GREEN HORIZONS

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Community Forestry

Missouri trees face new threats from pests

by Hank Stelzer
Extension Forester

Landowners across the Show-Me State need to be aware of two new threats to Missouri's trees: one is an insect, and the other is a fungus. While neither has been found among our trees to date, their potential impact on native ashes and oaks warrant our attention.

The emerald ash borer (*Agrilus planipennis*), or EAB, was discovered in July 2002 feeding on ash trees in southeastern Michigan. Despite extensive quarantines and eradication efforts, the insect has been detected in northeastern Indiana and northwestern Ohio. **(cont. page 4)**

Left: : Exit holes left by the emerald ash borer are typically D-shaped.The insect, shown below, poses a potential threat to Missouri ash trees.

Market Opportunities

Missouri pecan growers seek "sweet spot" in organic market

by Rachel McCoy
UMCA Information Specialist

From the first bite of a native Missouri pecan, people know there's something special and different about these nuts. The taste brings families year after year to the central Missouri town of Brunswick, Mo., and the state's southwest area of Vernon County, Mo., the two regions identified with the majority of Missouri's pecan production. Missouri has retained thousands of acres of native pecan trees in its riverbottom regions, making the state an excellent source of "northern" pecans - known for their smaller size and rich flavor that

Native Missouri pecans ready for harvesting. Growers in Nevada, Mo., are expanding their market opportunities with certified organic native pecans.

(cont. page 2)

College of Agriculture Food and Natural Resources

Published by the MU Center for Agroforestry and the School of Natural Resources

Pecan growers seek “sweet spot” in organic market

(cont. from page 1)

distinguishes them from the nation's southern-grown pecans.

The Missouri Northern Pecan Growers LLC, (MNPG) based in Nevada, Mo., has found three simple words to describe this distinction: “sweeter by nature.” The tagline is meant to express that pecans grown in Missouri naturally offer a sweeter, richer flavor than southern-grown pecans, due to a smaller size and higher oil content.

Recently, a new symbol has been capturing consumer attention on packages of fresh pecans from the small farmer-owned company. MNPG's newest product is labeled “American Native” Pecan, Certified 100% Organic, and is accompanied by the USDA Certified Organic logo.

MNPG LLC partners, from left: Max Senkevech, Drew Kimmell, Joe Wilson, Kevin Hines, and Wayne Harth.

“We have always guaranteed our pecans to be free of pesticides, herbicides and fungicides,” said Drew Kimmell, MNPG managing partner. “The organic certification shows we are serious about offering a product that is not only healthy, but also protects the environment from unnecessary pollutants.”

The company, already known for pesticide-free native pecans, obtained organic certification from the Missouri Department of Agriculture Certified Organic program in 2003, and offered organic Missouri native pecans to buyers for the first time at the May “All Things Organic™” conference in Chicago, Ill. Sponsored by the Organic Trade Association (OTA), more than 30,000 visitors attended the event that is exclusively focused on the organic products market. According to the OTA, the organic industry is booming - growing at a rate of 20 percent annually - with U.S. retail sales of organic products projected to reach $20 billion by 2005.

“Buyers from all over the world sampled Missouri native pecans, with glowing comments on their flavor,” said Diana Daniels, MNPG marketing and sales executive. “The show produced immediate orders from bakeries, food co-ops and retail stores.”

Aligning with Market Trends

With its recent organic certification, MNPG is rapidly developing a new audience and higher value for Missouri native pecan producers. Kimmell personally assisted all MNPG growers toward achieving official organic certification last year, after a detailed 2003 market research analysis showed excellent potential for expansion into the profitable organic market. All the certified organic producers participating in the company are located in Vernon County where MNPG coordinates the processing and marketing of the pecans.

Now recognized by the American Heart Association to provide a range of heart-healthy and cholesterol-lowering benefits, demand for pecans is rising as consumers take a more active approach to their health. Kimmell said there is an increasing need for more organic pecan production to meet this demand. In a spring meeting, he told University of Missouri Center for Agroforestry (UMCA) staff that 2,000 cases of packaged organic pecans had already been ordered, with additional large orders being developed. More than three-fourths of the 2003 crop has already been sold.

“The markets are certainly there,” Kimmel said. “We're exploring several options because the profit potential for certified organic nuts is continually rising.”

Exploring new markets

MNPG conventional pecans can be purchased in more than 240 retail stores in Missouri, Kansas, Iowa, South Dakota, Minnesota, Nebraska, Illinois, Wisconsin and California. The company is investigating a buyers' club for consumers who use organic nuts frequently, and direct selling to consumers via the Internet and specialty magazines, especially in the vegetarian and healthy living segments. Retail specialty grocers, health food stores and confectionaries are additional profitable markets,

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Pecan growers (cont. from page 2)

not just for shelled nutmeats, but for "Sinful Delight," a chocolate, caramel and pecan product the growers' recently introduced. Mainstream grocers are another large market, as most are continually increasing their supply of certified organic products to keep up with consumer demand.

