

CU IN THE WOODS

Clemson Extension Forestry and Wildlife Newsletter



Repurposing Your Old “Live” Christmas Tree to Benefit Wildlife

By Susan Lunt and Tancey Cullum Belken

After the holiday season, you may be wondering what can be done with your discarded “live” Christmas tree. There are several options to repurpose your trees to benefit wildlife, your yard, and even your pond.

The first step in re-purposing your Christmas tree is to remove tinsel, ornaments, or any other synthetic materials that have been applied to the tree.

In the Yard

Living habitats require food, water, and shelter. Adding an old Christmas tree to your yard or pond will benefit the environment by adding organic matter, shelter, and shade, and reducing erosion.

Re-Plant or Intact

If your tree still has roots and a bulb, it may be possible to re-plant it as a live tree. To determine if the tree will thrive in the chosen site conditions, assure it is the right plant for the right place. These trees have the best chance of flourishing in South Carolina: Arizona Cypress (Blue Ice, Carolina Sapphire, and Clemson Greenspire), Deodar Cedar, Eastern Red Cedar, Pine (Eastern White, Scotch, and Virginia), Leyland Cypress, and Murray Cypress.

A tree without roots can still be planted to attract wildlife. A standing dead tree, called a snag, can provide habitat or food to many wildlife species, from raccoons to birds and everything in-between. The snag should be planted far away from vehicles or play areas for children and pets as the decomposing tree will eventually fall.

Mulch or Compost

A tree can also be shredded to create mulch by using a woodchipper or other heavy equipment, which may not be readily available. Mulch can also be used in your compost pile as an additional form of organic material. If you opt to mulch your tree, check with your local government agencies, as many have community mulch centers that will collect trees and create mulch for free for you or others in your community to pick up at a later date.



Figure 1. Christmas tree drop-off location in Pickens County. Photo credit: Susan Lunt, Clemson University 2021.

UPCOMING EVENTS

Forestry Taxes Webinar Series

The one-hour sessions will be on Tuesdays: Jan. 18, 25, Feb. 1, 8, & 15 at 1pm.

You can sign-up for just one or all five.

To register- <https://www.surveymonkey.com/r/ForestryTaxWebinars>

Master Tree Farmer

Coming Soon! This will be an on-demand digital Master Tree Farmer Series that consists of seven different modules. Be on the lookout for registration details soon.

4-H Forestry Clinic

February 26th at Harbison State Forest. Open to high school-age youth. See article on page 8 for more details.

Women Owning Woodlands Webinar Series

Webinar dates will be: Jan. 25th, Feb. 22nd, March 22nd, and April 26th. Contact Janet Steele for more information- jmwatt@clemson.edu

Conservation Easement Workshop

February 2022

Contact Janet Steele for more information- jmwatt@clemson.edu

Chainsaw Safety and Training

March 19, 2022

Sandhills State Forest

Contact Janet Steele for more information- jmwatt@clemson.edu

CFE Opportunities:

You can find a list of current CFE opportunities at this website:

https://www.clemson.edu/extension/forestry/continuing_education/index.html

More Events:

You can find a list of more events at this website:

<https://www.clemson.edu/extension/forestry/events.html>

Check out our blog page for past articles and other great forestry and wildlife information- blogs.clemson.edu/fnr

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Repurposing Your Old “Live” Christmas Tree to Benefit Wildlife Cont.

In the Water

With special considerations and permission from the pond owner, you can recycle your Christmas tree by sinking it to create a fish habitat, often called a fish structure. In water, a tree can become a food source and provide a sanctuary and protective structure. Creating a habitat for fish is beneficial for anglers or anyone who wants a healthy pond ecosystem.

Considerations and requirements

Sinking old Christmas trees is not for every pond. There are a few requirements and considerations to make before deciding to sink a tree or a group of trees into a pond.

Pond type

Stormwater ponds that receive runoff in order to treat the water before it reaches rivers and streams are not designed for fish structures. They not only reduce the amount of water the pond can hold, but can also add nutrients into an already nutrient-rich environment. Recreational fishing ponds are ideal candidates; however, algae and other aquatic plant growth must be under control before sinking the tree.

