of grazing and maintaining these summer forages combined with the high rates of gain they produce make them a good investment for producers interested in summer stockering and/or backgrounding.

Related URLs -

For more information see *Grazing Native Warm-season Grasses in the Mid-South* (SP731-C) and *Economic Implications of Growing Native Warm-season Grasses for Forage in the Mid-South* (SP731-E) at

<https://extension.tennessee.edu/publications/Documents/SP731-C.pdf>

<https://extension.tennessee.edu/publications/Documents/SP731-E.pdf>

Visit our website at <http://nativegrasses.utk.edu>

Wildlife Management for February and March

Craig Harper, Professor, Wildlife Management

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Wildlife Notes for February

White-tailed deer are shedding antlers

Great horned owls have nestlings

Bald eagles are nesting

Red-tailed hawks are nesting in February and March

River otters are born in February and March

Eastern gray squirrels are giving birth

Opossums are born and cling to their mother's pouch

Coyotes are breeding

Bluebirds and wood ducks are looking for nesting sites

Tiger salamanders may be seen searching for ephemeral ponds in February and March

Spring peepers and chorus frogs are calling

Wildlife Notes for March

White-tailed deer finish shedding antlers

Cottontails begin 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

Purple martins begin to arrive

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

Habitat Management for February and March

February and March 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 less than desirable
- overstory should be thinned to allow at least 20% sunlight to stimulate understory

Burn old-fields and other early successional communities 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 Chapter 6 in *Native Warm-Season Grasses: Identification, Establishment, and Management for Wildlife and Forage Production in the Mid-South*, PB 1752, for additional information on managing old-fields

Disk fields to encourage fresh forb and grass growth and improve the structure at ground level for many wildlife species, such as young quail and turkeys

- disking is especially good to set-back succession if you can't burn
- disk one-third to one-fourth of the field in a block or strips, rotating such that each block is disked every 3 – 4 years
- blocks are better than relatively narrow strips—makes it more difficult for predators to find nests
- if you disk strips, they should be **at least** 30 feet wide

Plant firebreaks for additional forage, seed, bugging opportunities

- alfalfa, clovers, and annual lespedezas can be planted in mid- to late February
- warm-season plantings can be completed later in May
- see *A Guide to Successful Wildlife Food Plots: Blending Science with Common Sense*, PB 1769, for seeding rates and additional information

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

- for best results for wildlife, **disk the area after mowing** to facilitate litter decomposition, improve travel for small wildlife and stimulate the seedbank
- if you must mow, do so in late March, but **not during the growing season** or you'll disrupt nesting and reduce fall recruitment of wildlife that use early successional cover in summer

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

- spraying now is not as effective at killing these grasses as spraying in October/November, 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, 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 Chapter 5 in *Native Warm-Season Grasses: Identification, Establishment, and Management for Wildlife and Forage Production in the Mid-South*, PB 1752, for additional information on eradicating perennial cool-season grasses and other undesirable species

Plant trees/shrubs for wildlife

- where lacking, hedgerows can be established across large fields with soft-mast bearing trees and shrubs
- planting a small orchard (6 – 12 trees) at end of hedgerows or in “odd” areas is a good idea
- apple, pear, crabapple, persimmon, wild plum, elderberry are good choices
- refer to *Improving Your Backyard Wildlife Habitat*, for a list of other trees and shrubs to consider

Fertilize/prune trees/shrubs for increased soft mast 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 FSI activities

Finish Forest Stand Improvement (FSI) activities by early March

- stimulate growth among oaks, beech, blackgum, cherry, persimmon, and other mast producers by killing surrounding competitors
- girdle unwanted trees and spray wound with imazapyr or triclopyr
- use a 20% solution of Arsenal AC (imazapyr) or a 50% solution of Garlon 3-A (triclopyr) with water
- work should be finished by early March; later in March and April is not a good time to complete FSI because herbicide may be washed out of girdle when sap is flowing

