

# CU IN THE WOODS

## Clemson Extension Forestry and Wildlife Newsletter



### What is a Pawpaw Patch?

By Robert Carter

Many people have heard about a pawpaw patch in a song, but don't realize that there is such a place. Pawpaw (*Asimina triloba*) is a tropical to subtropical shrub or small tree in the custard apple family. It was first observed by Hernando DeSoto in 1541, but Native Americans had been consuming the fruit and using the plant for millennia. The fibrous bark was used by the Catawba Indians to make cordage for nets. The name comes from papaya, although the plants are not closely related. The genus *Asimina* comes from the Potawatomi Indian word for the plant "asimen."

The large seeds of pawpaw will not pass through the digestive tract of existing mammals except large animals such as deer and bear. It is believed that the large fruit and seeds evolved to be dispersed by extinct megafauna such as sloths and mastodons. It is likely that Indigenous people also helped disperse the seeds by collecting and moving fruit and, in some cases, growing pawpaw near their towns.



Large pawpaw leaf. Photo credit: Erik Danielson, iNaturalist.

Pawpaw is usually less than 20 feet tall but can reach heights of 40 feet with a 10-inch diameter. However, it often is a multistemmed shrub rather than a tree. It prefers moist but not saturated sites in shade or partial sun and does well as an understory plant. It produces root suckers, so a patch of pawpaw can actually be the same tree with the many stems connected underground.

The alternate simple leaves are up to a foot long and 4 inches wide, with a blunt tip and wedge-shaped base. The twigs and bottom of young leaves are covered by rusty hairs that fall off with time. The buds are covered with rusty hairs and lack protective scales, so the primordial leaves can be seen with the naked eye in the winter. The leaves and other plant parts have a pungent odor reminiscent of diesel fuel. The odor is due to a chemical cocktail that protects the plant from predators. Few insects and no mammals will consume the plant except for the ripe fruit. Some of the chemical compounds are being studied for use as insecticides and to treat cancer. The zebra swallowtail (*Eurytides marcellus*) and pawpaw sphinx moth (*Dolba hyloeus*) larvae feed primarily on pawpaw leaves. The zebra swallowtail sequesters the toxins into its body, so it is distasteful to predators.

The purple downward-facing flower is cup-shaped and forms in leaf axils in the  
continued on page 2

### In This Edition

#### What is a Pawpaw Patch?

Page 1-2

#### Find Your County Forestry Association

Page 2

#### Making the Most of Your Small Woodlot

Page 3-4

#### Silvopasture: The Four "I" System

Page 5-7

#### Five Reasons Why Your Foodplots May Fail

Page 7-8

#### Stumpage Price Trends & Industry Update

Page 9

#### FAQ's

Page 10

#### Our Extension Forestry and Wildlife Staff

Page 10

### Events and More

#### Upcoming Events

Find out about all of our upcoming events by visiting our events page:

<https://www.eventbrite.com/o/clemson-extension-forestry-and-wildlife-75733679603>

#### Looking for more forestry and wildlife information?

Check out our blog page for past articles and other great forestry and wildlife information-

[blogs.clemson.edu/fnr](https://blogs.clemson.edu/fnr)

## what is a pawpaw patch cont.

spring before leaf expansion. The 1.5- to 2-inch-wide flower has two whorls of three petals. Most dicots have petals in whorls of four or five, but pawpaw breaks the rules and has whorls of three, which is more like a monocot. Pawpaws are ancient and primarily pollinated by beetles and flies. They evolved flowers before bees were common and provided pollinator food from structures at the base of the petals for beetles and flies. The flowers attract pollinators with red to purple flowers resembling rotting flesh and a fetid odor. The flower produces its own heat to volatilize the odor. Think about that. The plant produces its own heat. Only animals are supposed to do that. Even stranger, the flowers can change sex. They begin as females and then transition to males. The heat-producing flower petals provide a place for the pollinators to spend the night on cool spring days. The flowers do not close at sunset, but the petals curve over the flower center, creating pollination chambers for the beetles to reside while they dine on the petals. It is like a beetle bed and breakfast on a branch. Beetles and flies are not the most reliable pollinators, so this strategy encourages them to spend more time in the flower.

The 6-inch-long and 1.5-inch-wide fruit is the largest fruit in North America and has seeds up to 0.75 inches in width. The fruit is yellow to brown when ripe, but often falls from the tree while still green. The skin and seeds are toxic, with the skin sometimes causing dermatitis. Once the sweet fruit is ripe, it is only good for two to three days. It is consumed by many animals, including fox, opossum, and raccoon. You need to collect them as soon as they drop to outcompete the animals. Eat them when they turn yellow to brown.

The mineral-rich flesh is high in vitamin C and has a flavor similar to bananas or custard. Some people get an upset stomach from the flesh, so only small amounts should be consumed. The fruit can be used to make ice cream and other treats, and was used by Native Americans to make bread or dried for winter consumption. There is currently research to develop pawpaw into a commercially viable fruit. If you really want to experience pawpaw fruit, attend the Pawpaw Festival in Taylors, SC, at the end of August.

