

GREEN HORIZONS

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Growing Tomorrow's Future Today

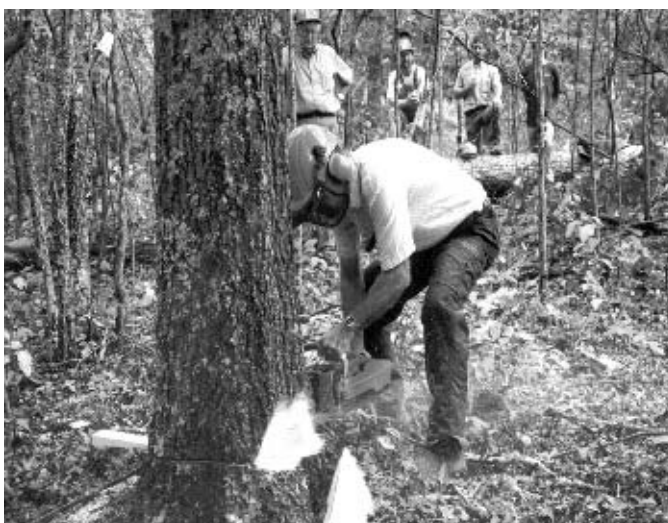
Fall 2004

Forest Management

Harvesting your own timber

The woodland owner who cuts and delivers the logs or other products to the roadside or mill may substantially increase profits from the sale. However, logging requires special skills and knowledge and there are substantial risks involved. It is hard and potentially dangerous work. In addition to personal risks, engaging in logging may alter your insurance coverage.

Some types of logging may require special equipment. Attempting to log with some agricultural equipment could result in extensive damage to the equipment and increase the chances of personal injury. Furthermore, improper cutting, handling, or transporting of high-value logs can destroy much of their value. As with most projects, logging often requires more time than is initially estimated. (cont. pg 3)



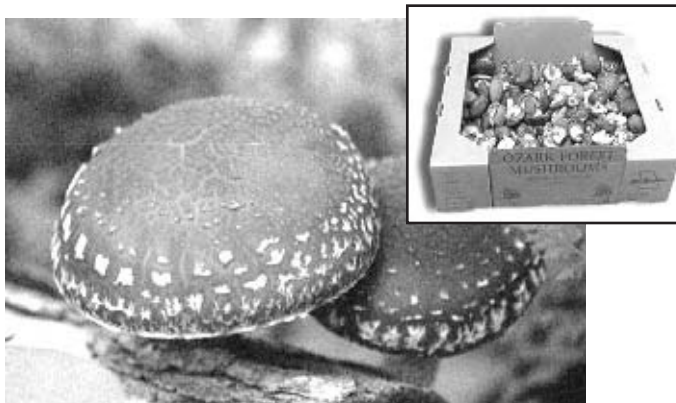
Landowners who receive proper training gain confidence in felling their own timber. Note: The chainsaw operator shown here is wearing specially designed protective jeans for added safety.

Market Opportunities

Specialty gourmet mushrooms: A forest farming cash crop

What could a dark, damp forested area of your small acreage be good for? A variety of potentially profitable crops, including specialty mushrooms. The Center for Agroforestry is conducting research to produce specialty and gourmet mushrooms, like shiitake, morel and the European black truffle, in forest farming settings. These forest farming products can sell at high retail prices and grow well on small acreages.

In a forest farming practice, light, or shade levels, is intentionally managed in a forest to (cont. on page 7)



Specialty gourmet mushrooms, like shiitake, shown above, can be profitable value-added agricultural products when grown in a forest farming system. Informative presentations on growing shiitake mushrooms will be included in the Center for Agroforestry upcoming Specialty Mushroom Workshop, Dec. 3-4, 2004, in Columbia, Mo. (see pg. 10)

Establishing bottomland hardwood forests for agroforestry: Methods and funding incentives

In the Summer 2004 issue of Green Horizons, we outlined the importance of restoring bottomland hardwood forests in Missouri, based upon presentations from an April 1 workshop supported through the Missouri Department of Conservation (MDC) Forest Land Enhancement Program (FLEP) funds. Additional information about bottomland hardwood forest establishment and funding incentives is provided in this article. To view the summer article, visit www.centerforagroforestry.org and select UMCA Publications. Green Horizons is listed at the bottom of the page.