Kimmell said Midwestern growers may have a unique niche market opportunity, in that there are no other certified, branded organic pecan products available and few traditional growers working actively in the organic market. This quickly-growing market potential could allow MNPG to greatly increase its purchase of organic pecans each year. The organization plans to focus on gaining retail distribution in the west, northwest, northern and northeast markets where southern pecans are not favored. MNPG is developing grower programs, including management and training, for producers of organic nuts.

Linda Matlock, MNPG employee, helps a customer select a package of fresh Missouri native pecans at the growers' retail store in Nevada, Mo.

"The challenge is to identify and grow directly for the consumer who recognizes the value of a certified organic product," said Joe Wilson, MNPG partner. "We're already selling to Kansas City-area restaurants, but predominately conventional pecans at this time."

One market barrier Kimmell and Wilson identified is the expense of roadside billboards directing travelers to opportunities to purchase value added products from local farmers. Yearly expenses for a roadside billboard can be thousands of dollars. Another challenge lies in making a clear distinction to consumers that MNPG is offering "certified organic" pecans, which requires an investment of time and financial resources to complete the rigorous organic certification process. The ingredient sector of the baking and snack food industry may offer an additional new market for organic pecan oils, and MNPG growers are identifying baking industry trade magazines for possible advertising outlets.

"We feel direct marketing and selling to consumers are our most profitable options," Kimmell said. "This effort can be supplemented by the candy and snack industry, especially as we remain the only branded organic pecan producer."

Wilson is confident that the distinct flavor and quality of the growers' pecans will continue to open doors in several markets. "We believe the 'Missouri flavor' will introduce a new image for our pecan taste," he said. "Processing and removing the shell of our smaller native pecan provides a more convenient product for the purchaser, great for snacks or cooking."

Working Collaboratively

UMCA has worked within the state's native pecan industry for many years, and is hoping to collaborate actively with MNPG to improve the organic pecan market through enhanced pest control, effective management of native pecan stands and market research. The Center is currently working to connect with nutrition and dietetics professionals for possible joint research and grant activities evaluating the health benefits of locally-grown nuts in patients' diets. To help increase consumer awareness and demand for nuts, the Center is offering nutritional information about pecans, black walnuts and chestnuts through its new publication series, "NUTrition and Your Health." Interestingly, the 2003 MNPG market study showed that health and nutrition is the number one motivator for consumers in purchasing an organic product over a non-organic product, followed closely by taste - creating an excellent marketing niche for MNPG organic pecans.

"Missouri landowners have a history of harvesting native nuts, growing a business on the premise that the nuts are sweeter and better tasting," said Michael Gold, UMCA associate director. "Now these landowners are in a position to establish a strong presence in the organic produce market, bringing a host of benefits for family farms and the state's natural environment."

Missouri Northern Pecan Growers, LLC, was founded in 2000 by southwest Missouri pecan growers to distinguish the native Missouri pecan from the Southern pecan and create a new market for Missouri pecan products. For more information, visit www.mopecans.com.

2003 Market Research: Ann Wilkinson

New threats from pests (cont. from page 1)

The spread of this insect has been attributed to the movement of infected nursery stock and firewood logs. So far, emerald ash borer has only been found on green, white and black ash trees. The adults emerge from mid-May to late June and are a bright metallic emerald green (hence their name). Their length is about half the diameter of a penny. After mating, the females lay their eggs in bark crevices.

Larvae then feed in the phloem and outer sapwood, producing S-shaped galleries that eventually girdle and kill branches and entire trees. The larvae overwinter and the cycle begins anew the following spring.

Left: Emerald ash borer larvae create S-shaped galleries that eventually girdle and kill branches and entire trees. Right: Trunk sprouts, or suckers, are a common response to emerald ash borer injury. These abundant sprouts may indicate the presense of the insect.

Infestations of EAB can be difficult to detect until canopy dieback begins. Many trees appear to lose about 30 to 50 percent of their canopy in one year and the tree is often killed within 2-3 years of initial attack. Evidence of infestation include D-shaped exit holes on branches and trunk; vertical splits in the bark resulting from the tree producing callus in response to the galleries formed by the feeding larvae; heavy woodpecker activity as they feed on the larvae; and a profusion of bole and root sprouts. Systemic insecticide treatments of imidacloprid may or may not save infected trees, depending upon how long the tree has been under attack. The only proven control method is eradication of all ash trees greater than one inch in diameter surrounding the infected tree.