### Sources and further reading

<https://www.missouribotanicalgarden.org/plantfinder/PlantFinderDetails.aspx?taxonid=275970>

[https://www.clemson.edu/cafls/demo/plant\\_profiles/asimina-triloba.html](https://www.clemson.edu/cafls/demo/plant_profiles/asimina-triloba.html)

[https://plants.usda.gov/DocumentLibrary/plantguide/pdf/cs\\_astr.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/cs_astr.pdf)

[https://www.wildflower.org/plants/result.php?id\\_plant=astr](https://www.wildflower.org/plants/result.php?id_plant=astr)

<https://www.illinoiswildflowers.info/trees/plants/pawpaw.htm>

<https://hgic.clemson.edu/factsheet/pawpaw/>

## County Forestry Associations

### Abbeville County Forest Landowners Association

Contact: Stephen Pohlman

### Aiken County Forestry Association

Contact: Janet Steele

### Anderson Forestry & Wildlife Association

Contact: Carolyn Dawson

### Calhoun-Orangeburg Forest Landowners Association

Contact: Janet Steele

### Darlington/Florence Landowners Association

Contact: TJ Savereno

### Edgefield County Forestry Association

Contact: Stephen Pohlman

### Greenville Forestry & Wildlife Society

Contact: Carolyn Dawson

### Greenwood County Forestry Association

Contact: Stephen Pohlman

### Kershaw County Forest Landowner Association

Contact: Robert Carter

### Laurens County Forest Landowners Association

Contact: Jeff Fellers

### Lexington County Forestry Association

Contact: Janet Steele

### Lowcountry Landowners Association

(Beaufort, Colleton,  
Hampton, Jasper)

Contact: Mike Windhorn

### McCormick County Forestry Association

Contact: Stephen Pohlman

### Newberry County Forestry Association

Contact: Jeff Fellers

### Salkehatchie Forestry Association

(Allendale, Bamberg and  
Barnwell)

Contact: Mike Windhorn

### Saluda County Forestry Association

Contact: Stephen Pohlman

### Tri-county Forestry Association

(Berkeley, Charleston,  
Dorchester)

Contact: Mike Windhorn

### Williamsburg County Forest Landowners Association

Contact: Tancey Belken



# Making the Most of Your Small Woodlot

By Stephen Pohlman

If you have ever owned a small woodlot, you know firsthand the challenges that come with it. Oftentimes, it seems impossible to get any kind of forestry management activity performed on such a tract, short of you having to do it yourself. In this article, I want to discuss the many things to consider and/or options one might not have considered. Just remember to always plan for a desired outcome (a goal), and you achieve these goals through objectives (actions taken). Your goals should ultimately reflect why you own the land.

## Keep Making Money: Harvest with a Neighbor.

In 2025, for most parts of the state of South Carolina, it has become increasingly difficult to harvest tracts of less than 20 acres. Sometimes, the only way to get these tracts harvested is to partner with a neighbor who also owns timber, in hopes that between the two owners, the total acreage of timber is over the 20-acre threshold to make it financially feasible for a logger. A 'Timber Contact' will be written to each landowner separately before any wood is harvested (for more information about Timber Contracts, please see [here](#)). Usually, the logger will set up on one property, harvest the timber on that tract, finish all activity on that tract, and then begin harvesting the neighbor's timber while dragging it to, and loading it from, the original tract loading spot (aka a loading deck). This is to cut down on moving expenses that the logger would incur, save time, and keep truckloads separate to identify where the wood came from. Load ticket identification is imperative, so the correct landowner is paid for their wood in its entirety. Sometimes a single load of wood to the mill will be identified as a 'split load', meaning part of the wood is from the first tract and part from the second tract to make a full log truck. At this point, the landowners must trust their logger as a professional, as some split loads might be 25%/75%. This is where open communication is imperative for all parties involved. After harvesting is over, the small woodlot owner can resume normal forestry practices on their land, such as reforestation if clearcut, knowing that they can move future wood growth, to maintain a healthy forest, through partnering with the neighbor when it is time to harvest again.



Managing a small woodlot can be as challenging as it is rewarding. Photo credit: Stephen Pohlman, Clemson Extension.

## This is for the Birds: Managing for Open Woodlots.

Often, the best outcome for small woodlots is to reduce the remaining stems to a Basal Area of 40-60. (For more information on How to Measure Basal Area please see [here](#)). This will allow the woodlot to seem wooded while opening it up to a more park-like savannah that most find attractive. Most people associate this look with the stereotypical quail woods habitat look. Justly so, as this usually promotes many different forms of wildlife. If the woodlot is pine, this will significantly reduce the likelihood of pine beetle (southern pine beetle, IPS beetle, turpentine beetle) attacks. This style of woodlot can easily be managed with prescribed fire. Prescribed fire is a highly desirable management tool due to the plant community response you get afterward (which wildlife depend on), while reducing the wildfire risk through fuel reduction. However, if you are in a smoke-sensitive area, then the use of herbicides on undesirable plants, light winter discing, or mechanical mowing is an option as well. Once woodlots of mature timber are reduced to 40-60 basal areas, typically, harvesting timber is not needed. The property is maintained in this state for as long as the timber lives until natural mortality takes them. These openings from dead trees can either be maintained as openings for plant diversity or replanted with desirable tree species, depending on the landowner's objectives. If you are receiving property tax breaks through Agricultural Exemption, make sure you do not lose your exemption status.



