

ACTION IN AGROFORESTRY

monthly newsletter of The Center for Agroforestry at the University of Missouri

February 2011

Michael Gold and Michelle Hall, editors

Vol. 2, No. 2

Save the Date for 9th Annual Missouri Chestnut Roast

The Ninth Annual Missouri Chestnut Roast will be Saturday, Oct. 8, from 10 a.m. to 4 p.m. at the Horticulture and Agroforestry Research Center, New Franklin, Mo.

The Roast, held each October during the chestnut harvest season, has become one of mid-Missouri's premier family-oriented fall fes-



tivals, drawing thousands of visitors to the University of Missouri's Horticulture and Agroforestry Research Center. The event is a harvest festival; a family day out; a Missouri specialty product showcase; an agroforestry field day; and – first and foremost – a chestnut extravaganza!

Admission and parking are free for the event.

SYMPOSIUM VIDEO NOW ONLINE

Video of the presentations from the Second Annual Agroforestry Symposium, held Jan. 12, are now available online.

Go to <http://www.centerforagroforestry.org/events/sym2011.php> to see all of the presenters, including keynote speaker Steve Flick, Show-Me Energy. When the presentations were streamed live, the audio of Flick's talk was not available. Hear it now, along with the seven others.

UMCA OFFERS CHESTNUT WORKSHOPS IN 2011

The Center for Agroforestry at the University of Missouri has pioneered growing Chinese chestnuts in Missouri and will teach others what they've learned through four workshops offered at the Horticulture and Agroforestry Research Center, New Franklin, Mo., throughout 2011.

About 60 landowners have gone through the workshop series the past two years and post-workshop feedback was overwhelmingly positive. Attendees rated the workshops, on average, either "excellent" (90 percent) or "good" (10 percent) in surveys administered after the final meeting.

Mike Gold, associate director of The Center, recommends interested participants sign up for the full course of four sessions – attendees will be taken through the entire growing season and learn about establishing and caring for trees, in addition to harvesting, cleaning and marketing the nuts. The workshops will occur throughout the year, covering topics relevant to the time of the growing season.

Course dates and topics are as follows (all sessions are on Tuesday):

- * Tuesday, March 22: Site selection, planting, grafting planning and pruning;
- * Tuesday, May 3: Grafting;
- * Tuesday, Aug. 16: Orchard maintenance, weed control, insect scouting and pest management, and disease control;
- * Tuesday, Sept. 13: Chestnut harvest, marketing and sales.

MU instructors include Gold; Ken Hunt, research scientist, forestry; Mark Coggeshall, research assistant professor of forestry; and Michele Warmund, professor of plant sciences. Outside experts and veteran growers will be brought in for individual courses when applicable.

Previous workshop series were supported by a Missouri Department of Agriculture Specialty Crop Block Grant, which has ended. For 2011, workshop fees will be \$75 per session or \$300 for the entire course. The fee includes educational materials and lunch. A minimum of 10 participants for each course is needed for the workshops to be offered. The event confirmation date will be March 15, so sign up today!

For workshop details contact Gold at 573-884-1448 or goldm@missouri.edu; contact Julie Rhoads at 573-882-3234 or rhoadsj@missouri.edu to reserve your place for individual workshops or book all four in advance (recommended).

ACTION IN AGROFORESTRY

IMPACT

Chung-Ho Lin has applied for two patents:

“Purification of anti-microbial, anti-fungal and anti-inflammatory diterpenoids from Eastern redcedar (*Juniperus virginiana*).”

“Development of a spore-based biocatalyst for remediation of atrazine and other environmental pollutants (with *Brian M. Thompson and George C. Stewart*).

Lin also has submitted an invention disclosure form:

“Use of tricyclic diterpenoids from Eastern redcedar (*Juniperus virginiana*) for preventing and ameliorating the development of melanin and hyperpigmentation.”

KUDOS

The following research proposal has been funded:

Kelly Nelson (PI), **Peter Motavalli**, Manjula Nethan, and **Ranjith Udawatta**, “Utilization of Enhanced Efficiency Nitrogen Fertilizer and Managed Drainage to Reduce Nitrate-N Loss Research,” Fertilizer and Ag Lime Board, \$90,355, February 2011-January 2013.

COMING SOON...

Feb. 21-23 Agritourism, Small Fruit & Vegetable Conference
Springfield, Mo.
Go to <http://mtngvr.missouristate.edu/commercial/conference.htm> for more info.

March 5 and April 2 Family Forest Legacy Workshops
March 5: Columbia, Mo.; April 2: Jackson, Mo.
Go to www.snr.missouri.edu/forestry/extension/events.php for more info or to register.

June 4-9 12th North American Agroforestry Conference
“Agroforestry: A Profitable Land Use”
University of Georgia, Athens, Ga.
For more information:
<http://hosting.caes.uga.edu/2011NAAC/>

June 24-26 Chestnut Growers of America annual meeting
Go to <http://www.wcga.net/> for more info.

RESEARCH

Chung-Ho Lin presented “Exploration of Diterpenoids Isolated from Eastern Redcedar for Antibacterial, Antifungal, and Activity on Melanoma Cells” at the International Conference on Gram-Positive Pathogens, Omaha, Neb., Oct. 10-13, 2010. About 200 people attended the presentation.

Eastern redcedar (ERC) is one of the most widely distributed tree species in Missouri. The ERC is an important source of bioactive secondary metabolites, but very few of these compounds have been identified, purified or commercialized. An interdisciplinary collaboration between MU scientists was initiated to identify and isolate biologically active phytochemicals from ERC tissues for possible commercial application. Many of these isolated diterpenoids not only have shown strong anti-microbial activities against a wide range of pathogenic bacteria, but also strong inhibitory activities against melanin biosynthesis. The first of these compounds to be characterized is the purified bioactive diterpenoid, which was found to have a significant inhibitory effect on the growth of all Gram-positive pathogens tested. It also played a small role in the inhibition of a select handful of Gram-negative bacteria. Additional compounds have activity on fungal agents, as well as potential anti-melanin activities.

OUTREACH

Shibu Jose presented at the Missouri River Relief Big Muddy Speaker Series, Jan. 18, Les Bourgeois Bistro, Rocheport, Mo. He spoke on “Biomass in the Missouri River Floodplain.”



Research by **Ranjith Udawatta, Harold E. Garrett and Robert Kallenbach** is prominently featured on the American Society of Agronomy Web site, <https://www.agronomy.org/>. The research, “Agroforestry Buffers for Nonpoint Source Pollution Reductions from Agricultural Watersheds,” was posted

online in the *Journal of Environmental Quality* Jan. 25, <https://www.soils.org/files/publications/jeq/abstracts/agroforestry/q10-0168-abstract.pdf>



The Center for Agroforestry at the University of Missouri

203 ABNR 573-884-2874

www.centerforagroforestry.org

Shibu Jose, Ph.D., Director

 The Center for Agroforestry
University of Missouri

A Global Center for Agroforestry, Entrepreneurship and the Environment