College of Forest Resources
Extension Forestry

The Overstory

MSU Forestry Extension Newsletter

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INSIDE THIS ISSUE

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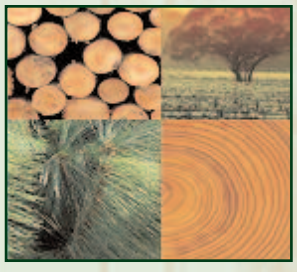

From the Coordinator's Desk

by James Henderson, Extension Specialist

The MSU Extension Forestry Program recently added a new member to the team. We are pleased to announce that Cody Rainer accepted the position of Extension Associate based in Grenada, Mississippi. He is a Mississippi native and a Mississippi State University Alumnus. He received his Bachelor and Master of Science degrees in forestry with an emphasis on bottomland hardwood forests and wildlife management. For the past three years Cody has worked for Plum Creek as a resource forester in Monticello, Arkansas, where he supervised a vast array of harvesting and silvicultural operations.Cody's primary responsibility with Mississippi State University Extension Service is to administer the Southern Pine Beetle Prevention Cost Share Program in north Mississippi. Cody will also serve a key role in delivering Extension forestry education programs across Mississippi. He is well qualified for the position and will be a great asset to accomplishing our Extension education mission. If you haven't already, we hope that you and your county forestry association will soon have an opportunity to meet Cody and benefit from his expertise. We are pleased to have him on our team!

Mr. Cody Rainer
Forestry Extension Associate
Grenada, MS

Cody with some participants in the pine thinning short course

Feature Article

Forest Succession and the Land Manager - Part One

by Don Bales, Senior Extension Associate

Making good and timely decisions for forest and wildlife management requires a working knowledge of plant succession. Simply put, land and plant communities are dynamic, they change constantly. Plant succession is the change over time of the types and sizes of plants that occupy a given site.

If a given site experiences a dramatic change by man or a catastrophic change wrought by nature, the plant community will begin to rebuild itself. How fast it changes and which plants are involved is highly dependent upon the soil type, slope, aspect and fertility, and is also dependent on topography and available moisture and other factors. For instance, a moist and fertile bottomland site will change much differently than an upland site dominated by sandy clay soils. The bottomland will have different plant species than the upland site, but both sites will also have some species in common. Agricultural land that is abandoned and allowed to take a natural course will differ significantly from the cutover of an upland pine hardwood forest. The forested landscape will have a residual seedbank, but will also have new plant growth that originates from rootstocks. The agricultural site will have only those seeds remaining in the seed bank.

Understanding plant succession allows the manager to understand which plants are likely to appear and how they interact with each other. Will they complement each other or compete? Some plants will get their start from seeds or root stock and others will invade. The invading seed may arrive by air, water or be transported by animals. Sites that have been returned to bare ground with full sunlight will produce a plant community dominated by annual grasses and other herbaceous plants. The next invaders will be perennial plants and vines, and then shrubs and small trees that will grow into the "climax forest" of large mature hardwood trees. The early stages can easily be observed in a few years, but seeing it all the way to the climax forest is beyond the human lifespan. The changes are rapid at first, but in later stages the forest appears to be changing very little, if at all, until another disturbance comes along to restart the succession all over again. While this concept applies to large areas, we must also think of it on a smaller scale. For instance, if pine beetles kill all of the pine trees on one acre, that area will soon look much different than the surrounding acres because sunlight is now reaching the forest floor.

I invite you to do an internet search of "plant succession." It will change the way you think about land management. Or perhaps you will realize that you already knew and used this concept in your decisions for forest and wildlife management practices. In the next issue we will discuss some specific ways we can use this knowledge to aid our management decisions.