In order to maintain this aesthetic, understory control practices must be used. Photo credit: David Stephens, Bugwood.org.

## A Holistic Approach: Clearcut and Repurpose.

Sometimes, the only way to make a small woodlot attractive for harvest is to clearcut it due to the needed volume to make it financially feasible. That might sound great if you were looking for a financial gain, but when you replant it (plantation pines or hardwoods), how are you going to get that timber thinned when it comes time for a first thinning since the volume of wood from that same size acreage will be significantly less in a first or second thinning versus a clearcut. Not to mention, with pines, the lack of timely harvests sets you up for stressed trees, which typically spells pine beetle problems. This is when we must decide if repurposing the land is the best option. Converting land to pasture and/or farmland is one option. Still, it is

continued on page 4

## making the most of your small woodlot cont.

expensive due to stumping and possibly having to regrade areas afterward, not to mention pasture grass establishment, fencing, etc. This is when converting land to more of an open meadow to favor wildlife and/or pollinator habitat usage is simpler and less expensive.



A South Carolina meadow full of native plants for pollinators and wildlife that thrive courtesy of habitat manipulation. Photo credit: Cory Heaton, Clemson Extension.

When planning for this habitat conversion, keep in mind the necessities for a given wildlife species: food, water, shelter, and space. Also, keep in mind that many of the native grass and/or plant species that make great wildlife and pollinator habitats naturally occur. Many of these species have seeds already sitting in the seed bank, just waiting for soil disturbance and sunlight to cause them to germinate. You can also supplement native grass/plant habitat by planting these species through the purchase of seeds from companies that specialize in native plants. Specific species of trees and shrubs can also be planted based on the wildlife needs that you are planning for, while undesirable plants can be controlled with herbicides. Oftentimes, these herbicide applications will be target-specific, thus utilizing methods like tree injections, cut-stump applications, hack-n-squirt, or, at a minimum, foliar applications with herbicides that are species-specific. Again, check on maintaining the

Agriculture Exemption, if you are currently receiving it, due to the practice change.

### Time to Fold'em: The Last Option.

As one who has spent his entire life around forestry and surrounded by like-minded individuals, it pains me to type the following, but sometimes it is a landowner's only option. Sometimes the best option for a woodlot owner is to sell it. Oftentimes, neighboring tracts are interested in adjoining tracts, thus solving the management issue due to overall acreage. There is also the option of selling it to someone looking to build a home. Either way, in the end, the current owner realizes that they cannot meet the goals they have for owning the property. Either the objectives are too hard to perform to reach the goals, or the tract simply does not lend itself to being achievable. This could be due to geographic location, timber market conditions, proximity to neighboring houses, wrong soil type, liability reasons, and/or the owner's age or physical limitations.

### Here to Help: Clemson Extension.

Above are just some of the most common options given for most landowners. It in no way is a one-size-fits-all. When faced with these decisions, it always helps to talk to a forester and/or wildlife biologist to help assess what you want to do and/or need done. Remember that Clemson Extension's Forestry and Natural Resource Team has an Agent ready to help in every county in South Carolina.

## Silvopasture: The Four "I" System

By Janet Steele and Liliane Silva

Silvopasture is an interactive system that integrates forage, livestock, and trees into one system where the components are intentionally selected to enhance each other. It is also intensive, requiring more frequent implementation of management practices. Silvopasture is an old practice that has been gaining popularity due to its potential to enhance land use and production, diversify income and deliver ecosystem services. These benefits include, but are not limited to, increased biodiversity, soil health responses, livestock performance and welfare, and enhanced aesthetics.



An example of the enhanced aesthetics from utilizing silvopasture. Photo credit: Janet Steele, Clemson Extension.

stands or planting trees in existing pasture or newly established areas. In this context, the choice of forage should be considered based on local climate and topography conditions, soil type, and operational goals. Establishing a silvopasture system requires proper planning and understanding of the needs and requirements of each system component (forage, livestock, tree) and their interrelationships with the ecosystem.

### The Tree Component

In addition to providing a source of income from timber production, the tree component in the silvopasture provides several essential functions. The shade provided by the trees

Silvopasture can be created by thinning existing timber

continued on page 5



## silvopasture: the four “I” system cont.

in an established system helps reduce the heat stress on livestock during the hot months, which can support the performance of young categories. Forages grown under trees can retain a higher moisture content during dry conditions and mature more slowly, making them more palatable and digestible. Finally, the trees can absorb and utilize the nutrients from the livestock waste and reduce runoff.