Sudden Oak Death

Sudden oak death, or SOD, burst on to the national scene this spring when it was reported that two California nurseries that ship woody ornamental plants all over the United States had become infected with the fungus responsible for the disease.

Missouri was among the states receiving infected stock, but we were lucky. The suspect plants were traced and tested, and the results were negative. However, several southeastern states were not so fortunate. Statewide prevention efforts are currently underway at the Missouri Department of Agriculture, and on a national level, through the USDA to monitor the disease. Recent regulations require approximately 1,500 California nurseries to be inspected and certified free of the pathogen before nursery plants can be shipped.

The disease was first reported in 1995 in central coastal California. Since then, tens of thousands of tanoaks, coast live oaks and California black oaks have been killed by the fungus, Phytophthora ramorum. At least 59 additional plants have been affected, including many common ornamental species. Laboratory tests have shown that the fungus can attack many oaks, and Missouri's northern red and pin oaks are highly susceptible.

Once infected, oaks display a list of symptoms, including cankers on the stem. Infected trees may survive for a couple of years, but once crown dieback begins, leaves turn from green to pale yellow

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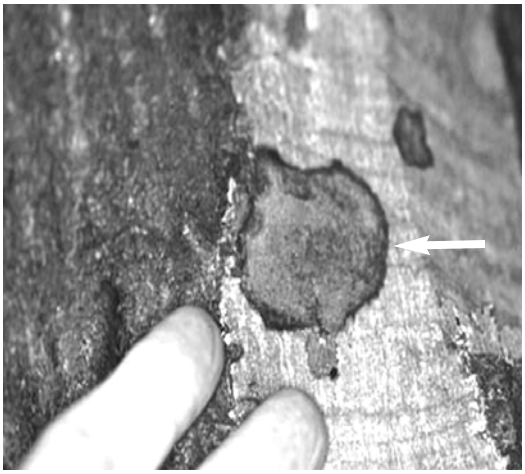
Trees face potential threats (cont. from page 4)

to brown within a few weeks. Black or reddish ooze often bleeds from the cankers. Patches of blackened tissue are often found under the bark, and laboratory tests are needed to confirm the pathogen's presence.

There are several SOD look-alikes in the landscape. Oaks defoliated early in the growing season by insects or other pathogens may appear dead, but leaves usually reflush later in the season. Canker rots, slime flux, leaf scorch, root diseases, freeze damage, herbicide injury and other ailments may cause symptoms similar to SOD. The disease can also be confused with oak wilt, oak decline, and red oak borer damage; all prevalent pest problems in Missouri. As with EAB, to date there are no proven control measures for sudden oak death. If you suspect a tree is infected with the disease, contact your local Missouri Department of Conservation forester or extension specialist.

For more information on emerald ash borer or sudden oak death, contact Hank Stelzer at (573) 882-4444; or email stelzerh@missouri.edu. Information is also available at the USDA Animal and Plant Health Inspection Service web site at www.aphis.usda.gov.



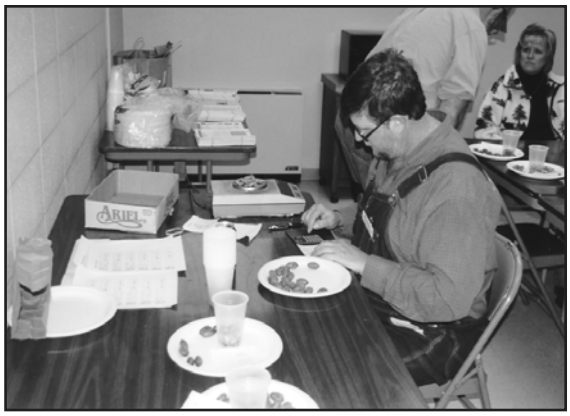
Beneath the bark, distinct lines surround the sudden oak death fungus.

Native Pecan Nut Contest generates ideas; friendly competition

by Ken Hunt
UMCA Post-Doctoral Fellow

Aside from the atmosphere of friendly competition, participants at the Native Pecan Nut Contest in January enjoyed an opportunity to discuss pest control, fertilization, grafting and regional marketing of pecans.

Bill Jackson, manager, AGRIServices of Brunswick, LLC, sponsored the native pecan contest with assistance from the Missouri Nutgrowers Association. The event, held at the Chariton County Courthouse in Keytesville, Mo., drew several local producers: Terry and Rick Smith of Harvey's Pecans; Tim Rice of Corn Crib Farms; Bob Magruder of Dalton, Mo.; Harry Porter of Salisbury, Mo.; Bob and Joe Kussman; Robert Crowder; Gerald Kruse; and Paul and Michael Manson of King Hill Farms.