Design and Implementation

Do not place the tree in areas with significant boat traffic or areas where people or pets may swim. Consider placing a visible marker in the area to warn visitors of a potential underwater hazard. Know the type of fish you want to attract and where other attractors are located. Trees sunk in areas with a mucky or muddy bottom may sink into the substrate over time; rocky or sandy bottoms will be more stable.

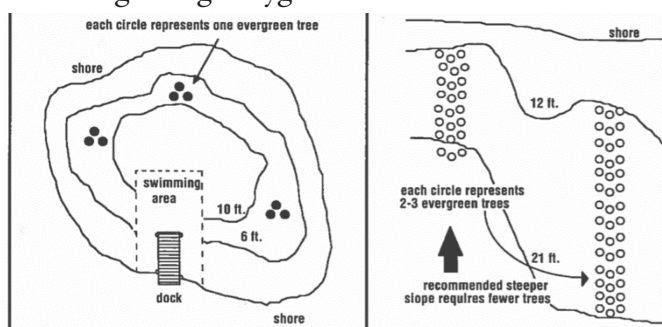
Depth and Spacing Recommendations:

Small Ponds

- When sinking multiple trees, small groups of 3-4 trees at varying depths are most effective.
- The depth can vary from 6 – 10 feet.
- Structures placed less than 6 feet deep can run the risk of getting too warm.

Large Ponds and Reservoirs

- When sinking multiple trees, long lines of small groups are more beneficial. (See figure 2)
- Deeper ponds and lakes allow for deeper trees, 10-20 feet, but take care not to place them too deep.
- Water deeper than 20 feet runs the risk of not having enough oxygen for fish to thrive.



Public land notice: SCDNR asks the public not to add their own fish structures in publicly managed lakes; in some lakes it is against the law without a permit. Instead, donate trees to identified sites located across the state to be placed by SCDNR biologists.

How to Sink a Tree:

Always check with your local government agencies for locations, permissions, allowed uses, and any fees. If you do not have plans for your tree, consider donating it so others can take advantage of this resource and use it to benefit wildlife.

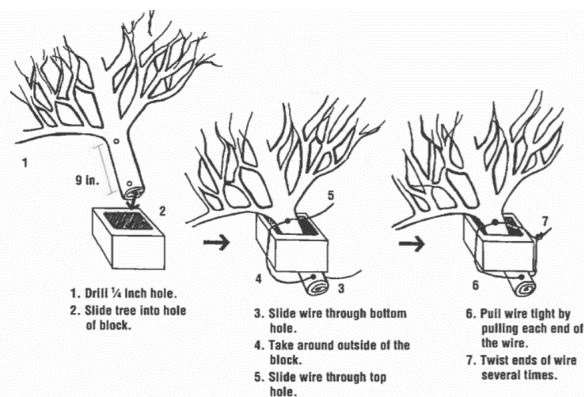


Figure 3. Attachment of concrete block to evergreen tree. Used with permission of Ohio State University Extension.

Resources

- [HGIC Factsheet 1754: Repurposing Your Old “Live” Christmas Tree To Benefit Wildlife](#)
- [HGIC Factsheet 1750: Selecting A Christmas Tree](#)
- [Carolina Yards Plant Database](#)
- [HGIC Factsheet 1020: Pine](#)
- [United States Department of Agriculture](#)
- [HGIC Factsheet 1001: Planting Trees Correctly](#)
- [HGIC Factsheet 1600: Composting](#)
- [HGIC 1604: Mulch](#)
- [Placing Artificial Fish Attractors in Ponds and Reservoirs](#)
- <https://www.dnr.sc.gov/admin/regions.html>

Citation

Bassett, Charles E. “Use and Evaluation of Fish Habitat Structures in Lakes of the Eastern United States by the USDA Forest Service.” *Bulletin of Marine Science*, vol. 55, Sept. 1994, pp. 1137-1148.

Establishing, Maintaining, and Protecting Property Boundaries

By Janet Steele

The winter months are a good time of the year for landowners to ensure that their property boundaries are well maintained and adequately marked to prevent trespassing and poaching and ensure that management activities will not encroach on adjoining ownerships. Newly acquired property may need a survey to relocate property corners and mark property lines. Once marked, yearly maintenance is a good practice for reducing future expenses associated with boundary reestablishment.

