



THE OVERSTORY

MSU Forestry Extension Newsletter



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Arbor Day and Planting the Right Tree

John D. Kushla, Extension Specialist

In researching the history of Arbor Day, I was surprised to learn that the idea of celebrating tree planting was not uniquely American. The first documented Arbor Day was in the Spanish village of Mondoñedo in 1594. Our first Arbor Day here in the USA was held in Nebraska City on April 10, 1872. Eventually, Arbor Day became a national holiday in 1885.

Since then, each state has its own date for Arbor Day. In Mississippi, this is the second Friday in February, which for this year is February 8. Winter is a great time for planting trees in Mississippi. Our soils are warm (at least not frozen) which allows the root system of transplanted trees to adapt and grow in their new environment. It is critical that transplanted trees become acclimated to their new environment before the hot weather of summer.

Before planting a tree in your yard, it is important to select the proper tree for the site (Figure 1). Trees grow best when site conditions most closely match their growth requirements. To do this, it is important to observe how much space is available, as well as soil and light conditions. Are there overhead wires or buried utilities? Does the site receive a lot of direct sunlight (6 or more hours)? Is the site wet or dry? Is the soil texture sandy, clayey, or loamy? For some soil characteristics, it is necessary to take a soil sample for analysis. The Soil Testing Lab at Mississippi State University can determine the relative soil fertility and soil pH. The lab can also provide a recommendation for applying fertilizer.

When selecting a tree, learn about its growth requirements. Know the size of the mature tree. (Continued on next page)

Figure 1. MSU Forestry Club members planting a tree for Arbor Day at Mississippi State University campus. Trees grow best when site conditions most closely match their growth requirements. Before digging call 8-1-1 to locate buried utilities. The hole should be to the depth of the root collar, but 2-3 times the width of the root ball. Photo credit: John Kushla





"Installing balled and burlaped material"

Photo credit: Joe Murray, Treebio.com, Bugwood.org

Most tree labels will have this information, or knowledgeable staff at your local garden center. Will the tree require full sun most of the day, or shade? Does the tree prefer dry or wet sites?

Choose a healthy tree. Inspect the tree for cuts in the bark, disease cankers, and broken branches. Select a tree with a single, dominant stem, unless the tree is multi-stemmed, such as crape myrtle.

Before planting the tree, find out about buried utilities. Overhead power lines are easy to observe, but for underground utilities call 8-1-1 at least two days prior to digging. This is a free service to locate buried utilities. It prevents serious injury when tree planting, and limits liability to the homeowner if a utility is hit while digging.

The planting hole should be to the depth of the tree root collar (Figure 1, previous page), where the roots branch from the main stem. The hole should be 2-3 times the width of the root ball, to allow roots to spread in loosened soil. All container material should be removed prior to planting. If circling roots are present, these roots should be cut back. Roots will grow in the direction they are pointing, so tree roots should point outward from the tree.

When filling the hole around the tree roots, the same soil removed should be used for backfilling the hole. Water should be applied when backfilling to allow the soil to make good contact with roots and remove air pockets. Finally, place about 2-4 inches of mulch over the planting hole, but avoid covering the root collar. Mulch is much like a blanket for plants, keeping roots warmer in winter and cooler in summer. Mulch will also keep weeds out, and protect the young tree from lawn mowers and trimmers. Moreover, if organic material is used such as cypress bark or pine straw, this will enhance soil biological activity around the tree roots. Start your own legacy this year by planting a tree on Arbor Day. Follow these guidelines to plant the right tree in the right place. You should enjoy many years watching your legacy tree grow.

Initial Steps in Managing Hardwood Plantations under the Conservation Reserve Program

Randy Rousseau, Extension Specialist

Today, there is considerable interest by landowners wanting to make some changes in their hardwood plantations that were established under the Conservation Reserve Program (CRP) CP-31 designation of Bottomland Hardwood Tree Establishment initiative or CP-3A Hardwood Tree Planting initiative. While changes can be made, if approved by the Natural Resources Conservation Service (NRCS), the question typical revolves around wildlife. In most cases the change wanted is primarily the result of changing wildlife populations, more specifically deer populations in relationship to tree growth.

During the hardwood plantation establishment phase a wide variety of wildlife is abundant, including deer which thrived on the combination of forbs and grasses and plentiful cover. But as the plantation trees aged and developed larger crowns, less and less sunlight is able to reach the forest floor. This lack of sunlight has not only a profound negative effect on grasses and forbs, but on cover as well. This change has not been lost on the landowners, as they have observed this negative change in deer and want to employ a strategy to alleviate the situation.

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Certainly if the land is no longer under a CRP contract then you have free rein to do whatever you chose, but even then you might want to weigh every possible aspect prior to taking action.