Bill Reid, research and extension horticulturalist, judges native pecan nut entries..

Bill Reid, research scientist and extension horticulturist, Kansas State University, and Ken Hunt, UMCA post-doctoral fellow, judged twenty native entries. Paul Manson earned first place with "Kuntz Tree," offering a nut weight of 4.28 grams and 51.47 percent kernel. Second and third place were awarded to Joe and Shelly Kussman, with a nut weight of 5.30 grams and 45.43 percent kernel for second place, and third place for a nut weight of 4.90 grams and 45.20 percent kernel. In addition, Joe Kussman brought an outstanding sample of Pawnee for exhibit.

Branding the "Brunswick Pecans" name and enhancing the regional identity for native pecans were included in topics of discussion. Incorporating agritourism with pecan sales and developing more identifiable roadside signage for attracting visitors are topics area producers hope to explore further.

According to Hunt, this promotion of native Missouri pecans is one goal of coordinating a nut contest. "Native Missouri pecans have a higher oil content than more southern pecans, (cont. page 11)

Bottomland hardwood forests: restoration and management

Bottomland forests can be very productive for landowners and maintain important wildlife habitats.

Millions of acres of Missouri bottomland forests have been cleared for agricultural production, creating some of the state's most productive farmland. However, this practice has resulted in a dramatic decrease in the acreage of this diverse land type. Only 20 percent of the bottomland forests that once existed in the United States remain today, and in Missouri, only 1.5 million acres remain. Many of these bottomland forested areas are prone to periodic flooding and may be considered only marginal for agricultural production - but through agroforestry practices and sound timber management, these areas can still be very productive for landowners and can maintain valuable wildlife habitats.

In keeping with its mission to promote research on agroforestry practices that improve the production and protection of agricultural and forest lands, one of the Center's research initiatives is to investigate methods for establishing oak and other hardwood tree species in floodplains. The reestablishment of oak in these areas provides several benefits to landowners, including diversifying native forests; combining timber, acorn production and the management of wildlife habitat for recreational operations; and restoring waterfowl habitats using integrated agroforestry practices. In addition, bottomland forests intercept pollutants from both ground and surface water and protect streambanks from erosion while offering invaluable protection against flood damage to levees. Last year, UMCA scientists participated in a project team including the U.S. Forest Service and the University of Missouri Department of Forestry in a study to evaluate regeneration methods for establishing oaks in floodplains. Several key findings emerged from this study that continue to be valuable to land and forest owners:

- Oak can be established in former bottomland crop fields by planting large container grown oak seedlings with a cover crop of redtop grass, producing a 98 percent survival rate after 4 years.

- Rabbit damage, a major cause of regeneration failure, was greatly reduced in the redtop fields as the wildlife habitat became more open to rabbit predators (raptors).

- Acorn production in large container seedlings of swamp white oak that were only 18 to 24 months old is phenomenal compared to production in natural oak stands, which often do not produce acorn crops for 20 to 30 years. This is a major benefit to landowners who are seeking acorn production for wildlife purposes, and it is important in providing a local seed source that makes possible natural regeneration of oak in the future.

Based on this research, the Center for Agroforestry and its collaborators hosted a spring workshop detailing the current state of our knowledge on restoring hard mast species to major river floodplains. The workshop was supported through the Missouri Department of Conservation (MDC) Forest Land Enhancement Program funds. In addition to presentations by experts and researchers, the day concluded with a tour of the MDC Plowboy Bend Conservation Area in Moniteau County, Mo., where there is a large scale UMCA research effort looking at RPM® seedlings for oak regeneration in bottomlands. *

Doug Wallace, USDA Natural Resources Conservation Service state forester, presented an overview of bottomland hardwood management. Wallace cited several important benefits of restoring bottomland forests, including maintaining habitat for whitetailed deer, wild turkey and threatened bird species including the bald eagle. Soil quality is another beneficial landscape attribute of bottomland forests.

“Bottomland forests grow on some of Missouri's most productive soils,” said Wallace. “These sites typically have greater volume growth, **(cont. next page)**

Bottomland hardwood forest restoration (cont. from page 6)

higher site indexes,and shorter rotation cycles than many upland forest sites."

Wallace said a management plan for the treatment of a forested property is one of the most important tools available to a landowner. Management prescriptions should be specific, based on physical site information and current stand information (inventories). Site information should include soil survey data, land elevation and topographical features, including tree species and the land feature associated with each species. Plant and animal species inventories should also be conducted to enable landowners to develop activities that will encourage and support these species.