The first step in knowing where property corners and boundary lines are located is to ensure you have a copy of the deed for your property. A deed is proof of ownership for any parcel of real estate, whether a home on a residential lot or a tract of land of any acreage. Within the deed, a legal description of the property is required. The description can be written in the deed using metes and bounds, which describe the property boundary in directions and distances between marked points such as established irons or other landmarks like rocks or fence corners. The deed can also reference a new or previously recorded plat of the property.

A plat is an illustration of the property with the directions and distances between property markers annotated. Other features a plat will show may include roads, water features, structures, and adjoining ownerships. The legend on a plat lists what each icon on the map represents and will have a map scale and the date that the plat was drawn. Plats are often easier for a landowner to use than a metes and bounds description found in a deed to locate their property boundary lines and corners since plats illustrate the property layout and features.

If a property needs to be surveyed to reestablish or confirm boundary lines and corners, landowners can find a licensed surveyor in their area by visiting the South Carolina State Board of Registration for Professional Engineers and Surveyors on the SC Labor, Licensing and Regulation website at <https://llr.sc.gov/eng/>. Boundary surveys are usually done at a rate per linear foot of boundary line, at a per acre rate, or an hourly rate.

Expenses will vary depending on how accurate the current survey is, how much research needs to be done to find the documentation necessary to survey the boundary, how difficult the site is to traverse, how much vegetation must be cleared to complete the survey, and how many stakes the landowner wants to be set along the property line between corner markers. Old fences should not be assumed to be accurate locations of property lines.



Large PVC pipe is driven in the ground over a corner iron. Photo credit: Janet Steele, Clemson Extension.

The best time to become familiar with and mark a property boundary is right after a recent survey. Evidence of the surveyor's lines between boundary markers will still be fresh. The lines can be marked by tying flagging in trees at intervals, and corner markers can be made more visible by placing pipes over or adjacent to the markers. Protecting corner markers with pipe will also ensure that they are not moved or damaged during land management activities. Orange and yellow flagging is visible during most months of the year but may be more challenging to spot with leaf color change during the fall. Flagging will also degrade over time and need to be replaced periodically. Painting the surveyor's boundary markings with paint is more labor-intensive but will last much longer than flagging.

The current state trespassing law is found in the SC Code of Laws Title 16-11-600 (<https://www.scstatehouse.gov/code/t16c011.php>). The law states that a property owner or tenant must "post a notice in four conspicuous places on the borders of such land prohibiting entry" for trespassing fines and penalties to be enforceable when someone enters the property without permission. The most commonly used method for posting is with signs stating, "No Trespassing," "Private Property," or "Posted". The signs will periodically need to be replaced due to weathering. A bill referred to as the "purple paint law" is currently being considered in the SC General Assembly. It would amend the trespassing and posting law in the state so that a property boundary clearly marked in purple paint according to specific requirements would be an acceptable means of posting a property against trespass. This law has already been enacted in about 15 states.

The laws relating to poaching can be found in the SC Code of Laws Title 50-1-90 (<https://www.scstatehouse.gov/code/t50c001.php>). The enforcement of this law does not require that the property be posted, but posting can strengthen a case since it indicates the landowner gave a warning that the property was not to be entered.

The SC Department of Natural Resources sponsors a program for landowners and their representatives or land lessees called Property Watch (<https://www.dnr.sc.gov/propertywatch/index.html>). When a property is enrolled in this program, SCDNR law enforcement officers can prosecute any trespass violations on the property in the landowner's absence. For a small fee, landowners in the program can order Property Watch signs to post at their access points, property corners, and along the property line.

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Rebar is a typical marker for property corners. It often has a plastic cap on top stamped for the surveyor who set the iron. The type of marker will be noted in the deed description or in the plat legend. Photo credit: Janet Steele, Clemson Extension.

Establishing, Maintaining, and Protecting Property Boundaries Cont.

Absentee landowners have the most significant risk of trespass and poaching violations on their property. Securing access points with locked gates and posting these areas can be a deterrent. Regular maintenance of the property, such as mowing and clearing downed trees, also indicates that the property is not neglected and will not be an easy target for unlawful use. Also, asking neighboring landowners to check periodically on the property can reduce trespassing since violators will know someone is watching for signs of illegal activity. Finally, leasing the property to a hunt club can increase property activity year-round and ensure the property is being utilized during the times of the year when poaching violations are most significant.



Property access that is un gated, not maintained, and not posted can encourage trespassing and poaching violations. Photo credit: Janet Steele, Clemson Extension.