The forestry component of silvopasture can be established through two methods: planting a new stand or managing an existing stand. New stand establishment can occur on fallow agricultural land, hayfields or pastures, and cutover timberland. The site's type and amount of vegetation will depend on its land use history. Pastures and hayfields may contain dense, rhizomatous forage species such as bermudagrass that will compete aggressively with young trees. At the same time, fallow agricultural fields may include a wide variety of leafy weeds that can also outcompete newly planted seedlings. Site preparation treatments before tree planting are crucial and can be conducted through mechanical practices, chemical applications, or a combination of both. These practices aim to give the tree seedlings at least one year of limited pressure from competing vegetation so they can become established and start initiating root and shoot growth. Required practices may include:

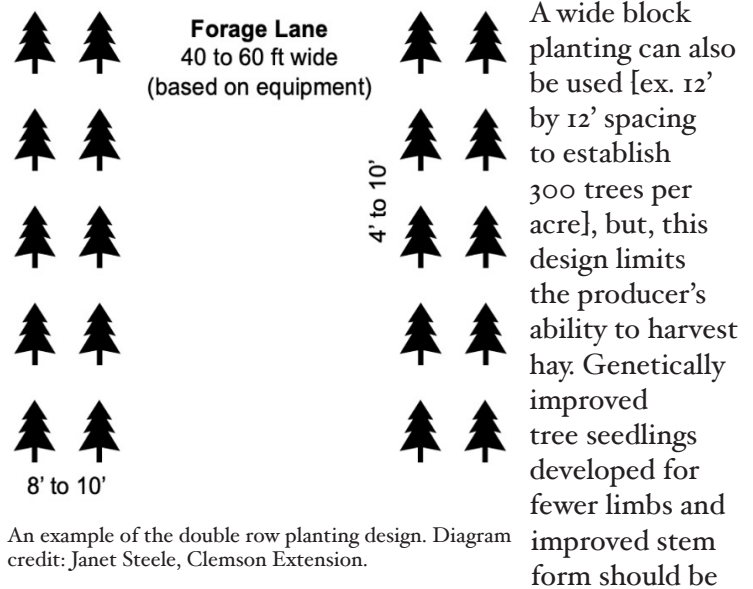
- Pastures and Hayfields – Scalping of improved forage grasses
- Agricultural Fields – Ripping or subsoiling of the plow pan/hardpan
- All Sites – Herbicide applications to control competition (grasses, broadleaf weeds, and woody and shrubby vegetation on cutovers)

Another pre-establishment consideration is soil pH, which may need adjustment for the selected tree species. Finally, residual chemicals used for crop production may require that an agricultural site be laid out up to 1 year before planting tree seedlings.

Most silvopastures in the southeast utilize pine species. In South Carolina, this is most often longleaf or loblolly pine. The branching habit of longleaf pine and its ability to self-prune make it a good choice for the tree component in silvopasture. It is the preferred species on droughty soil sites and can grow well on wetter sites when competition is adequately controlled. However, it is more prone to planting failure since the time it spends in the grass stage after planting makes it more susceptible to the impacts of heavy competition in areas with inadequate site preparation. Loblolly pine is a fast-growing species that does well on various soil types. But, the number and size of limbs in its crown require more frequent pruning than in slash or longleaf stands to provide adequate sunlight to the forages

on a site. Hardwood trees are more challenging to establish by planting than the pine species and require additional protection from the impacts of livestock and wildlife during establishment. Pecan trees can produce a commercial nut crop and be suitable for silvopasture if the seedlings and saplings can be adequately protected from animal damage.

The planting design can be done using two methods. The first is a double row of trees with a forage alley between rows. Tree seedlings are planted at 8' to 10' between rows and 4' to 8' between trees within rows, with a 40 to 60-foot alley between the sets of rows. This design results in 200 to 400 trees per acre. Planting in an east-west direction maximizes sunlight on forage strips.



considered for this planting option. Livestock should be excluded from new stands for the first 3 to 6 years. The terminal buds need to be above browsing height, and the trees sturdy enough to withstand rubbing and trampling before animals are introduced.

Another method for establishing the tree component is to transition an existing timber stand to silvopasture through thinning. Reducing the stand to a desired tree density will be based on the sunlight needed for successful forage establishment and production. If the stand is being thinned for the first time, this is traditionally a 3rd or 4th row thinning, with additional removals within the residual rows. A professional forester should mark subsequent thinnings to ensure residual crop trees with the best timber quality will be left while meeting the stand density requirements. Depending on the producer's selected forage, a residual basal area of 40-60 ft<sup>2</sup>/acre is usually recommended.

Landowners and managers need to know that managing the tree component in a silvopasture system is more intensive than on sites managed strictly for timber production.

continued on page 6

## **silvopasture: the four “I” system cont.**

Competition control will significantly affect tree seedling survival rates for the first two years after planting loblolly pines and until longleaf pine seedlings grow out of the grass stage. When trees are planted into established pastures, mowing between the rows of trees to control competition from grasses is recommended when feasible. Grasses, broad-leafed weeds, and woody species that mowing cannot control will require herbicide treatment. A variety of herbicide options are available for pre-emergent and post-emergent treatments. The selected herbicide and the application rate will vary with the date of application, the species of tree planted, and the species of competition present. In addition to improving tree seedling survival and growth rate, herbaceous weed control will also enhance forage production by reducing competing species. Again, producers can contact their local Extension agent for assistance with plant species identification and herbicide application recommendations.

