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Extension Images
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From the Coordinator's Desk

Fall is a time of change across the landscape as the weather finally becomes cooler and the leaves begin to change color. This fall, Extension Forestry is experiencing changes as well. Dr. Jason Gordon has moved from Grenada to the MSU campus where he will be working statewide in the areas of community development, urban forestry, and human dimensions.

Replacing Jason as the NW Mississippi Area Extension Forestry Specialist is Dr. Brady Self. Brady earned his PhD in forestry from Mississippi State working in the area of bottomland hardwood ecology and management. In addition, he also has extensive experience in pine management, forestry herbicides, and wildlife management. Brady has hit the ground running in NW Mississippi and is a welcome addition to the Extension forestry family.

Dr. Andrew J. Londo
Extension Forestry Program Coordinator



<http://www.publicdomainpictures.net>
by Bobby Mikul

Feature Article

**Herbaceous Weed Control in
Hardwood Plantation Establishment**

by Brady Self
NWMS Extension Forestry Specialist

Often, growth and survival of planted hardwood seedlings is not satisfactory in afforestation activities. The frequency of failed plantings indicates a need for greater understanding of proper plantation establishment techniques. Several factors can decrease seedling growth and survival including: soil conditions, planting techniques, seedling quality, and competing vegetation. These problems can be alleviated through proper planting of high quality seedlings, as well as applying proper silvicultural practices to enhance survival and growth. Notably, seedling establishment on these areas can be improved through the use of herbaceous weed control (HWC). Competing herbaceous vegetation is generally considered the most influential factor in hardwood plantation failures. Both herbaceous and woody competition may pose a threat to the survival of planted hardwood seedlings, with herbaceous competition posing the greatest threat during the first years of establishment. The increased threat of herbaceous competitors could be the result of increased exploitation of soil moisture and nutrients due to the more extensive nature of herbaceous species root systems. Chemical site preparation can

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"To know how to suggest is the great art of teaching."

Ralph Waldo Emerson



The Overstory

Feature Article (continued from page 1)

provide excellent control of competing herbaceous vegetation. Still, this is a short term solution. Research has shown that seed bank reserves of herbaceous weed species can overwhelm hardwood seedlings after site preparation herbicides degrade. Adequate control of growing season vegetation typically requires HWC to provide longer term control of competing vegetation and enable the survival of desirable hardwood species. Increased growth and survival of hardwood seedlings treated with HWC herbicides is well documented. Sulfometuron methyl (Oust® and Oust®XP), azafenidin (Milestone®), oxyfluorfen (Goal 2XL®), and imazaquin (Scepter® 70DG) have all been used successfully in HWC applications with growth and survival benefits in studies involving species such as black walnut, cherrybark oak, cottonwood, green ash, northern red oak, Nuttall oak, Shumard oak, sweetgum, water oak, white ash, white oak, and willow oak.*

Annual Food Plot Site Preparation

By Don Bales, Extension Associate

Heavy weed and grass growth must be dealt with effectively to get a smooth firm seed bed for planting food plots. When heavy summer vegetation is present, it is not advisable to plow under green plant material and plant on the same day.

Treat your plots with an herbicide (e.g., Glyphosate) about two weeks before you plan to do your first disking. Do not bush hog or disk for ten to fourteen days after application. Allow the vegetation to brown up and dry out as much as possible.

At this time, you should be able to disk without bush hogging. It is easier for the disk blades to reach the ground while the vegetation is standing up. The herbicide method is particularly useful when dealing with sod-forming grasses such as bahiagrass and bermuda. These grasses will be a problem each fall. The only way to control them effectively is to treat them with herbicides for several years.

If you choose not to use herbicides, it usually takes two bush hog operations about two to three weeks apart with a rain or two in-between. Then you can disk, hope for rain, and disk again before planting the food plot.

While all of the above mentioned herbicides were not used in tests with each species, greater growth and survival were the prevalent results.

When choosing which herbicide to use for HWC, thought should be given to different rates and application timings, as well as susceptibility of target and non-target species. The current "standard" broad-spectrum herbicide of choice in HWC efforts in hardwood plantings is Oust®XP at 2oz/acre. However, a forestry consultant, extension employee, or professional herbicide applicator should be consulted regarding the appropriate herbicide for use in any particular HWC treatment. Additionally, strict adherence should be given to all herbicide label restrictions and recommendations when using any herbicide.

* The information provided here is for educational purposes only. Reference to commercial products or trade names is not an endorsement by Mississippi State University nor is any discrimination intended against other products which may also be suitable and have label clearance.

If you disk green vegetation into the soil and plant the same day, you may have poor initial survival and growth of your seedlings. The decaying vegetation ties up nutrients, creates a heat that kills the seeds, and leaves open air pockets that will causes some seeds dry out. The best results are obtained by disking, waiting for a rain, disking again, and harrowing to smooth the soil for planting.