Congratulations to Clemson Extension Forestry and Wildlife Agent Tom Brant on his retirement!

We wish him all the best in his future adventures!

Tractors and Implements for Forest Landowners- Part 2: Ground Contact Implements

By Stephen Pohlman

In the first part of our series, we covered tractors for forest landowners and discussed specific options and specifications before making a purchase (<https://blogs.clemson.edu/fnr/2021/10/21/tractors-for-forest-landowners/>). In part 2, we will cover many of the common ground contact implements that forest landowners should have and some of the intended uses of such an implement.

Some of the most common things to look for in all implements for rough, unimproved ground applications, like found on forest land, is the size and thickness of the steel used. Also, pay attention to implements that have added gussets and other braces.

An implement's hitch is measured by Category, with Category 1 being the most common for 20-40hp tractors. Thus, make sure you buy implements that fit your tractor and will not need special bushings or other adapters for hooking up.

The disc harrow comes to mind first when talking about ground contact implements. Disc harrows are usually bought in widths just big enough to cover the tractor's rear tire tracks. However, some tractors have high enough horsepower (HP or hp) to pull widths greater than the rear tires. Typically, a 30hp class will pull a 5' wide, a 40hp class will pull a 6' wide, and a

50hp and greater stands the ability to pull even larger. As mentioned in the first article (part 1), keep in mind your operating widths and the limitations of things like tree row spacing, etc. When making a purchasing decision, a few things to look at are: disc count per axle, ease/ simplicity of adjusting the disc angle, style of bearings being used, is the implement Quick-hitch compatible if you are using one, steel thickness, and frame size and bracing. It's not uncommon for a less expensive disc harrow to lack one or more of the above-mentioned features.



Disc harrows are usually bought in widths just big enough to cover the tractor's rear tire tracks. Photo credit: Stephen Pohlman, Clemson Extension.

The number 1 job of the disc harrow for forest landowners will typically be planting food plots. They are also good for putting in fire breaks for controlled burns. The biggest thing to remember with a disc harrow is getting them to cut into the ground. Clay land can be a real challenge to penetrate, and sand soils can be a challenge not to cut too deep. Disc harrows are also great for smoothing ground that you may have had to use a different implement to turn the soil. Simply adjust the discs to a less aggressive angle and begin smoothing. One of

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Tractors and Implements for Forest Landowners- Part 2 Ground Contact Implements Cont.

the biggest mistakes I see people make with a disc harrow is operating the tractor too fast. Too slow is also not good either. Seat-time is the best way to learn the proper speed to operate the combination. By paying attention to soil type, tractor ability, and implement capability, you'll quickly get a feel for the speed that is perfect for getting the maximum turning of soil from your disc harrow. For me personally, with my tractor w/6' harrow and on my land, about 3-4mph is perfect (depending on soil moisture conditions).

One of my go-to plows is referred to by many different names. You will see people and businesses refer to it as an All-Purpose plow, spring-shank field cultivator, ripper plow, chisel plow, and spring-tooth scarifier.

I use it when I am operating in soils with compaction. Shank plows are typically bought by shank/tine count rather than width. It typically takes about 5hp/shank to properly pull one through the soil. Sandier soils can get

away with pushing the hp/shank rule, whereas clay soils need not exceed the rule. When planting food plots on heavy clay soils, I often use a shank plow with multiple passes to bust up the soil well. I then will put my disc harrow on and smooth everything out to make a perfect seedbed before thinking about planting. On sandier soils or soils that have good tith, one needs to pay attention to the depth of operation as it is not hard to sink one up to almost the frame of the implement and continue plowing with it. Shank plows can be used to plow fire breaks, but be especially careful when doing this. This is especially true if you are planning on making limited passes, as sometimes there may not be enough bare mineral soil exposed, and fire can hop-jump by spotting across the grass clumps.

Subsoilers are another great implement for the forest landowner. For most forest landowners, the single shank subsoiler is what most will have. Subsoiler performance is measured by 'how deep can they penetrate,' and depth penetration is greatly dependent on HP, traction, and soil type. Subsoilers are used for breaking up a hardpan condition. Most think of a hardpan condition as being a food plot issue; however, it can also be an issue when

dealing with tree seedlings. Typically, when discussing hardpan issues for seedlings, we are planting seedlings in old agricultural fields. Remember, if you are using a subsoiler for tree planting, plant beside the rip and NOT in the rip.