Dan Dey, USDA Forest Service research scientist and a primary UMCA research collaborator for the oak reestablishment studies, explained some objectives of species selection for bottomland forests. Species can be selected for five distinct land management objectives: timber production; nut production; wildlife habitat; agroforestry; and levee protection.

For timber production, black walnut and oak can be managed for high value specialty products, including veneer and saw logs. Recreational hunting and lease hunting may be profitable objectives for managing timber for wildlife production, including whitetailed deer and waterfowl hunting. When planting for bottomland forest restoration, it is important to match a species site needs and flood tolerance capacity to the conditions of the planting site. Species that are highly flood tolerant include swamp white oak and burr oak. Pin oak and pecan are moderately flood tolerant, while black walnut is not tolerant to flooding. Species suitable for bottomland plantings in agroforestry practices include swamp white oak, bur oak, pin oak and shell bark hickory. In the southeastern region (bootheel) of Missouri, willow oak, nuttall oak, cherrybark oak and overcup oak may be effective.

Dan Dey (far right), U.S. Forest Service, talks with landowners at the bottomland reforestation workshop. Dey is researching the benefits and methods of reestablishing oaks in floodplains.

In bottomland hardwood plantings, it is often recommended that the initial number of seedlings planted be much greater than the future density desired (often expressed as trees-per-acre). This helps ensure that in the natural process of mortality, whether from rabbit, deer, or periodic flooding, enough trees survive to create a forest comprised of desirable species. Given the dynamics of bottomland environments, larger seedlings, like RPM®, can give a distinct advantage to the landowner desiring oak and other hardwood species in that setting. However, due to the higher cost associated with RPM® seedlings and their management, it is not always feasible to plant seedlings beyond the number necessary for reaching your long-term goals.

Agroforestry practices provide the landowner many beneficial options during the growth and development of reforested bottomlands. The practice of alley cropping involves planting widely spaced rows of trees, then farming the resulting alleyways, allowing for maximum utilization of the land while the forest is developing. The trees will also benefit from the use of fertilizers applied to the cropped area. A landowner interested in developing waterfowl habitat might create a raised bed on which to establish the hard mast producing RPM®, oak or pecan trees, with the intention of flooding the cropped alleyways between the raised tree beds. This creates shallow water impoundments that are excellent habitat for migratory waterfowl. In both of these scenarios, the planting configuration utilizes a much more open planting of trees and does not require as many seedlings per acre as other reforestation efforts.

*RPM, or Root Production Method, is a patented process that involves the air pruning of roots throughout the growth of the seedling. For more information, visit www.fknursery.com

Additional information on bottomland hardwood forest restoration, including species for agroforestry plantings and economics, will be available in the fall 2004 issue of Green Horizons. Doug Wallace can be reached at (573) 876-0908; or email doug.wallace@mo.usda.gov. Dan Dey can be reached at (573) 875-5341, ext. 225; or by email at ddey@fs.fed.us

Department of Agriculture Circles Globe to Increase Demand for Missouri Forest Products

by Rachel McCoy
UMCA Information Specialist

The Missouri Department of Agriculture (MDA) is working diligently to establish Missouri as a name synonymous with top-quality lumber production around the globe. Through participation in international conventions, hosting international guests on Missouri lumber tours and coordinating sales with exporters, the MDA hopes markets for lumber will continue to expand.

Recently, MDA teams worked to expand this effort by sponsoring a Missouri booth at the Shanghai International Building and Construction Fair in May, a show that attracts buyers of both hardwoods and softwoods and more than 30,000 attendees.

"This trade show is well attended by hardwood lumber buyers and is an excellent opportunity to meet a number of customers in one place," said John Hensley, MDA crops and timber team member. "China is not only a big customer, but one of the fastest growing markets."

The MDA operates a trade office in Taipei, Taiwan and also makes use of the Department of Economic Development's trade offices in Japan, Korea, Mexico, and Europe. The Taipei office conducts activities such as exhibiting at trade shows, arranging sales missions for exporters and organizing buyers' missions for customers who want to visit Missouri.

Hensley said the presence generated by Missouri companies among international buyers can be powerful. He reports that following participation in recent activities in the Mexican market, one Missouri forest products company has exported more than $55,000 of hardwood lumber. "Mexico represents a particularly good opportunity for Missouri's hardwood exporters, since we are well-positioned to serve customers in that market," he said.