When moving from agriculture back to a forest cover type, it is nearly impossible to provide forest diversification that would mimic natural stands. The factors that exasperate the problems associated with CRP hardwood plantings include both the species mixture and spacing.

In most cases, these stands (plantations) are predominately comprised of oak species such as Nuttall, willow, and/or water oak, which will survive and grow best on poorly drained soils. The result has been plantations exhibiting very similar development rates, an elongated period of crown stratification, significantly delayed acorn production, and a longer period of time spent where sunlight is primarily intercepted by the oak crowns.

Additionally, the wide spacing (i.e. 12 x 12 feet) used in establishing these plantations along with no volunteer tree sources (i.e., tree seeds originating off the property) available resulted in larger lower limbs through the first 15 to 20 feet. These large poorly formed limbs not only result in lower quality timber (if later harvesting is desired for income), but take a great deal longer to self-prune.

Obviously the quick remedy is the removal of trees, allowing more sunlight to the soil surface, thus providing an environment more conducive to forbs and grasses. However, the removal of trees without an understanding of how the trees will respond will likely not result in the long-term anticipated conditions wanted and could possibly jeopardize the integrity of the planting. It has been shown that the removal of single rows will not work as the trees respond very quickly with increased crown expansion placing the stand in the same situation within a matter of a few years. Rather, we suggest that the landowner waits until the limbs self-prune, thus allowing a logger easier access to the trees.

One alternative prior to waiting for trees to self-prune would be to assay the plantation and determine the overall condition of the location in the plantation where the trees may or may not be growing well or have failed. Areas of poor growth and survival of trees are the first areas that could provide an excellent opportunity to increase both wildlife browse and cover by removal of existing trees, thus providing additional cover.



Two different oak species differences shown at age 20 on a somewhat poorly drained site. The species on the left is cherrybark oak, which exhibits mortality and growth problems when planted off-site, but also shows species excellent self-pruning capability. Willow oak (shown on the right) shows better survival and growth but is just beginning to lose its lower limbs.



*CRP Oak Stand that is a 15 years-old showing excellent survival, lack of variability, minimal limb self-pruning, and little size variability. The lack of ground cover emphasizes complete crown closure of the oaks.
Photos credit: Randy Rousseau*

Mississippi Timber Price Report

4th Quarter, 2018

The Mississippi Timber Price Report provides a picture of timber market activity across the state showing regional and statewide stumpage prices for common forest products. This report should only be used as a guide to help individuals monitor timber market trends. The average price should not be applied as fair market value for a specific timber sale because many variables influence actual prices each landowner will receive. This report and historical timber prices are available by contacting your local county Extension office or at:

www.extension.msstate.edu/forestry/forest-economics/timber-prices.

Quarter's Prices: 4th Quarter 2018 Stumpage Prices/Ton (Source: MSU Extension)

NOTE: Prices vary widely across the state; average prices presented here may not reflect your local market.

Pine Sawtimber - \$21.29	Mixed Hardwood Sawtimber- \$36.77
Pine Chip N Saw - \$12.63	Hardwood Pulpwood - \$8.23
Pine Pulpwood - \$4.80	Oak Sawtimber - \$49.08
Pine Poles - \$39.77	Crossties - \$39.56

Price Trends:

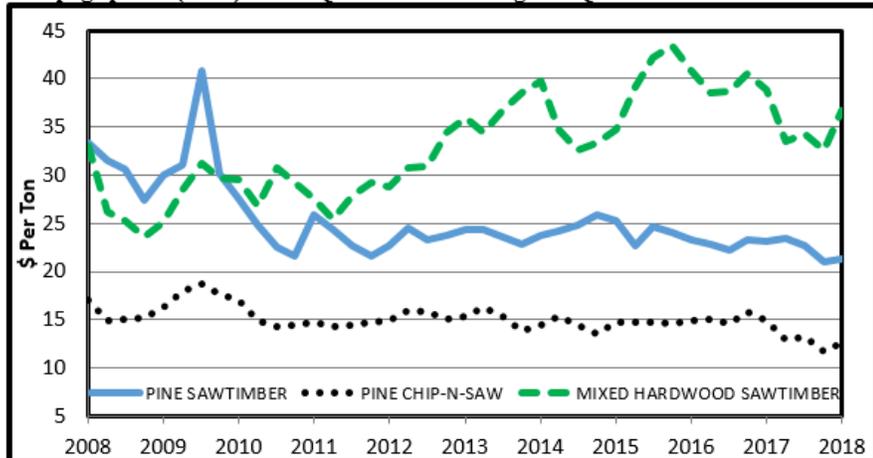
The oversupply issue (abundant supply of standing trees) and a stagnant housing market (demand) continue to influence timber prices in Mississippi. Future housing starts are projected to remain relatively flat which will continue to impact prices for an extended period. Announcements of mill expansions are good news for landowners near those mills. These expansions will provide additional market capacity in those areas.