Bottomland plantings can be effective in all five agroforestry practices: Forest farming, silvopasture, riparian buffers, alley cropping and windbreaks. 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.

Tree establishment methods:

John Kabrick, research forester, USDA Forest Service, presented information about tree establishment methods at the April 1 workshop. Two primary establishment methods

Kabrick explained for bottomland hardwood forests are direct seeding and planting seedlings.

Direct seeding is the establishment of trees by sowing seeds. For hard mast species, seeds are usually placed in the soil (acorns are placed 2 or 3 inches below the soil surface). This can be accomplished by hand or with a mechanical planter.

The first-year survival rates of direct-seeded trees were studied by the USDA Forest Service in three

conservation areas: a 1998 study of Four Rivers Conservation Area, Bates and Vernon Counties, showed a greater than 95 percent survival rate; a 1991 study of Settles Ford Conservation Area

“Even with high quality seed, the number of seedlings that germinate can be low if the seed becomes too dry or if it is eaten by insects or wildlife. Small seedlings that have just emerged from seed are vulnerable to rain, wind, drought, and browse by wildlife,” said Kabrick. “However, when the conditions are right, survival can be quite high.”

Planting seedlings:

The survival rate of planted seedlings, whether you use bareroot stock, container stock, or cuttings, is consistently higher than it is for seedlings established by direct seeding. Bareroot stock, like the name implies, are seedlings that are mechanically lifted from the nursery bed, removing the soil and leaving the roots exposed. Once lifted, the seedlings are packaged and sent to the planting site where they can easily be planted with a tile spade or planting bar.

Bareroot seedlings are established and grown for one or two years at the nursery where they can be properly cared for and protected when they are most vulnerable. Consequently, they are larger and better able to compete for light, water, and nutrients once they leave the nursery.

Much like bareroot stock, container stock seedlings are also established and grown at the nursery for one to two years. However, container seedlings are established in small pots or containers. The container is removed during out planting, and the root ball and planting medium are planted without disturbing the seedling roots. **(cont. page 5)**



Photo 1a: Container stock seedlings grown with the RPM™ method produce a very large root system at the nursery. With the RPM™ method, seedlings are established in small, bottomless pots (1b). This causes the seedling's tap root to air prune and produce a large number of lateral roots. During the final stage of this method, trees are transferred to 3- or 5-gallon pots (1c) where they continue to grow for another one to two growing seasons.



showed a 14 percent survival rate; and a 2003 study of Duck Creek Conservation Area, Bollinger, Stoddard, Wayne Counties, showed only a 5 percent survival rate.

Harvesting your own timber (cont. from page 1)

Hence it may interfere with other activities and responsibilities. Once begun, logging is best finished as quickly as possible so the forest can begin regenerating itself.

For these reasons alone, harvesting of high-value species, such as black walnut or white oak trees containing veneer quality logs, should be left to the buyer.

A discussion of proper techniques of cutting, handling, and transporting timber products is beyond the scope of this article -- but if you're thinking about harvesting, keep the following points in mind.

The Missouri Forest Products Association offers an excellent timber harvesting short course and it is open to private landowners. For a schedule of course offerings, visit www.moforest.org or call education coordinator Glenda Fry at (573) 634-3252.

Recommendations for harvesting your own timber:

1. Have a market for your product before you invest the time and money necessary to harvest it. If possible, have a written contract with the buyer. Do not get stuck with a product to sell without a buyer.
2. Know your buyer's specifications and requirements. What size log will they accept (minimum, and in some cases maximum, diameter and length)? How much volume or how many trees will they accept in a given period of time? Are they only interested in veneer quality logs?
3. Once the tree is down, know where to cut the logs. There is more to it than simply laying out a tape measure and cutting at every 16 feet. One can ruin a perfectly good lumber log (or heaven forbid, a veneer log) by cutting at the wrong place. Super glue will not help you here!
4. If you employ other people to help you, know your legal responsibilities for such things as workers' compensation, minimum wage, social security, state and federal income tax, O.S.H.A. requirements, etc.
5. Use the proper equipment. Seek out others who have harvested similar timber in conditions like those found in your woodlot and see what they recommend.
6. Observe all safety precautions and procedures.
7. Check with your insurance carrier to determine if logging alters your coverage. If it does, work with your carrier in securing a special rider that will provide you with the necessary coverage.