Top Ten Export Markets For U.S. Hardwood Lumber

Canada	$414 Million
China(PRC)	$109 Million
Spain	$ 94 Million
Italy	$ 89 Million
Hong Kong	$ 71 Million
Mexico	$ 70 Million
United Kingdom(Britain)	$ 65 Million
Japan	$ 49 Million
Portugal	$ 25 Million
Taiwan	$ 24.7 Million

Since 1999, hardwood lumber exports to Canada have grown approximately 18 percent, and exports to China have grown 265 percent. Hardwood lumber exports to Vietnam, ranked number 22 among export markets, have grown 1,120 percent during the past five years. Although the growth rate of Canadian exports ranks lower than other markets, Canada remains the number one export customer, accounting for 32 percent of U.S.hardwood lumber exports.

Note: For purposes of collecting data, the USDA treats Hong Kong and China as separate markets. Source: USDA Foreign Agricultural Service BICO reports, based on data from the U.S.

Though U.S.hardwood exports to Mexico have declined overall since their peak in 1999, Missouri forest products companies are geographically well situated to serve this market.

In response to growing Asian furniture industries, the MDA Taiwan office is also pursuing those markets for U.S. lumber. Vietnam's furniture sector has experienced particularly rapid growth, and staff from the Taiwan office recently traveled to Vietnam to meet with furniture manufacturers and increase the market for U.S. hardwoods. Several potential Vietnamese customers provided the staff with product specifications during the trip. In September of 2003, the Taiwan office recruited buyers from Taiwan and Vietnam to travel to Missouri to meet with hardwood lumber suppliers. As a result of the buyers' mission, more than $67,000 in export sales have been reported. Next year, Missouri's Taiwan Trade Office plans to exhibit at furniture industry shows in both Vietnam and southern China.

Mark Hitt, leader of the MDA crops and timber team, said establishing a presence at international events helps generate markets for products Missouri producers are positioned to explore. Korean log buyers, for example, recognize red cedar for its natural pest resistant properties. "As we work to develop supply-driven markets for lumber, we expect to see greater export opportunities arise," said Hitt.

In addition to the MDA's office in Taipei, the Department of Economic Development operates trade offices in Japan, Korea, Mexico, and Great Britain to assist forest products exporters.

For more information, contact John Hensley, MDA, at (573) 751-5613; or visit www.mda.state.mo.us.

Grant helps landowner replace tornado-damaged trees with cedar and pine windbreak

This article is part of a Missouri Department of Agriculture (MDA) series called "Small Farms, Big Ideas" that showcases Missouri producers who are trying innovative and sustainable projects on their farms. The grant that assisted the Karr's in establishing their windbreak is part of the MDA's Missouri Sustainable Agriculture Demonstration Awards program. In 2004, UMCA sponsored three of the program's grants to focus on sustainable projects that involve agroforestry.

For Sustainable Agriculture Demonstration Awards program information, contact Joan Benjamin, MDA, at (573) 522-8616; or email at jamin@mda.mo.gov. To contact story author Lori Compas: call (608) 238-1654; or email lori@hartcreek.com.Visit www.mda.mo.gov to access additional "Small Farms, Big Ideas" stories.

While no farmer expects life to be easy, Robert and Cheryl Karr had no idea it would be this hard. Last year a tornado destroyed their house, garage, two barns, and almost every tree on their property. Now, a year later, their brand-new house sits proudly in its yard, which is freshly seeded and covered with straw. Cattle graze contentedly in the pasture. And thanks to a grant from the Missouri Department of Agriculture, 90 young trees form a new windbreak to replace cedars destroyed by the storm.

"We try to manage our farm as good stewards," Robert says. "A good steward takes care of everything - you have to conserve the soil, keep the trees healthy, take good care of the animals. You have to watch over the whole complex thing."

The Karrs run about 50 red Angus cows on their own 100 acres and an additional 20 acres they rent from a neighbor. They survived the tornado by standing in a closet. The storm ripped off the roof of their house, but the walls remained standing. They emerged to find their farm in shambles.

Robert Karr received a grant to establish a low maintenance, quick growing windbreak after his farm was destroyed by a tornado in 2003. UMCA sponsored three of the MDA Sustainable Agriculture Demonstration awards to feature agroforestry projects.

"We used to have 28 huge oak trees, just here in the yard," says Cheryl."

Their scrapbook shows photographs of the trees completely uprooted. A dump truck hauled the stumps away four at a time. Other trees were damaged, too. Cedar trees along the Karr's northwest corner of their first 40 acres once provided a windbreak in the winter and shade in the summer. The storm destroyed the trees, and only their stumps remain. Skip Mourglia, a forester with the Natural Resources Conservation Service, urged Karr to apply for a grant from the Missouri Department of Agriculture. The grant, part of a program called Missouri Sustainable Agriculture Demonstration Awards, provides funds for farmers to test, evaluate, and adopt sustainable agricultural practices on their own farms. In 2004, the University of Missouri Center for Agroforestry sponsored three of the grants to focus attention on sustainable agriculture projects that involve agroforestry, or the integration of trees and shrubs into agriculture systems.