Prescribed burning to reduce hazardous fuels, improve forages for livestock and wildlife species, and prune lower limbs can also be implemented. Mechanical pruning is a labor-intensive management activity required to maintain stem quality on crop trees and create knot-free wood. Widely spaced trees and those sides of trees exposed to sunlight will develop more and larger limbs, which can reduce timber value. Pruning also raises the canopy to allow more sunlight to reach the forages. Finally, herbaceous weed control is often required in the understory thinned stands to enhance forage production.

### **The Forage Component**

Forage crop selection is a crucial step and shade-adapted species should be selected, such as tall fescue, bahiagrass or native warm-season grasses. Also, site selection is important for successful forage establishment and management. Suitable sites for establishing silvopasture should be determined based on topography, soil type, drainage, sunlight, availability of water for livestock, existing fencing, nutrient levels, soil pH, and other resources required for tree and forage growth, and livestock management. Then, forage species must be adapted to the climate and soil conditions of the specific area to succeed. Producers should also consider the level of investment and management needed and their skill sets before committing to using a silvopasture for their livestock, as it is a management-intensive system.

Soil sampling is required before implementation. Soil samples should be collected and sent for analysis to the Clemson Agricultural Services Laboratory (<https://www.clemson.edu/public/regulatory/ag-srv-lab/soil-testing/>). The recommendation is to sample around 5 acres per composite sample to obtain an initial assessment of the soil's chemical characteristics. In addition to determining fertilizer rates and types, the soil test results will also provide the soil pH.

Most areas will have a lower pH, ranging from 4.5 to 5.2.

The optimal pH range for perennial grasses is 5.6-5.8, and for legumes is over 6. Agricultural lime can take up to 8 months to react in the soil and raise the soil pH so that soil nutrients become available for plant growth.

Proper land preparation before planting is key. If a prescribed burn is needed to remove thicker layers of dead material and vegetation standing in the field, it should be conducted by the end of February.

Disking or plowing will also be required.

Unfortunately, all these land preparation steps can activate the seedbank and result in weed seed germination. The seedbed must be clean to limit weed competition in early establishment. For pre-establishment, non-selective herbicides can be used to kill all weeds and promote control before sowing seeds.

Before sowing the selected forage species, the planting site must be firm and smooth to ensure proper seed-soil contact. Equipment calibration is crucial and should be conducted before planting any crops to ensure an appropriate seed depth, seed-soil contact and seeding rates. After sowing, fertilizer should be applied according to recommendations obtained from the soil test. Lack of adequate land preparation, weed control, and improperly calibrated equipment are some of the most common reasons for the failure of establishment in any crop.

Establishing a perennial grass stand takes 2 to 3 years, and it should not be overseeded until it is properly established. Annual forages such as ryegrass and oats can eventually be overseeded into established silvopasture to extend or prolong the grazing season in early spring and late fall. Leaf fodder from a forage crop, such as legumes, can add nutritional value to livestock diets. Studies have found up to 51% higher yields in cool-season forages in a silvopasture system versus a traditional system.

A post-emergence weed control plan must be developed as the forage becomes established and weed competition is evaluated. The local Livestock and Forages Extension Agents



Taking a soil sample is a critical step in ensuring the growth of your selected forage crop. Photo credit: Liliane Silva, Clemson University.

continued on page 7

## **silvopasture: the four “I” system cont.**

are sources for information related to weed identification, herbicide selection, and determination of application rates. The local agents can be found at <https://www.clemson.edu/extension/co/>.

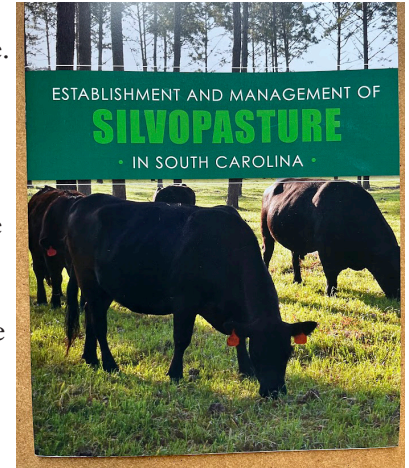
### **The Livestock Component**

A silvopasture system provides forage but also offers microclimate benefits for livestock. The ideal temperature range for cattle is 41°F to 77°F, depending on where they are located, breed, nutritional condition, body score, etc. The summer months in the southeast can far exceed this range. Heat stress directly impacts animal production (e.g., milk, weight gains, etc.) and can reduce reproductive responses. Elevated body temperature in cows and heifers increases the chances of failure to become pregnant after insemination and can cause sperm production issues in bulls (morphology and motility). There can also be survival issues related to heat in embryo transfer. The trees can also provide shelter during the winter months in colder climates.

Livestock will start grazing in year 2 or later, depending on what forages are established and the age of the trees. Small ruminant production can also benefit and thrive in these ecosystems, so multi-species grazing can be another option. The maximum value will be obtained from the forages when livestock is divided into paddocks based on nutritional needs. A rotational grazing strategy will often need to be implemented to maintain forage productivity and prevent overgrazing. Additional costs for fencing and watering systems to facilitate moving animals from one area to another are important considerations before implementing a silvopasture.