"Realizing the Value of Trees in the Farming System" Agroforestry Workshop and Field Tours

Saturday, Oct. 30, 2004

Southwest Research Center, Mount Vernon, Mo.

8:30 - 4 p.m.

Fee: \$8 if pre-registered; \$10 at the door

Sponsored by the Missouri Farmers Union and the Kansas Farmers Union

Don't miss this workshop in woodlot management and agroforestry! Discussions include: integrating forestry management on the farm; nuts as a growing market; lease hunting as an additional income; non-timber products and marketing and managing a profitable woodlot. Featured speakers include Gene Garrett of the University of Missouri Center for Agroforestry; Joe Wilson of the Missouri Northern Pecan Growers LLC; Skip Mourglia of the USDA Southwest Missouri Resource Conservation and Development and Mike Gold of the University of Missouri Center for Agroforestry.

Field tours include the low maintenance/fast establishing Robert Karr windbreak demonstration; the Southwest Research Center nut orchards, including 800 grafted trees; nut harvest equipment and improved varieties of walnuts, pecans, hickories and pawpaws; and a walk-through of a family forest to discuss forest management and harvest issues. A wood-mizer (or portable sawmill) will also be demonstrated during this section of the tour. See adjacent box for registration information.

Register now for "Realizing the Value of Trees in the Farming System" Agroforestry Workshop

Send name, address, phone number, email address, number of wooded acres and county name with \$8 check by Monday, **Oct. 25th** to:

Missouri Farmers Union

325 Jefferson City, Suite 100A
Jefferson City, Mo. 65101
ph: (573) 659-4787

On-site registration is \$10, but pre-registration is strongly suggested. For more information or to see a list of additional sponsors, visit www.missourifarmersunion.org.

Missouri Christmas Tree Producers Association boosts tree industry; holiday spirit

With the holiday season approaching, many of our thoughts turn to decorating, food and family.

For members of the Missouri Christmas Tree Producers Association (MCTPA), thoughts turn to preparing for harvest and hopefully, a rush of happy customers.

The association includes members representing 65 tree farms across Missouri. The focus is member information and education, highlighted by an annual meeting in June and in January to exchange ideas about pest control, marketing and tree farm maintenance.

Steve Meier, association president, said the benefits to members extend beyond producers' immediate area. "We're able to network with each other often, and if a crop problem is discovered, the members contact the entire association and we all start watching for it across the state."

Another component of the association is to dispel ideas toward fresh holiday trees that could turn buyers away. For example, some consumers purchase artificial trees for fear of fresh trees catching fire in the home.



Members of the Missouri Christmas Tree Producers Association share tips for shearing and managing trees.

According to Meier, a fresh tree will maintain its quality in your home for up to three months if well watered and maintained.

"Contrary to popular belief, it's almost impossible to catch a real tree on fire," he said. "Proper preparation of the stump and maintaining the water level are the keys to a beautiful, long lasting tree without risk of fire."

The two most common types of trees grown at Missouri farms are Scotch and white pine. While Scotch is the most prevalent type, white pine is suggested for people who have allergies.

"The pollen content of white pine is unlike the others, and is well-tolerated by people sensitive to pollen," Meier said.

One of the most important attributes of selecting a tree is the "Christmas aroma" that fills a room. Meier suggests purchasing a Virginia pine or a fir for the best aroma. The Frazier fir, grown in the northern portion of Missouri, is also an excellent choice for the holiday scent.

Members of the association also take a role in environmentally-friendly disposal of trees. They are encouraged to provide tree bags for customers, which can be easily pulled up and over the tree at the end of the holiday season with little needle shedding. Many cities have designated recycling plans for the trees,

including mulch for parks and walking paths.

"There's nothing like the freshness and aroma of a real tree, especially if you go to a tree farm and have it cut just for you," Meier said. "Purchasing fresh trees is also beneficial to the environment and to Missouri farmers."



Fresh garland and wreath-making demonstrations offer tools to Christmas Tree Producers at the association's annual meeting.

Meier said the number of Christmas tree farms in Missouri is increasing, but despite the list of benefits to association members -- including information about estate planning, taxation and new technology for improving tree farm production -- membership in the association is declining.

"This trend has been happening for about the last ten to twelve years," he said. "There are growers out there who are missing the opportunity to try new techniques first-hand and learn about innovations in the industry."