Karr applied for the grant and received funding to purchase cedar and pine seedlings. Along with his son and granddaughters, he planted about 90 trees in an L-shaped windbreak earlier this spring. The windbreak should provide protection for his cattle in all seasons.

"We get a strong north wind here on this prairie. Those cattle sure will appreciate it," Robert says, looking out over the young trees. "It might take a couple of years, but they'll use it."

The Sustainable Agriculture Demonstration Awards program is sponsored by the Missouri Department of Agriculture with support from the Community Food Systems and Sustainable Agriculture Program of the University of Missouri and Lincoln University. For more information, visit agebb.missouri.edu/sustain/ or call (573) 522-8616.

Tree Farm Conference honors timber management efforts

by Julie Rhoads
UMCA Events Coordinator

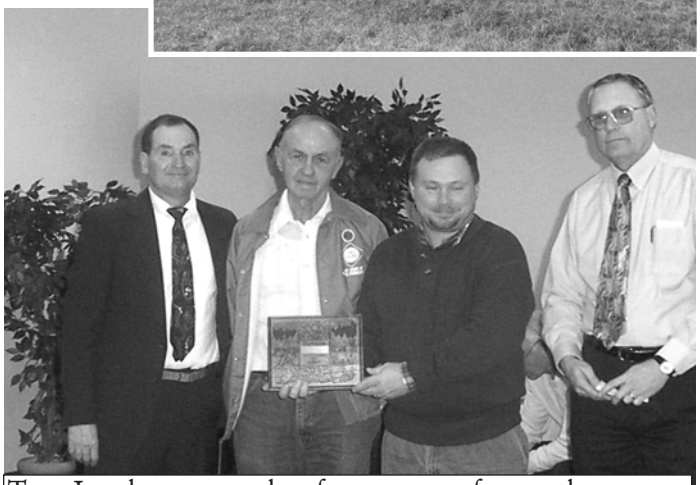
The Missouri Tree Farm Conference, held on Feb. 28 in Lake Ozark, Mo., brought 130 landowners and professionals together to learn about topics including FLEP plans, tree identification, forest management plans, wildlife and timber marketing. Winners of the Tree Farm Program Awards were also announced.

Regional Tree Farmers of the Year included Marc and Mary Robertson, Liberty, Mo; Malinmor Hunt Club, Eolia, Mo; Stanley Wendleton, Boonville, Mo; and Richard and Esther Myers, Protem, Mo.

The recipient of the John P. Slusher Award was Dwight Bensend of Chillicothe, Mo. This award is given for distinguished service to the Tree Farm Program on a sustained basis. The State Tree Farmer of the Year Award was earned by the Shannondale Tree Farm of Salem, Mo.

Prior to the conference, a group of 50 tree farmers and forestry professionals gathered at a private farm near Eldon, Mo., for a Best Management Practices Workshop on watershed management led by Jason Jenson, a Missouri Department of Conservation Resource Forester from Piedmont. Participants learned how to keep sediment and other contaminants out of their waterways, and techniques for preventing erosion along stream banks, access roads and log landings on their properties.

Next year's conference will be held on February 25-26 in Columbia, Mo., at the Stoney Creek Inn. A tour on the 25th will be held at the University of Missouri Horticulture and Agroforestry Research Center located near New Franklin, Mo. For information about the 2005 conference, contact Glenda Fry at the Missouri Forest Products Association, (573) 634-3252 or email glenda@moforest.org.



Top: Landowners gather for a pre-conference best management practices workshop. Above, from left: Gary Smith, MDC forester; John Keesey, consulting forester; Jeff Fulk, winner of the 2003 Tree Farmer of the Year Award; Bob Krepps, MDC state forester. Photo credit: Missouri Forest Products Association

2nd Annual Missouri Chestnut Roast

Saturday, October 16, 2004
11 a.m. to 4 p.m.
Horticulture and Agroforestry Research Center, New Franklin, Mo.

Guided tours of the 660-acre Horticulture and Agroforestry Research Center featuring diverse agroforestry practices

Educational booths from Missouri value-added agriculture vendors and University agricultural and environmental research programs

Showcase for Missouri's outstanding agricultural products, including wines; jams and jellies; pecan, walnut and chestnut products; locally-produced honey; cheeses & meats

Children's Tent, farm display, family activities and music

Hourly informational presentation on the farm's Hickman House, a historic 1819 Georgian cottage and one of the oldest brick homes still standing in the state

Demonstrations of new research on profitable specialty products produced through agroforestry, including pine straw and chestnuts

Free fresh-roasted chestnuts, an emerging value-added crop for Missouri, and samples and displays of Missouri pecans and black walnuts set amidst the beautiful Missouri River Hills

Free admission! All activities under tents for comfort, rain or shine!