A 3-point hitch rototiller can be a great tool for food plot planting and fire break maintenance. These work especially well on land plowed for years with other implements (disc harrow, etc.) and are free of rocks and roots. The primary misuse of rototillers I see is people operating too fast with them. Rototillers work exceptionally well with hydrostatic drive tractors as the operator can feather the forward pedal. On gear selection tractors, typically, some of the slowest gears work best.

If you want a food plot to have a smooth appearance, a rototiller might be just what you need. Do keep in mind that the pulverizing of the soil into a light, fluffy medium to work with will also increase the loss of soil moisture. Keep this in mind when working sandier soils and/or droughty conditions.

One of the last implements I want to discuss before quickly running out of article space is a cultipacker. Serious food plot planters who really want their food plots to perform at peak ability will use a cultipacker. A cultipacker's primary job is to 'firm up' the soil after you have finished working (plowing) it. It offers a firm seedbed for planting. When soil conditions are not too wet, a cultipacker will roll a small amount of soil just in front of the rollers, causing a perfect condition for planting small seed plants (such as clover, rape, etc.). This provides just enough soil coverage for these small seed plants. Cultipackers are usually bought as wide as the tractor's rear tires or slightly wider. This is because the implement is not digging but rather applying slight down pressure across the top of the ground. Thus, HP needed is not as big of a concern; however, traction and tractor weight is.

In our next article, part 3, we will discuss implements and attachments for property maintenance.



This shank-style plow is referred to by many names such as an All-Purpose plow, spring-shank field cultivator, ripper plow, chisel plow, and spring-tooth scarifier. Photo credit: Stephen Pohlman, Clemson Extension.



A 3-point hitch rototiller can be a great tool for food plot planting and fire break maintenance. Photo credit: Stephen Pohlman, Clemson Extension.

Identifying Common Longleaf Pine Planting Mistakes

By Ryan Bean

Successfully planting longleaf pine requires attention to detail. Recognizing mistakes may mean the difference between moving forward with a successful stand or starting over. Here is what you should be looking for:

It is highly recommended that you work with your planting contractor so that you can check in during the planting process. If you're not able to inspect during planting, a planting inspection should be made within 48 hours, but no later than 5-10 days following planting. Timely inspection will allow you to hold the contractor(s) accountable should there be any issues.

Were the seedlings planted to the correct spacing? This may be crucial if you are enrolled in a cost-sharing program that requires a certain planting density to qualify for funding. Longleaf seedlings can be quite picky when it comes to planting depth. Most seedlings being planted are containerized stock so that is what we will focus on here. The most important thing to ensure is that the terminal bud is not below soil level. Generally, the seedling should be planted to ensure the terminal bud will be left exposed. Conversely, it is also important to avoid planting too shallow, as this can lead to excessive drying of the seedling and lead to mortality.

There are specialized tools for use when planting containerized seedlings. The tool and planting method must match the shape and length of the containerized plug. Creating too large of a hole can allow seedlings to dry out once planted, and too shallow of a hole leads to seedlings being planted too shallow or creating additional issues with the root system such as J or U rooting. In these cases, the taproot is forced into the hole but allowed to fold and either turn parallel to the ground's surface or turn upright, pointing towards the sky. In both cases, poor survival or less than favorable future growth will become an issue. Also, if the seedling is not heeled-in properly, it could be too loose in the soil, which leads to drying of the roots. This can be tested by grabbing 4-5 needles and firmly tugging on the seedling. There should be no free movement of the seedling in the soil. It is also important that the seedlings be upright and no more than 30 degrees from it. If additional holes are created in the process of heeling-in, they must be stomped in as well.



Longleaf seedlings. Photo credit: David Dickens, University of Georgia, Bugwood.org

When inspecting your planting, you should be observant and take note of other potential issues. In fields that were scalped prior to planting, consider potential soil movement relative to the seedlings planting depth. A seedling planted with the terminal bud at the soil level has a high potential to be covered up as soil moves back into the scalped row. Discarded roots may indicate that the plugs were trimmed, which is not acceptable. Seedlings planted in

a subsoil furrow or rip may be prone to drying out and/or having their buds covered as the seedlings settle in the furrow. Seedlings should be planted to the side of the rip instead. Evaluate site prep activities and control of competing vegetation such as Bermuda grass or other pines.