For tree maintenance tips and more information about MCTPA, visit www.missourichristmastrees.org; or email Steve Meier at meierhsp@netscape.net

Establishing bottomland hardwood forests (cont. from page 2)

Because the root system is not disturbed during planting, container-grown stock generally has higher survival and growth than planted bareroot seedlings.

Another kind of container stock is the RPM™ seedling, or Root Production Method™.

These seedlings are produced through a patent-pending process developed by Forrest Keeling Nursery, Elsberry, Mo. Through a multi-step program of air-root pruning, seedlings develop a very dense, fibrous root system that absorbs and utilizes more oxygen, water and nutrients, translating into greater basal diameter, shoot length, root volume and root and shoot dry weight than bareroot seedlings.

Site Preparation:

Site preparation provides an opportunity to improve conditions for planting trees and may include fertilizing, weeding, disking, clearing debris, or bedding (mounding) the soil.

Soil beds can be constructed by mounding soil with a moldboard plow, offset disc, rice levee plow, or similar tillage implements and also with backhoe-type excavators. Once constructed, beds range from 4 to 8 feet wide and one-half to 2 feet tall. Soil bedding or mounding concentrates organic matter and nutrients, decreases bulk density, and improves aeration and soil drainage. On soils that are very wet or clayey, it may increase tree seedling survival or growth.

Funding incentives for bottomland plantings

There are a number of federal, state, and private organizations that can provide landowners with both funding and technical assistance for bottomland hardwood restoration in Missouri. At the federal level, the

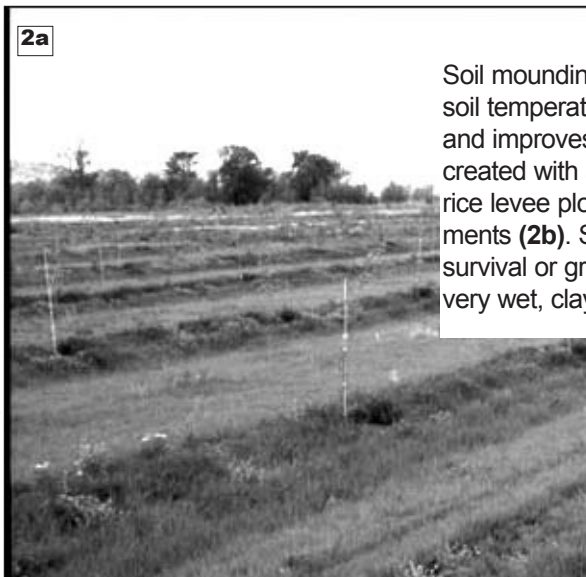
Conservation Reserve Program (CRP), Bottomland Timber Establishment on Wetlands (CP31) is a relatively new CRP practice that

provides landowners with a 50 percent cost-share for tree planting, an annual rental payment,

and maintenance payments on enrolled lands. The Riparian Buffer practice (CP22), which can be used in tandem with CP31, provides even more incentives: in addition to the standard 50 percent cost-share and annual payment (at 120% of

the average soil rental rate), landowners installing CP22 receive a "practice incentive payment" that covers an additional 40 percent of establishment costs and a one-time "signing incentive payment" of up to \$150 per acre, depending on contract length.

Other programs that can support bottomland restoration include the Wildlife Habitat Incentives Program, which offers up to 75 percent cost-share for habitat improvement, and the Environmental Quality Incentives Program, which also includes several applicable cost-shares and other incentives (**next pg**)



Soil mounding or bedding (2a) increases soil temperature, decreases bulk density and improves soil drainage. Beds can be created with a moldboard plow, offset disc, rice levee plow or similar tillage implements (2b). Soil bedding can improve the survival or growth of seedlings planted in very wet, clayey soils.



primary funding organizations are the USDA's Farm Service

Agency and Natural Resource Conservation Service. At the state level, both the Missouri Department of Conservation and the Missouri Department of Natural Resources (DNR) have cost-share programs for tree planting in bottomland areas. On the private side, organizations such as the National Wild Turkey Federation and Ducks Unlimited support landowner efforts to restore bottomland wildlife habitat.

The USDA Wetlands Reserve Program (WRP) includes cost-share provisions that can provide the landowner with up to 100 percent of restoration costs, while WRP ease-

Bottomland hardwood forests (cont. from pg. 5)

for both establishment and management of bottomland hardwoods.