Compared to 3rd quarter 2018 prices, statewide average prices increased for all species and product classes. Regional prices fluctuated between product classes with some experiencing increases while others decreased. North Mississippi prices continue to be less than south Mississippi prices primarily because of fewer mills north of Interstate 20. Prices are expected to remain relatively stable headed into 1st quarter 2019, with slight increases for some species/product classes and slight decreases for others. Prices in north Mississippi, particularly pulpwood will continue to suffer because of oversupply and reduced demand in the area.

Timber-Mart South (TMS), Inc. has more detailed data available by subscription that contains values for other timber products not included in this report. TMS is compiled and produced at the Center for forest Business, Warnell School of Forest Resources, University of Georgia, under contract with the Frank W. Norris Foundation, a non-profit corporation serving the forest products industry.

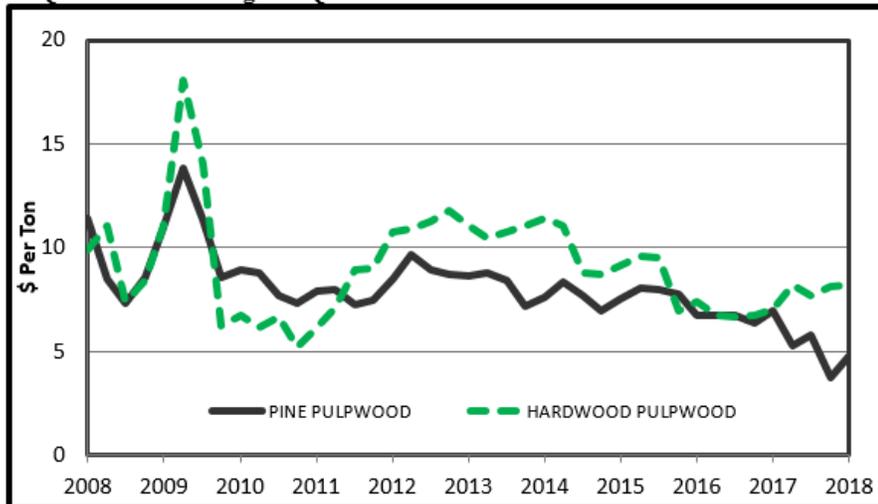
See <http://WWW.TMARTSOUTH.COM/> for information on subscriptions.

Average Mississippi pine sawtimber, pine chip-n-saw, and mixed hardwood sawtimber stumpage prices (\$/ton) for 4th Quarter 2008 through 4th Quarter 2018.*



*Prices from 2008-2017 are from Timber Mart-South. 2018 prices are from Mississippi State University Extension.

Average Mississippi pine and hardwood pulpwood stumpage prices (\$/ton) for 4th Quarter 2008 through 4th Quarter 2018.*



*Prices from 2008-2017 are from Timber Mart-South. 2018 prices are from Mississippi State University Extension.



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Delta Hardwood Notes: What is a high-grade?

Brady Self, Extension Specialist

Several harvesting strategies exist in forest management. While most people are familiar with terms like clearcut and thinning, many do not realize that several thinning techniques are in common use. These techniques are typically designed to enhance residual crop tree growth if applied correctly. They are used to remove stems deemed undesirable for a variety of reasons (e.g. damage, disease, undesirable species, poor form), or reduce stand density so that residual trees have sufficient room for future growth. While all thinning practices can be detrimental to stand quality if implemented incorrectly, “high-grading” always results in residual stands of lower quality.



Picture of oaks marked for removal in a high-grading operation. Photo credit: Brady Self

High-grading, known by several names including 'selective thinning' and 'diameter-limit cutting', can be thought of as a practice that “takes the best and leaves the rest.” Trees with highest value are removed leaving only genetically inferior trees to populate the future stand. Typically, either a stump or bole diameter limit is set and all trees above that diameter are harvested. Another approach is to remove the greatest value trees (those of highly valuable species or stems). When both desirable species and the highest quality stems are removed, the merchantability and regenerative potential of subsequent stands decreases. High-grading may provide greater immediate economic gains for units of wood removed in the cut (the harvester does not have to merchandise lower quality stems), but future ability of the stand to produce quality timber is vastly impacted. In addition, it can be very difficult to attract loggers into previously high-graded stands due to the inherently low value associated with these stands. To avoid this practice, one should only employ reputable and competent foresters when deciding to sell timber.

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MSU-ES Region Map