Erect boxes for wood ducks and bluebirds

- 1 box per 100 yards of shoreline is adequate for wood ducks
- clean-out old wood duck boxes and replenish fresh wood shavings (about 4 – 6 inches)
- screech owls and gray squirrels may use the boxes through winter
- repair/install predator shields to guard against raccoons and snakes if necessary
- in Tennessee, wood ducks begin searching for nest sites in late February / March
- bluebird boxes should be no closer than 80 yards apart
- up to 9 or more bluebirds may roost in a single bluebird box on cold nights

Build brushpiles from thinned trees and pruned limbs

- put large limbs on bottom and small limbs on top for crevice space and overhead protection
- this is best done and the effect greatest along the edges of and within high-quality early successional areas (native forbs and grasses with scattered brambles and shrubs) where good cover already exists
- building brushpiles along a woods edge adjacent to a tall fescue pasture or hayfield may do more harm than good because all rabbits present will then be isolated for predation

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 *Improving Your Backyard Wildlife Habitat*, 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 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.

Plant perennial clover and alfalfa plots

- ladino white clover, alsike clover, red clover, and alfalfa do well when sown in mid- to late February
- refer to *A Guide to Successful Wildlife Food Plots: Blending Science with Common Sense*, PB 1769, for information on planting and soil amendment

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

- most cool-season weeds are best killed when sprayed before they reach 3 inches tall
- refer to *A Guide to Successful Wildlife Food Plots: Blending Science with Common Sense*, PB 1769, for herbicide recommendations
- always read and follow directions on the herbicide label

Fertilize cool-season forage plots if needed in February

- those containing wheat or oats that look pale will respond to 30 pounds of N per acre
- fertilize perennial forage plots with P and K according to soil test recommendations

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 now prevents harming dormant desirable species, which are still dormant
- 5% solution of Garlon 3-A or 1% solution of glyphosate herbicide works well for honeysuckle
- 1% solution of Arsenal AC works 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; ALSO, stems may be treated with basal application of 20% Garlon-4 with commercially available basal oil as a penetrant

Establish salt/mineral licks for white-tailed deer in March

- this is especially helpful to attract deer to sites and get pictures of deer with infrared-triggered cameras
- do not expect increased weights, reproductive success, or larger antlers following establishment of mineral sites; no study has indicated mineral supplementation will influence these in wild deer

Begin drawdown of fields flooded for waterfowl in mid-February and complete by late March

Wildlife Damage and Population Management Notes for February and March

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

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

Moles also mate in February, so increased activity may be evident

- "molehills" are created as quart-sized chambers and deep runways are excavated where young may be born and raised
- moles are born (litters of 2 – 5) March – June; they are independent at 1 month

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

Repel large winter flocks of blackbirds and starlings

- 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; you will have to scare them off at least 5 or 6 nights in a row before breaking their habit

Vultures can present a real problem for calving by plucking out eyes and eventually killing calves

- try scare tactics as soon as vultures appear during calving season
- contact USDA-Wildlife Services (toll free 866-487-3297) if problems continue; they can give you a referral to the US Fish and Wildlife Service for depredation permit if warranted

Refer to *Managing Nuisance Animals and Associated Damage Around the Home*, for additional wildlife damage management information.

URL's

Native Warm-Season Grasses: Identification, Establishment, and Management for Wildlife and Forage Production in the Mid-South, PB 1752

<https://extension.tennessee.edu/publications/Documents/PB1752.pdf>

A Guide to Successful Wildlife Food Plots: Blending Science with Common Sense, PB 1769

<https://extension.tennessee.edu/publications/Documents/PB1769.pdf>

Managing Nuisance Animals and Associated Damage Around the Home, PB1624

<https://extension.tennessee.edu/publications/Documents/pb1624.pdf>

Improving Your Back Yard Wildlife Habitat, PB1633

<https://extension.tennessee.edu/publications/Documents/PB1633.pdf>

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