A survival check needs to be made either during the fall or early winter following planting. It can be especially important if you are enrolled in a cost-sharing program that requires a minimum density. This step looks at the area planted as a whole to determine the number of seedlings still alive versus those that died. It is rare to see 100% survival. In fact, most successful stands have survival rates of 80% or higher. There are many ways to conduct a survival check, but one of the simplest ways is to walk across the rows in several areas and, as you approach a row, examine five seedlings and note whether they are alive or dead. These numbers can be tracked by using tally counters to count all living and dead seedlings at each row you cross out of the five trees examined. It is important that you walk across the stand in several different areas so that areas such as poor soils, poor drainage, heavy competition, etc., are included. Once you are satisfied you have covered enough area, simply divide the total number of living seedlings by the total number of seedlings counted (living and dead).

Planting acreage to pines can represent a substantial investment to landowners. It is important to evaluate planting success in order to learn from past mistakes (if doing the planting yourself) or to hold accountable the professionals you are paying to do the job. Successful planting efforts benefit everybody involved. By following the procedures outlined above, your chances of success will be improved.

Benefits of Prescribed Fire for Pest Control

By Dave Coyle

Prescribed fire is a commonly used management tool in both pine and hardwood forests in South Carolina. When used correctly, it has many benefits to forest ecosystems. Fire helps reduce fuels on the forest floor, which can help lower the chances of a wildfire. It helps recycle nutrients, making them more available to the growing vegetation, and it helps reduce woody competition, resulting in increased growth to crop trees.

Prescribed fire has many benefits for insect, fungal, and invasive plant pest control as well. While few insects are directly controlled by fire, some may be killed by the flames and heat if the fire occurs when the insects are present. In pines, prescribed fire does not usually result in a great deal of pine bark beetle mortality, but fire does kill competing vegetation. Since pine forests with a lower basal area and less woody competition are less susceptible to pine bark beetles (like the southern pine beetle), prescribed fire indirectly contributes to forest health by increasing the resistance of burned stands to pine bark beetles. However, fires that burn too hot can injure and scorch trees, which may make them more susceptible to turpentine beetles and Ips bark beetles. All in all, the application of prescribed fire as a management tool is part science, part art, and part experience, as many factors contribute to a fire's effectiveness.



Excessive scorch on tree boles may increase the likelihood of bark beetle infestation. Photo credit: Dave Coyle, Clemson Extension.



Brown spot needle blight looks like yellow spots surrounded by brown rings on pine needles. This fungus causes pines, usually longleaf, to drop needles. Burning your longleaf stand can help eliminate the fungus. Photo credit: Dave Coyle, Clemson Extension.

Prescribed fire can also be an effective management tactic for some fungi. Brown spot needle blight, a fungal disease that often impacts young longleaf pine stands, is easily controlled by prescribed fire. This fungus causes needle loss primarily in grass stage longleaf. The fungal inoculum persists on the dropped needles under the tree. These needles act as a constant source of fungal infection, and spores reinfest the living needles by wind or rain splash. By burning the pine stand, the shed needles and fungal inoculum are destroyed,

and the disease is usually controlled without the use of pesticides. This strategy also works on many fungal pests that attack hardwood foliage. Fungi like tar spot of maple and Tubakia leaf spot of oak overwinter on fallen leaves – burning these during the dormant season can help reduce the next spring's chance of infection.

While prescribed fire can be an effective management tactic for many native insects and fungi, invasive species are usually not impacted. Invasive insects like the emerald ash borer (which kills ash and is present in the Upstate), the Asian longhorned beetle (which kills maple in the Lowcountry), or the redbay ambrosia beetle and laurel wilt fungus (which kills trees in the family Lauraceae, like bay trees or sassafras, across much of the state) are generally not impacted by prescribed fire. These pests are also not impacted by forest management in general, as the pests attack healthy, living trees.

Using prescribed fire to control unwanted vegetation often has mixed results, depending on the species targeted and the timing of your burn. Growing season burns are more difficult to implement but often result in greater woody stem mortality. In contrast, dormant season burns are easier to conduct but may not give the same amount of vegetative kill as growing season burns. Invasive grasses, such as cogongrass or Japanese stiltgrass, tend to respond positively to burns. While burns may kill the aboveground vegetation, increased sprouting or germination from the seed bank often results.