## **A new guidebook on the establishment and management of silvopasture in South Carolina is now available**

We are excited to announce the release of this new educational handbook: “Establishment and management of silvopasture systems in South Carolina”. This is a great multidisciplinary collaboration among 12 specialists and graduate students to discuss aspects related to the establishment and management of silvopasture. This handbook provides concepts and research-based information on the establishment and management of silvopasture for Extension and agricultural educators, producers, students, and the public in South Carolina. The goal is to provide a practical resource that any producer can understand and use, regardless of their background or scientific training. This handbook encompasses topics related to trees, forages and livestock management, water quality, ecosystem services, economic considerations to adopt silvopasture, and more.



A new silvopasture guide book is now available. Photo credit: Liliane Silva, Clemson University.

## **Five Reasons Why Your Food Plots May Fail**

By Marion Barnes

Habitat management for wildlife is a popular topic for hunters, landowners and wildlife managers. Food plots can play a key role in managing wildlife on your property, especially white-tailed deer. Planting food plots is a great way to increase and improve available nutrition, concentrate wildlife and increase carrying capacity. While food plots do not replace management practices such as early successional habitat, prescribed fire, and timely timber harvest, they can supplement the naturally occurring food supply on a property.

If you have planted food plots for any length of time, you most likely have experienced a food plot failure. Food plots fail for various reasons, such as too much or too little rain at the wrong time, which is beyond our control. Drought can severely impact seed germination at planting and yield throughout the growing season. While we cannot control the weather, we can avoid mistakes by closely examining some common causes behind food plot failures.

### **Soil type matters:**

One of the most critical and often overlooked components in food plot production is soil type. Think of soil type as the foundation of a building or house on which everything rests. Many food plot species require specific soil types for optimum growth and production. For example, *Aeschynomene* prefers a fertile, moist soil type with adequate water holding capacity throughout the growing season but does not grow well on sandy, drought-prone soils. For alfalfa, select a well-drained, fertile site that allows for a deep and healthy root system. Both of these forages are excellent food plot species for deer and provide bugging habitat for turkeys and quail, but require slightly different soil types for optimum production. In contrast, Alyce clover and chicory tolerate sandy soil types well.

continued on page 8



## five reasons why your food plots may fail cont.

### Soil fertility and soil pH:

The importance of proper liming and fertilization in food plot production cannot be overstated. Scientists have identified 16 essential nutrients required for plant growth and grouped them according to the amount plants require: Primary, secondary nutrients, and micronutrients. Plant growth depends on the amount and form of these elements in the soil. Soil pH directly impacts the availability of these nutrients in the soil. Acidic soils can also negatively impact nodule formation and nitrogen production of legumes. Most legumes require a soil pH of 6.2 to 6.5 for optimum growth, while alfalfa grows best at soil pH 6.5 or slightly greater. The only way to accurately determine the fertility and pH of a soil is by taking a soil test. Soil sampling is an easy task, but many food plot managers often skip this process.

### Plot prep & planting techniques:

Proper seedbed preparation is a key component of successful food plot establishment. How many times have you heard or read the phrase, “Establish in a well-prepared, weed-free seedbed with adequate moisture”? Disking is necessary to incorporate soil amendments like lime, fertilizer & herbicides if applicable, break up large dirt clods, and remove weeds and residue from the soil surface. However, disking can also stimulate weed seed germination and deplete soil moisture during hot weather with limited rainfall. Planting with limited soil moisture and planting too deep are common causes of food plot failure. Small-seed species like clover, alfalfa, brassica, chicory, Alyce clover and aescynomene germinate better in firmer, well-prepared seedbeds. Large-seeded species like cowpeas, soybeans, Austrian winter pea and small grains will germinate with less soil preparation provided they are covered with soil at recommended seeding depths. Planting seed blends can be challenging due to competition between plant species and different seed sizes that require different planting depths for optimum germination.

### Weed control challenges:

One of the most significant problems in growing food plots is weed control. Selecting the appropriate herbicide depends on the specific weeds present and the crops you plan to plant. Weed control options are sometimes few and far between due to the limited number of herbicides labeled for use in wildlife food plots. Controlling weeds is also difficult if you do not know which weeds you are dealing with. Misidentification of weeds leads to poor control, allowing weeds to compete with food plot species for moisture, nutrients and sunlight. Post-emergent herbicides control weeds best when they are small and actively growing.

Generally, weeds larger than 3 to 4 inches tall are more likely to survive herbicide application, especially when growing conditions are less than ideal. Herbicide-resistant weeds like Palmer amaranth and ryegrass are becoming more frequent in food plots. Perennial weed species like bermudagrass and Johnsongrass can be especially challenging in perennial food plots. Monoculture, growing the same crop in the same food plot year after year, increases weed, disease and insect pressure. Nematodes can become major causes of yield reduction in monoculture systems without proper crop rotation, making food plot species less competitive with weeds.