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NEW! See our blog at: www.blogs.msucares.com/forestry

Note: This quarter's newsletter is in a slightly different format. The font and page size is larger. When printing, under "size options" you will need to choose "fit", or if you wish to keep the 12 pt font for printing you will need to copy/paste. Please send your comments about which setup you prefer to me at: l.garnett@msstate.edu

"When the oak is felled the whole forest echoes with its fall, but a hundred acorns are sown in silence by an unnoticed breeze"
--- Thomas Carlyle

Early Successional Stage
Herbaceous Materials

Hardwoods begin to encroach and compete with the pine

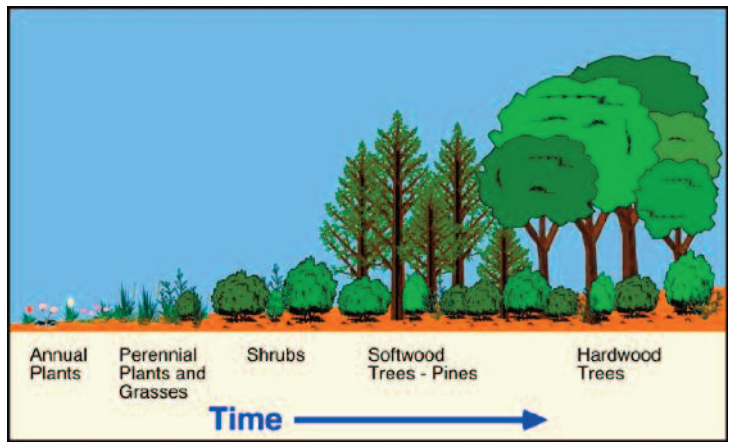
Final Stage of Succession - Mature Hardwood Stand

Low Quality Tree

High Quality Tree

The Objective of the Landowner Tree Improvement Cooperative is the tree on the right

Stages of Forest Succession



Mississippi Landowner Tree Improvement Cooperative

by Randy Rousseau, Extension Specialist

We kicked off the initial year of the Mississippi Landowner Tree Improvement Cooperative during the 2015 planting season, with a total of 14 plantings. There are three major components working together on this project, including ArborGen (the source and donor of the planting stock), Mississippi State University Forestry scientists, and most importantly Mississippi non-industrial forest landowners. The program was designed as an Extension/Research project aimed at evaluating the performance of open-pollinated, mass control-pollinated, and varietal loblolly pine seedlings. Each landowner was provided a total of 800 seedlings, which consisted of three different mass control-pollinated families, three different varietals, an open-pollinated 2nd-generation single family, and an open-pollinated seed orchard mix. Because there are eight different genetic types and our goal was to provide more stand-like data, these seedlings are planted in 100 tree block plots. Thus, each landowner site has the ability to compare among the various genetic types (See plot map below, each box equals 0.23 acres).

Mass Control- Pollinated No. 1 (100 Seedlings)	Varietial No. 1 (100 Seedlings)	Open-Pollinated Single Family (100 Seedlings)	Mass Control - Pollinated No. 3 (100 Seedlings)
Seed Orchard Mix (100 Seedlings)	Mass Control - Pollinated No 2 (100 Seedlings)	Varietal No. 2. (100 Seedlings)	Varietal No.3 (100 Seedlings)

In 2015, 14 landowners from across the four Mississippi Extension Districts each provided two acres for a planting site. Besides the area for planting, each landowner also completed their own site preparations, provided the planting crew, and completed an herbaceous spray following planting. Extension personnel marked the site for planting at a specific 10 by 10 foot spacing with different color pin flags representing each genetic type, and assisted in the planting to ensure correct arrangement. Each planting site will be measured annually by Mississippi State University and the information will be provided to each landowner about their respective site as well as all 14 planted for that specific planting year. These sites while providing excellent data across the state will also serve as excellent demonstration sites for Extension/Landowner field days. As time goes by, the information concerning growth and yield performance will provide an excellent data set to aid all Mississippi Forest Landowners on what genetic types should be used to meet their objectives and increase the revenue from their timber. We will again be looking for eight to 12 landowners in 2015 for the 2016 planting. Any forest landowner that will be establishing pine plantations in 2016 and would like to participate in this program, should call Randy Rousseau at (662) 325-2777 or e-mail at rjr84@msstate.edu.

Delta Hardwood Notes

by Brady Self, Extension Specialist

Managing Hardwoods for Acorns (Part 3)

In Parts 1 and 2 of this series we learned about some acorn production differences between the red and white oak groups. In this installment, we will discuss techniques with which you can determine your best producing trees and how to manage for maximum acorn production. The only way to know which stems are the best acorn producers is to evaluate production of individual trees. Acorn production can be observed during late summer and early fall, and determinations can be made regarding which trees to favor in future management efforts. Due to the variability of year-to-year acorn production, this evaluation should take place over the course of five or more years. If you are a time-limited individual, trees may be observed during a "bumper" mast year to make a rough estimate regarding production potential. Keep in mind that many good producers in the red oak group may be overlooked during a single year's observations.