For woody vegetation – especially shrubs – prescribed fire often top-kills larger stems, resulting in multiple resprouts after the burn. For example, Callery pear can send up anywhere from 2-12 resprouts for each stem killed by fire. For this reason, prescribed fire should not be seen as a silver bullet for invasive plant management, but it can be an effective component of your management plan. After the plants resprout and grow to about 2 feet tall, herbicide can effectively kill the unwanted vegetation. Prescribed fire may kill shrub or tree seedlings and even the seeds of some invasive plants, but once woody plants develop thick or corky bark, prescribed fire is unlikely to have much of an impact.

In most cases, prescribed fire can and should be used as part of a forest management plan. When used correctly, you will positively benefit from using prescribed fire as a form of pest management in your pine and hardwood forests.

Economic Implications of Joint Management for Timber and Wildlife

By Puskar Khanal

Private forest landowners, specifically family forest owners, have multiple objectives for owning and managing their property. Managing property for various objectives may require different cost inputs and potential timber revenue losses. In South Carolina, loblolly-shortleaf pine accounts for over 43% of forest types, and loblolly pine is the most common tree species. Understanding the economic implications of different land management objectives is critical for private forest landowners.

Clemson Extension Land-Grant Press recently published an interesting article examining the importance of hunting lease revenue associated with managing a forest property for wildlife benefits and its potential to offset lost timber revenue. The article provides a framework for landowners to estimate the economic tradeoffs of managing loblolly pine plantations in South Carolina for timber production versus a management regime that incorporates enhancing wildlife habitat in addition to timber production.

Their analysis shows that managing for loblolly pine timber only in South Carolina generated net present values of \$209.50/ac, \$250.95/ac, and \$296.58/ac at low, medium, and high site qualities, respectively. Interestingly,

joint management for timber and wildlife with a lease rate of \$10/ac generated net present values of \$294.03/ac, \$337.63/ac, and \$386.02/ac for the same low, medium, and high site qualities, respectively. The analysis proved that hunting leases provide revenue gain compared to timber only management and a hedge against fluctuating timber prices. Using a reasonable hunting lease rate of \$5.00 per acre, leasing a property managed for wildlife and timber can easily break even with and increase revenue over timber-only management.



White-tailed deer (*Odocoileus virginianus*) Zimmermann. Scott Bauer, USDA Agricultural Research Service, Bugwood.org

Additionally, a hunting lease provides an annual income stream for landowners that may help to cover annual fixed management costs, such as taxes. Of course, the amount of money a landowner could charge for a hunting lease varies widely across the state. Factors that influence a hunting lease price include lease size, number of hunt lease members, presence of food plots, proximity to other private and public lands, and game quality. To set a lease price, a landowner will need to consider their particular property, amenities, and hunting conditions.

Article link: <https://lgpress.clemson.edu/publication/economic-implications-of-wildlife-considerations-in-timber-management/>

South Carolina 4-H Forestry Clinic

By Jaime Pohlman

The 2022 South Carolina 4-H Forestry Clinic is an excellent opportunity for high school-age youth to learn more about forestry and forest practices. Youth will gain hands-on experience from Clemson Forestry and Natural Resources Extension Professionals during the clinic. The clinic will focus on tree identification, tree measurement, compass and pacing, and other forestry skill areas. No prior forestry knowledge or experience is required.

This year's event will be one-day-only, on February 26th, and held at Harbison State Forest in Columbia.

New this year, we are offering the opportunity for youth to attend as individuals or as teams of four. Individual registration costs are \$20, or a team of four for \$60. The cost includes pre-event study materials, lunch, a t-shirt, and the chance to win awards!

The clinic is open to the first 26 youth who register. Youth must be between the ages of 14 -18 as of January 1, 2022. South Carolina 4-H Membership is also required.

We are always looking for great companies and organizations to sponsor the event. If you are interested, please contact: Jaime Pohlman- jaime@clemson.edu

**SOUTH CAROLINA
4-H FORESTRY
CLINIC**

FEBRUARY 26, 2022
HARBISON STATE FOREST
9:00 AM- 4:00 PM

OPEN TO HIGH SCHOOL YOUTH.
NO PRIOR FORESTRY KNOWLEDGE OR
EXPERIENCE IS NEEDED.