### Overgrazing/ browsing:

Overconsumption of forages by deer can significantly reduce your food plot's chances for success, given the high deer population in many areas of the state and the fact that food plots tend to be small in size, resulting in too many mouths to feed and not enough room at the table. Food plot species like cowpeas, soybeans, and buckwheat are commonly overgrazed in small food plots. Warm-season species, including aescynomene and Alyce clover, tend to withstand heavy browsing pressure better. Cool-season plantings of small grains and clover are options in the fall for small food plots with high grazing pressure. Increasing the size and number of food plots and reducing deer herd density through increased doe harvest offers workable long-term solutions to overgrazed and overbrowsed food plots.

Given all the challenges of successfully growing wildlife food plots, it's still a popular management practice for hunters, landowners and wildlife managers. With proper planning, attention to detail and a little luck, one can reduce the chances of food plot failure. Contact your local Clemson Extension office for more information on wildlife food plot establishment and management.



An exclusion cage is a great way to monitor browsing pressure. Photo credit: Marion Barnes, Clemson Extension.

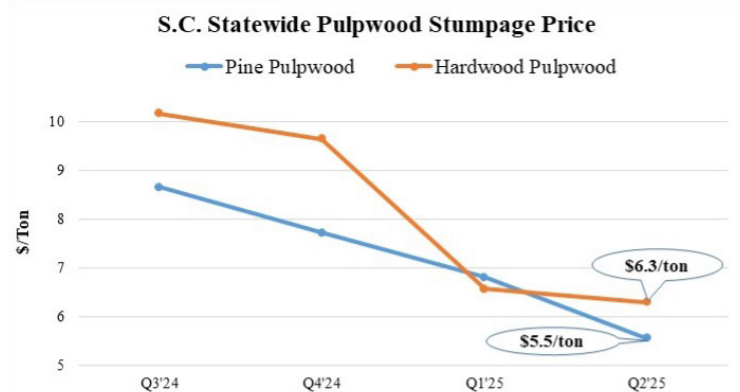


# Stumpage Price Trends in South Carolina for the Q2, 2025 & Industry Update

By Puskar Khanal

## South Carolina Pulpwood Prices Continue Downward Trend:

In the second quarter of 2025, South Carolina's statewide average prices for pine and hardwood pulpwood were \$5.5 per ton and \$6.3 per ton, respectively. Compared to the first quarter of 2025, these prices reflect declines of 18% for pine and 4% for hardwood pulpwood. The pine pulpwood price, falling below \$6 per ton, marks one of the lowest levels recorded in recent years. In contrast, hardwood pulpwood experienced only a modest decline and has returned to price levels last seen two years ago. Overall, both pine and hardwood pulpwood prices were at their lowest this quarter compared to the previous three quarters, continuing a downward trend that has persisted through much of the past year.



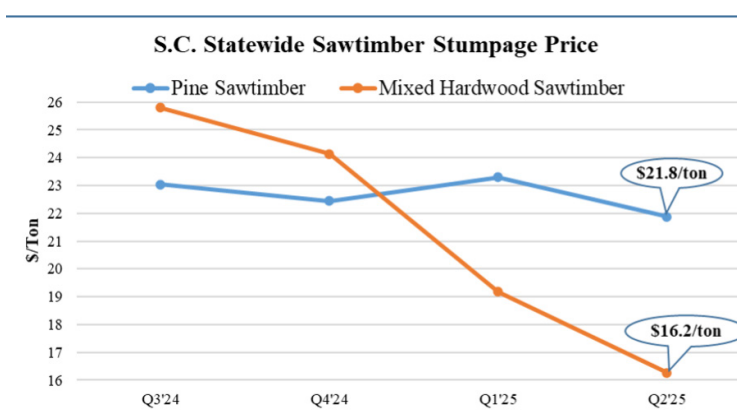
South Carolina statewide pulpwood stumpage prices for Q2, 2025. Graph credit: Puskar Khanal, Clemson University.

## South Carolina Sawtimber Prices Decline, Hardwood Prices Drop Sharply:

In the second quarter of 2025, South Carolina's statewide average prices for pine and hardwood sawtimber were \$21.8 per ton and \$16.2 per ton, respectively. Compared to the previous quarter, pine sawtimber prices declined by 6%, while hardwood sawtimber prices experienced a sharper drop of over 15%. Pine stumpage prices have remained relatively stable over the past two years, fluctuating between \$21 and \$24 per ton. In contrast, hardwood sawtimber prices have shown more volatility, ranging between \$16 to \$26 per ton during the same period. Since the fourth quarter of 2024, hardwood sawtimber has consistently sold for less than pine, and that gap has continued to widen in early 2025. This growing price disparity underscores the ongoing market challenges facing hardwood producers in the state.

## Wood Market is Local:

Stumpage prices for both sawtimber and pulpwood in your local markets could vary significantly as compared to the above statewide averages, depending on: size and species composition, quality of timber, total acres and volume, logging operability, distance from nearby mills, and overall market condition.



South Carolina statewide sawtimber stumpage prices for Q2, 2025. Graph credit: Puskar Khanal, Clemson University.