After your best producers have been identified, thinning operations should be performed in their immediate vicinity. These thinnings should focus on exposing crowns of residual trees to full sunlight. Increased exposure to sunlight will result in crown expansion and ultimately lead to increased acorn production. Make sure that a mixture of both red and white oaks are retained to minimize yearly fluctuations in the acorn crop. Your overall goal should be to keep oaks as 50 to 60 percent of the residual stand. After performing thinnings, it will take several years for individual oak stems to respond and an observable increase in acorn production to occur.

Mississippi Timber Price Report

MISSISSIPPI STATE UNIVERSITY EXTENSION

2nd Quarter 2015

The Mississippi Timber Price Report (MTPR) is a quarterly survey of stumpage timber prices in Mississippi. It is developed to provide a picture of timber market activity. The state average prices for common forest products are listed. Values given are offered as a guide to help individuals assess the fair market value of their timber. The average price should not be applied as the exact value for a particular tract. This report is updated quarterly and available at MSUCares.com/forestry, or by contacting your local county Extension office.

QUARTER'S PRICES: 2nd Quarter 2015 Stumpage Prices/Ton (Source: Timber-Mart South)

Pine Sawtimber - $25, Pine Chip-N-Saw - $14, Pine Pulpwood - $8,
Mixed Hardwood Sawtimber - $33, Hardwood Pulpwood - $9

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

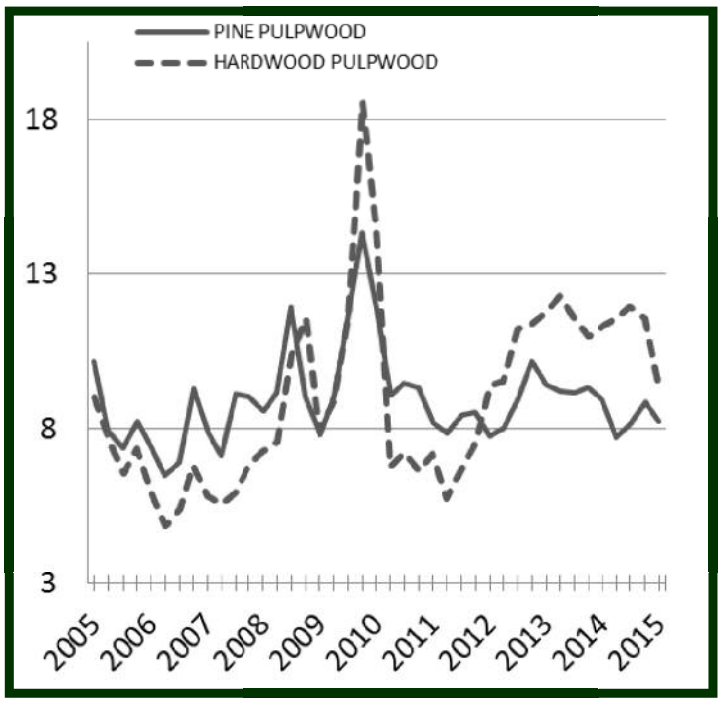
WHAT'S MOVING PRICES - TRENDS:

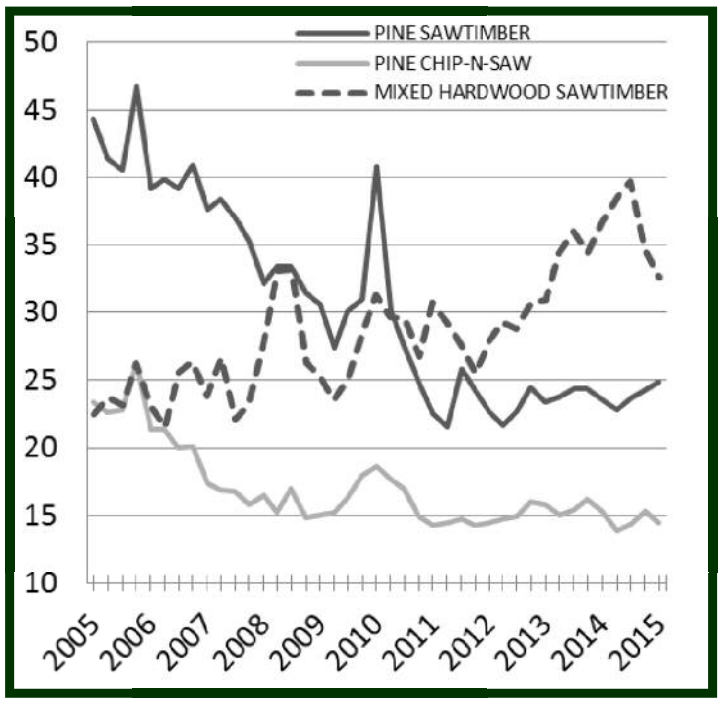
Product prices for all product categories decreased during the 2nd quarter with the exception of pine sawtimber.

Pine sawtimber increased by 2.5%, pine chip-n-saw decreased by 5.8%, and pine pulpwood decreased by 7.9%. Stumpage prices for hardwood decreased from the previous quarter by 6.1% for mixed hardwood sawtimber and by 20.5% for hardwood pulpwood.

TIME SERIES:

Average Mississippi Pine and Hardwood Stumpage Prices
2nd Quarter 2005 through 2nd Quarter 2015
(All prices in $/TON)





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.TMART-SOUTH.COM/ for information on subscriptions.

Please don't forget to check out our Blog at www.blogs.msucares.com/forestry and sign up for email notices!

Emerald Ash Borer Awareness

by John Willis, Extension Specialist

Mississippi landowners and communities may soon be threatened by a tree pest that is one of the most devastating invasive insects ever introduced to North America. The emerald ash borer (Agrilus planipennis) (EAB) has killed hundreds of millions of ash (Fraxinus spp.) trees since its introduction to southeast Michigan in the mid-1990's (Siegert et al. 2007). Efforts to contain the spread of EAB have largely been unsuccessful, as 25 states currently have confirmed infestations, including neighboring states Louisiana, Arkansas and Tennessee. Although ash represents only a small fraction of all forest trees in Mississippi, the recent advance of EAB into the South is troubling. Much of this concern relates to the high economic value of ash lumber, and because ash has recently (past 20 years) been widely planted on alluvial soils throughout the state through federally funded conservation programs. In the Delta region of Mississippi, ash makes up about 20% percent of the marketable timber species. In addition to its value as a commercial forest species, countless ash trees are planted as landscape trees in cities and residential landscapes.

While it cannot be predicted if or when EAB will reach Mississippi, it is widely accepted that early detection will be an important factor in reducing its potential financial impact. As such, we encourage all citizens to be observant of your surroundings, as it can guide you in your EAB detection efforts.

Emerald Ash Borer (EAB)

EAB Woodpecker Damage

<u>Some Indicative Signs of EAB</u>
Woodpecker damage
D-shaped exit holes
S-shaped galleries
Crown dieback
Epicormic shoots

EAB D-shaped Exit Holes

EAB S-shaped Galleries

EAB Crown Dieback

EAB Epicormic Shoots

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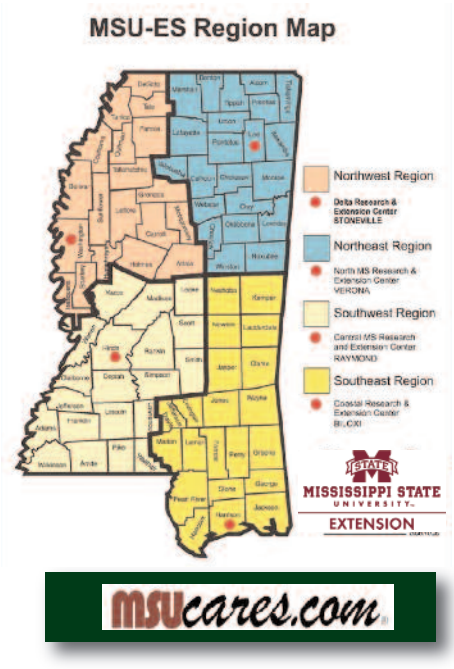

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