Heavy Grass Growth in Annual Food Plot†

Delta Hardwood Notes

by Randy Rousseau, Hardwood Silviculture Specialist

Are Hardwoods in Your Future? At some point, you've decided that you want hardwoods on your property but you're not sure where to start. While you're sure of the beauty that these trees will bring to your property but you need to be aware that they will also be long lived, a benefit for wildlife, and the source of revenue from pulpwood to highly valued sawtimber. But every aspect of hardwoods from recreation to timber production will increase the value of your property. The process begins with determining what hardwood species are best suited for your property. To answer this you need to understand various soil characteristics such as pH, physical and nutrient properties, as well as hydrology. Once the species have been selected you need to make sure that the correct source or origin of the material is obtained. Typically, a local source of material is well adapted to the environment. Local source means the origin of the regeneration material should be within 100 miles of the planting site. The next step is to decide what type of regeneration or planting stock will be used. Artificial regeneration of hardwoods, especially heavyseeded species such as oaks, can be accomplished by either sowing seed or by planting seedlings. Although sowing seed can be

done rather cheaply, success is greatly dependent on the seed quality, handling, and storage of the seed as well as the environment to which they will be sown. If you will be using oak acorns you need to be aware that improper seed moisture will quickly reduce the ability of the seed to germinate and grow. Handled properly, acorns have a high probability of survival and care must be taken not to over seed, which would result in an overstocked stand with seedlings at a very close spacing within the drill (row) but at rather wide spacing between rows. If you choose to use seedlings, which are the primary choice of regenerating hardwoods, there a number of factors to be understand. First and foremost make sure that you purchase quality seedlings as hardwood seedlings are rather expensive ranging from \$235 to \$250 per thousand. But like seed, these seedlings need to be carefully stored, handled, and planted. If correctly accomplished, survival should be exceptionally high. To insure good hardwood seedling survival, competition control during the first year is necessary to allow the newly planted seedlings to take hold and begin the growth process of your new forest. When the processes are properly completed the enjoyment begins, so sit back and enjoy

Benefits of Compliance with BMPs

By Butch Bailey, Extension Associate

Best Management Practices (BMPs) were established by a broad range of forestry experts in Mississippi as guidelines to protect soil and water quality. It is important to note that the use of BMPs is not mandatory. Compliance with BMPs does, however, have many benefits for landowners. BMPs promote wildlife habitat by establishing corridors of unharvested Streamside Management Zones (SMZs) after clearcuts; they prevent costly road repair and construction by minimizing soil erosion; and they increase the value of your property by improving the overall beauty of landscape. Many different practices are covered by BMPs. One of the most common BMP recommendations is the establishment of SMZs. SMZs are merely a buffer strip of vegetation next to a body of water. Typically, this means that a strip of trees and other vegetation is left unharvested along streams, creeks, and rivers. These work by slowing and filtering water runoff before it reaches the stream, and by providing natural

shade for the stream. SMZs also provide excellent wildlife food and cover by providing hardwood trees that might not otherwise be present.

BMPs address other aspects of forestry. Some of the activities covered in the state BMP manual (available online) include proper planning of harvests, proper use of culverts and bridges, and disposal of chemicals. For more information on BMPs ask your Mississippi Forestry Commission County Forester or County Extension Director.



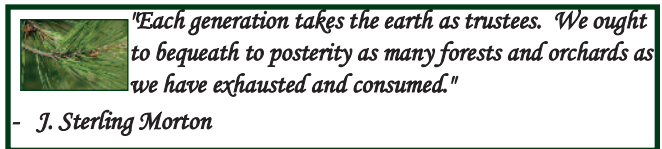
Timber Market Outlook

by James E. Henderson, Forest Economics Specialist

Timber harvesting activity over the third quarter was up and, given the relatively drier weather over the past two months, most mills around the state now have adequate timber inventories. As a result, demand for pine sawtimber was down as mills implemented quotas on timber deliveries. The impact on pine sawtimber stumpage prices for Mississippi, as reported by Forest2Market (available MSUCares.com/forestry), decreased sharply to \$24.26 for the third quarter of 2012. Prior to the Fall of 2012, Mississippi had experienced four consecutive quarters of sawtimber price increase. Given the recent improvement in the national housing market and the increase in residential construction, which is expected to maintain a positive trend over the next several years, demand for sawtimber should resume in earnest later this year and into 2013 as lumber mills increase production. However, stumpage prices will not necessarily increase greatly over the next several years as timber inventories in Mississippi are high.

Estimates from the Mississippi Institute for Forest Inventory indicate increases in standing pine sawtimber of over 43% since the beginning of the U.S. housing bubble

collapse. It will take several years to reduce this inventory once demand for timber increases following continued improvement in the U.S. housing market. It appears that the U.S. housing market is on the path to recovery. Housing starts and permits, a leading indicator of construction, are up by 30% from last year. Also, both new and existing home inventories are at lows not seen since the peak of the U.S. housing bubble. These are all positive indicators that demand for timber will be expanding over the next few years. However, as indicated in the July 2012 Timber Market Update, it is reasonable to assume that it will be several years before we see significant gains in pine sawtimber stumpage prices given both the demand and supply side issues facing Mississippi's timber markets. Having said that, it is safe to say that the path to recovery for our timber markets is underway.



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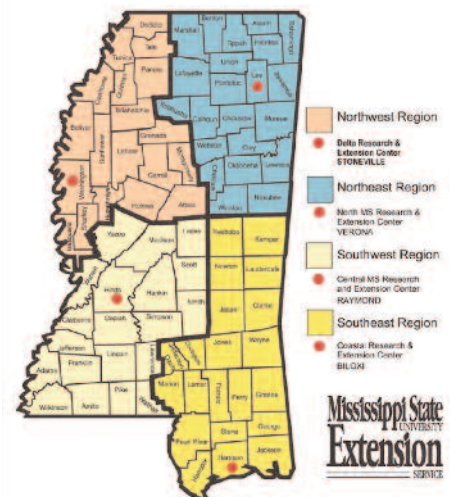
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