Data credit: The sawtimber and pulpwood price data included in this newsletter are published with permission from TimberMart-South, Athens, GA 30605, email: [tmart@timbermart-south.com](mailto:tmart@timbermart-south.com).

## Industry Update:

A new sawmill is coming in Allendale, South Carolina: Hampton Lumber, a fourth-generation, family-owned sustainable building materials company based in Oregon, has announced a \$225 million investment to establish its first East Coast sawmill in Allendale County, South Carolina. The new 375,000-square-foot facility in Fairfax will produce Southern Yellow Pine framing lumber and is expected to create at least 125 new jobs, with operations beginning in 2027. Supported by state and local partners, Hampton Lumber's expansion reflects growing confidence in South Carolina's forestry sector and sustainable timber resources.

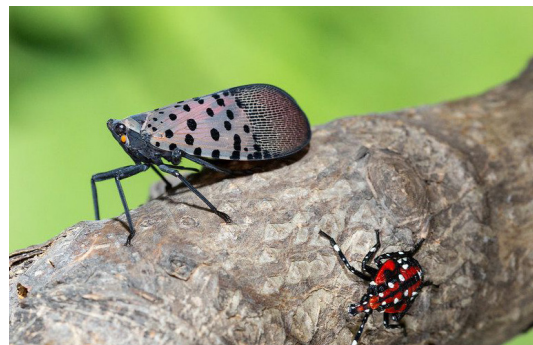
# Spotted lanternfly has been found in South Carolina

Unfortunately, the invasive Spotted Lanternfly has been found in South Carolina. According to Steven Long, Assistant Director of DPI, the concern with spotted lanternfly is its potential impact on our forestry and agricultural industries. Early detection is critical to prevent economic and ecological losses. While we are actively searching for the insect, we are also asking the public to join with us in stopping its spread by looking for and reporting signs of the pest.

## What to Look For:

According to the USDA's Animal and Plant Health Inspection Service (APHIS), signs of the spotted lanternfly include:

- Nymphs: Juvenile insects are black with white spots and turn bright red with age.
- Adults: Approximately 1 inch long and 1/2 inch wide, adults have grayish-brown forewings with black spots and striking scarlet hindwings with black and white bars.
- Egg masses: Laid on hard surfaces such as tree trunks, bricks, stones, vehicles, and equipment. Fresh egg masses appear like wet gray putty and later resemble dried mud.
- Honeydew: A sticky substance excreted by the insects when feeding. It promotes mold growth, attracts other insects, and emits a foul, fermented odor as it breaks down.



An adult spotted lanternfly and a nymph. If you see either, please report them to Clemson University.

To report a spotted lanternfly sighting or learn more, visit [www.clemson.edu/invasives](http://www.clemson.edu/invasives).

## Contact our Agents:

Agent	Email	Counties Covered
Tancey Belken	<a href="mailto:tanceyc@clemson.edu">tanceyc@clemson.edu</a>	Berkeley, Charleston, Florence, Georgetown, Horry, Marion, Williamsburg
Robert Carter	<a href="mailto:rec4@clemson.edu">rec4@clemson.edu</a>	Chesterfield, Kershaw, Lancaster, Sumter, Richland, York
Carolyn Dawson	<a href="mailto:dawson4@clemson.edu">dawson4@clemson.edu</a>	Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg
Jeff Fellers	<a href="mailto:fellers@clemson.edu">fellers@clemson.edu</a>	Chester, Fairfield, Laurens, Newberry, Union
Derrick Phinney	<a href="mailto:dphinne@clemson.edu">dphinne@clemson.edu</a>	Statewide Program Team Leader
Jaime Pohlman	<a href="mailto:jaime@clemson.edu">jaime@clemson.edu</a>	McCormick, Statewide Communications Responsibilities
Stephen Pohlman	<a href="mailto:spohlma@clemson.edu">spohlma@clemson.edu</a>	Abbeville, Edgefield, Greenwood, McCormick, Saluda
TJ Savereno	<a href="mailto:asavere@clemson.edu">asavere@clemson.edu</a>	Clarendon, Darlington, Dillon, Florence, Lee, Marlboro
Janet Steele	<a href="mailto:jmwatt@clemson.edu">jmwatt@clemson.edu</a>	Aiken, Bamberg, Barnwell, Calhoun, Lexington, Orangeburg
Mike Windhorn	<a href="mailto:mwindh@clemson.edu">mwindh@clemson.edu</a>	Allendale, Beaufort, Charleston, Colleton, Dorchester, Hampton, Jasper

Specialist	Background
Lance Beecher	Aquaponics, Aquaculture and Fisheries
Dave Coyle	Forest Health and Invasive Species
Cory Heaton	Wildlife Management
Patrick Hiesl	Forest Operations and Forest Products
Puskar Khanal	Forest Economics
Marzieh Motallebi	Ecological Economics and Carbon Credits



**COOPERATIVE EXTENSION**  
College of Agriculture, Forestry and Life Sciences

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.

Newsletter is compiled by Jaime Pohlman

Newsletters are archived online at:

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

## Follow Us Online

@fnrclemson

