ACTION IN AGROFORESTRY

monthly newsletter of the University of Missouri Center for Agroforestry

Michael Gold and Michelle Hall, editors

A Thousand Concerns with Thousand Cankers

The Thousand Cankers of Black Walnut National Conference held in St. Louis Nov. 3-4 pulled together more than 140 participants from 24 states to assess what is already known and what actions need to be taken to reduce risk movement of this insect/disease complex into the eastern United States.

Examples of cankers found around beetle galleries. Images courtesy Hank Stelzer.

Attendees included researchers, nut growers and processors, conservation agencies, nursery operators, and state and federal agencies with regulatory power.

Invited UMCA presenters at the national conference included Mark Coggeshall (walnut susceptibility and conservation) and Jerry Van Sambeek (potential for spread of disease and distribution of walnut resource). In addition, Brian Hammons, President of Hammons Products Co., presented on implications of lost nut crops.

The walnut twig beetle (*Pithyophthorus juglandis*) and associated fungus (*Geosmithia morbida*) work in concert -- the beetle opening the pathway and the fungus colonizing the inner bark and forming small cankers at each entry point. Cankers eventually clog the phloem and kill the tree.

Why the sudden explosion in the western U.S. of a native pest complex? No one knows. Movement of beetle-infested walnut wood is a major concern. For more information, check out the pest alert prepared by Colorado State: http://www.ext.colostate.edu/pubs/insect/090604_pestalert.pdf

The Missouri Department of Agriculture and Missouri Department of Conservation are working together and will cooperate with the local United States Department of Agriculture-Animal and Plant Health Inspection Service representatives to set up protocols for screening potentially infected trees. Current estimates indicate the loss of the walnut resource in Missouri is projected to exceed a half billion dollars in altered landscape values and lost wood, nuts and jobs.

MDA has assembled a DVD containing thousand cankers-related documents, along with the program, slide presentations, audio and notes from the conference. Contact the Missouri Department of Agriculture, office of the state entomologist, at 573-751-5505 with your name and address to order a free copy.

GUIDING LANDOWNERS

The MU Center for Agroforestry has been busy working on its Agroforestry in Action line of publications over the past few months.

New guides include “Succession Planning for Woodland Owners,” AF1013, and “Understanding Casualty Loss of Timber,” AF1014.

“Succession Planning” was co-authored by Larry Godsey, along with David Watson, financial advisor and Missouri Tree Farmer. This publication is about helping the current owners of family forestland assess their situations and prepare for a successful transition to the next generation of owners.

Godsey also authored the “Casualty Loss” guide. Two major tax concepts are involved in determining a casualty loss deduction: “adjusted basis” and “fair market value.” This guide is an explanation of these concepts and two case studies illustrating their application in determining a casualty loss deduction for damaged timber.

In addition, extensive updates have been made to the guides “Growing Black Walnut for Nut Production,” AF1011, and “Growing Chinese Chestnut in Missouri,” AF1007. The black walnut guide has a new chart on foliage nutrients and the chestnut guide now includes a page detailing the economics of establishing and managing an acre of chestnuts.

See all of these “new” guides and more at http://www.centerforagroforestry.org/pubs/index.asp#pubs

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KUDOS

Peter Motavalli has received the Maxine Christopher Shutz Award for Distinguished Teaching. This annual MU campus-level award is given to a faculty member who has "demonstrated extra efforts to involve undergraduates in active learning experiences and to personalize the undergraduate experience of students." The honor includes a monetary award and the delivery of a public address.

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Michele Warmund, Larry Godsey and Mike Gold received a Missouri Department of Agriculture Specialty Crop Grant to study "An Economic Analysis of a Paddock Vacuum for the Mechanical Harvest of Chestnut Trees." The award is for $9,185. Research is underway to determine the feasibility of harvesting chestnuts with a vacuum system.

OUTREACH

Dick Schultz presented "Managing streams and riparian buffers" at the Iowa Grazing Lands Conservation Initiative Conference – Optimizing Grazing and Enhancing the Environment. Rathbun Lake, Moravia, Iowa. August 2009.

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The December 2009 issue of *Inside Columbia* magazine features a one-page spread on the rehabilitation of the **Thomas Hickman House**. "Aging Gracefully: The Thomas Hickman House Gets a Makeover at Age 190," appears on page 31 and features four photos of the home and the dedication ceremony. See the issue online at http://www.insidecolumbia.net/

COMING SOON...

Jan. 6-7 Inaugural Agroforestry Research Symposium and Annual ARS Review, *Stotler Lounge, Memorial Union*

* From 9 a.m.-noon Jan. 6, UMCA will host the Inaugural Agroforestry Research Symposium.

Keynote speaker: Dr. Andy Mason, interim director, USDA National Agroforestry Center, Washington, D.C., *"Agroforestry in America: New Opportunities for a Sustainable Future."*

Additional speakers: Dr. David Burner, *"Regional Collaborative Research on Diverse Biofuel Grasses";* Drs. Ranjith Udawatta, Stephen Anderson and Peter Motavalli, *"Agroforestry's Environmental Services: Drawing the Big Picture"*; and Dr. Mike Gold and Larry Godsey, *"Specialty Crop Industries for the Midwest."*

Andy Thomas was interviewed for an article all about pawpaw in October by KSMU public radio station. Read and/or listen to the article here: http://www.ksmu.org/content/view/5353/66/

IMPACT

BayerCrop Science has changed their label worldwide for the herbicide isoxaflutole (Merlin ®) based on recent research findings by **Chung-Ho Lin**. Bayer now recommends not to mix isoxaflutole with water containing high levels of chlorine, or its efficacy may be reduced. The utilization of metabolite profiling through tandem mass spectrometry in one of Lin's projects has led to the discovery of the rapid degradation of herbicide Balance™ (isoxaflutole) to an inactive form by hypochlorite ions in tap water. Several stable chlorinated by-products also were first identified and characterized from this work.

RESEARCH

Bruhn, J.N., J.D. Mihail, and J.B. Pickens. 2009. Forest farming of shiitake mushrooms: An integrated evaluation of management practices. Bioresource Technology 100:6472-6480.

Devised new method for analyzing effects of alternative management practices on shiitake mushroom products. *Mushroom production was directly related to the volume of un-discolored wood (roughly equivalent to sapwood) in a log. The wide-temperature-range strain WR46 was more productive than the warm and cold weather strains tested. Sugar maple and white oak were more productive than red oak. Sawdust and thimble spawn were more productive than dowel spawn. As expected, wide-range and warm weather strains fruited in response to precipitation; cold weather strain responded to temperature fluctuation.*

Nothing like fresh, locally grown chestnuts roasting on an open fire to bring out the crowds! The MU Center for Agroforestry had a booth at the Columbia Farmers' Market Nov. 14 to sell fresh and sample roasted chestnuts. Introducing people to the taste of chestnuts or hearing their excitement at seeing them again after a year is very rewarding!

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