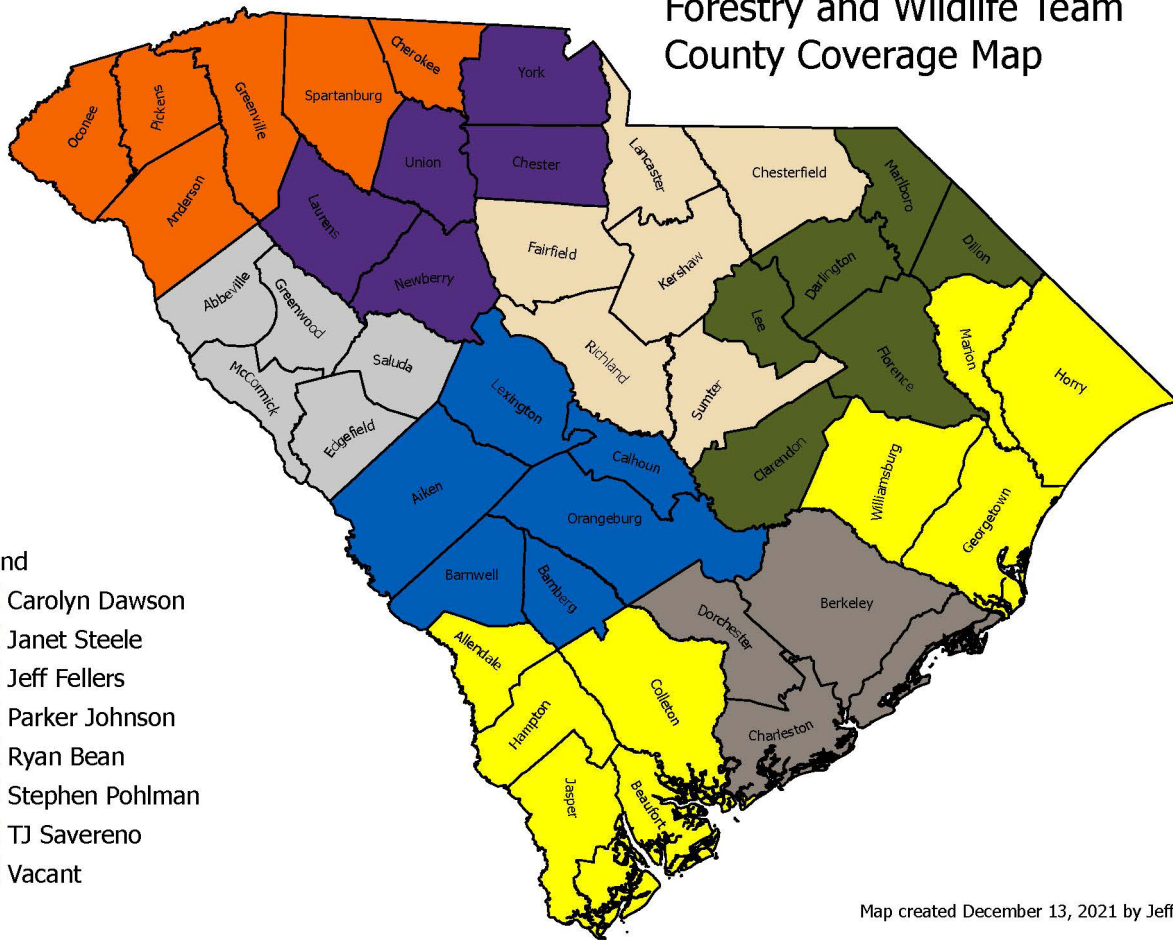
For more information contact
Jaime Pohlman
jaime@clemson.edu
864-986-1026

SCAN HERE TO REGISTER!

PRE-REGISTRATION IS
REQUIRED AND SPACE IS
LIMITED.

COOPERATIVE EXTENSION
Clemson University Cooperative Extension Service offers its programs to people of all ages.
Regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual
orientation, gender identity, marital or family status and is an equal opportunity employer.

Forestry and Wildlife Team County Coverage Map



Map created December 13, 2021 by Jeff Fellers

Agent	Email	Background
Ryan Bean	rbean@clermson.edu	Forestry, Cost Share Programs, Prescribed Fire, Soil Types
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