For maps and information, visit www.centerforagroforestry.org or call (573) 882-3234.

The Back Page

Native Pecan Seedling Contest

(cont. from page 5)

and are therefore better flavored," he said. "Based upon the producers' discussions, we're on the right track for encouraging greater consumer demand for these nuts."

Hunt said the identification and preservation of exceptional native pecan germplasm is another goal of seedling contests, and he acquires scionwood of native trees from local contests for the repository at the University of Missouri Horticulture and Agroforestry Research Center in New Franklin, Mo.

Woodland Wildlife Short Course

MU Extension specialists Hank Stelzer and Bob Pierce are developing a Woodland Wildlife Short Course that is scheduled for release in November. The DVD-based short course will be delivered through county MU Extension offices with the help of natural resource professionals in the local area. Four indoor sessions will culminate with a capstone "walk in the woods" field day.

Participants will gain basic knowledge of forest and wildlife management and learn how to begin improving their woodlands. -- whether they are interested in wildlife, wood products or aesthetic beauty.

This short course will help you develop a plan that

meets your personal woodland objectives. Short course participants and local natural resource professionals will become a team demonstrating the benefits of good land stewardship. As more individuals become involved, you and your neighbors will see improvements in the area's natural resources, measured by an increase in a sustainable flow of value-added forest products, improved wildlife habitat, more abundant and higher quality wildlife species, and improved water quality in the managed landscape.

For more information about having a short course in your county, contact your local University of Missouri Extension office; or Hank Stelzer, extension forester, at (573) 882-4444 or by email at stelzerh@missouri.edu.

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Riparian Buffer Workshop

October 14, 2004
Horticulture and Agroforestry Research Center
New Franklin, Mo.
(Rain or shine)

For more information, or to register, contact Julie Rhoads at (573) 882-3234, or email at rhoadsj@missouri.edu

We welcome your thoughts!

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Calendar of Upcoming Events

July 25-28, 2004: Walnut Council Annual Meeting and 6th Walnut Research Symposium, Purdue University, Holiday Inn Select - City Centre, Lafayette, Ind. Meeting includes sessions on genetic diversification, timber improvement, nut production and agroforestry, propagation and use of hardwoods in riparian buffers. Visit www.walnutcouncil.org for more information.

Aug 12-22, 2004: Missouri State Fair, Sedalia, Mo. Visit www.mostatefair.com for directions, schedule and admission information.

Aug. 15-18, 2004: Northern Nut Growers Assn. and North American Fruit Explorers (NNGA and NAFEX) Joint Meeting, Ramada Inn, Columbia, Mo. This meeting includes technical sessions and workshops; research center and farm tours; and guest speaker Dr. Chiranjit Parmar from the Himalayan Mountain region. For more information, visit www.nafex.org; or contact Jerry Lehman at (812) 298-8733.

Sept 13-15, 2004: 10th Annual Women in Agriculture Conference, St. Louis, Mo. Organized by Missouri's Soil and Water Conservation Districts, workshops will cover agricultural initiatives including alternative agriculture and sustainable farming, as well as health and legal issues for women. Registration is $75. For hotel rates or more information, call (314) 453-9555, ext.3.

Oct. 14, 2004: Riparian Buffer Workshop, Horticulture and Agroforestry Research Center (HARC) New Franklin, Mo. Contact Julie Rhoads to register, or for more information, at (573) 882-3234 or rhoadsj@missouri.edu

Oct 16, 2004: Second Annual Missouri Chestnut Roast, Horticulture and Agroforestry Research Center, New Franklin, Mo. Free admission; event open 11 a.m. to 4 p.m. Visit www.centerforagroforestry.org for more information.

Nov. 5-6, 2004: Central Region Woodland Conference, National Arbor Foundation's Lied Conference Center in Nebraska City, Neb.. A variety of talks by field practitioners will assist the woodland owner in managing his or her property. Early registration fee is $35 if paid before October 29, 2004; late fee is $40. For more information, contact Hank Stelzer at 573-882-4444 or Julie Rhoads at 573-882-3234.

December 3-4, 2004: UMCA Specialty Mushroom Production and Marketing Workshop, Ramada Inn, Columbia, Mo., and Horticulture and Agroforestry Research Center, New Franklin, Mo. Registration is $59. For more information, contact Julie Rhoads at (573) 882-3234, or email at rhoadsj@missouri.edu.