At the state level, both the MDC and the DNR can provide technical assistance and funding for bottomland hardwood restoration and management. The MDC will cost-share (up to 75%) on two timber-related wildlife habitat improvement practices: Tree/Shrub Establishment (MDC 700) and Woodland Improvement (MDC 900). The DNR also provides up to a 75 percent cost share through their Forest Plantation (DFR-04) and Permanent Vegetative Cover (DSL-11), though certain eligibility criteria must be met.

Private organizations also partner with landowners to support bottomland habitat creation and enhancement. The National Wild Turkey

Federation's Superfund program helps landowners develop habitat for wild turkey and other species. Ducks Unlimited specializes in helping landowners obtain resources and technical assistance for wildlife habitat improvement. The National Fish and Wildlife Foundation gives challenge grants to leverage funds from other sources. Taken together, these sources of funding and technical assistance offer landowners many opportunities to defray the costs of bottomland hardwood forest restoration and management.

The guidelines in this article are subject to change. Check with the appropriate agencies for up-to-date program information.

Additional sources of information:

Missouri Department of Conservation

www.conservancy.state.mo.us

Forrest Keeling Nursery

www.fknursery.com

Walnut Council

www.walnutcouncil.org

John Kabrick, USDA Forest

Service: (tree establishment)

ph. (573) 875-5341 x.229

email: jkabrick@fs.fed.us

Dusty Walter, UMCA: (species

selection) ph. (573) 884-7991;

email: walterw@missouri.edu

Doug Wallace, NRCS: (funding

incentives) ph. (573) 876-0908;

www.mo.nrcs.usda.gov

MFPA offers landowners and hunt clubs liability insurance

Hunters and landowners will soon have the ability to be insured for the upcoming hunting season as the Missouri Forest Products Association (MFPA) has teamed up with Davis-Garvin Agency, Inc. to offer hunt/lease liability insurance to its members. The association is the only source in the state for affordable hunt/lease liability insurance.

"This is a program we have wanted to implement for a while," MFPA Executive Director Cory Ridenhour said. "It has had great success in the southeastern part of the country and benefits all parties involved. Landowners have to realize their general liability policies do not cover hunting activities on their land. This special policy is needed for protection."

The hunt/lease plan provides comprehensive general liability insurance for hunting clubs and for the timberland owner who is leasing the land for hunting. There is a \$1 million per event limit occurrence and a \$2 million aggregate limit. Liability covers bodily injury and property damage. To participate in this program and qualify for the low rate of 16 cents per acre, both the landowner and the hunt club must be current members

of MFPA. The organization began issuing policies on Sept. 13, 2004. To view a list of frequently asked questions regarding hunt/lease liability insurance, please visit the MFPA website at www.moforest.org.

For more information contact the MFPA office at (573) 634-3252.

Talking Nuts: Bill Reid, (far left), Kansas State Research and Extension Specialist on nut crops, discusses pecan cultivar traits at the University of Missouri Horticulture and Agroforestry Research Center, New Franklin, Mo. The farm tour was part of the Northern Nut Growers Assn./ North American Fruit Explorers joint annual meeting, held in Columbia, Mo., Aug. 15-19, 2004.



Forest farming: specialty gourmet mushrooms (cont. from page 1)

favor the growth, or enhanced production, of certain shade-loving plants. These shade-loving plants that may be grown in the understory of a forest are often termed non-timber forest products--demonstrating the possibility for successful growth of both timber and other products simultaneously in a forest farming practice. However, to accomplish this objective, forest canopy densities must be controlled by manipulating the structure and /or species composition of the forest. These manipulations then influence light levels available to the forest floor.

Properly applied to the forest environment, the forest farming practice can enhance and diversify farm income opportunities, while at the same time making significant improvements to the composition and structure of the forest for long term improvements in overall health, quality and economic value. Long term tree crops and short term understory crops can be grown simultaneously on the same forested land, and result in a healthy, sustainable forest environment.

It is very important to start small when establishing a forest farming practice. The intensity of the practice, and the value of the product being grown, makes it likely that the initial management of small acreages will provide greater encouragement to landowners. On a very small area (5 acres or less) the vertical, horizontal and below-ground dimensions are managed intensely to produce multiple crops simultaneously. One example of this process is highlighted in the adjacent article on Ozark Forest Mushrooms, a timber/forest farming operation in the state's Ozark region.

Advantages of Forest Farming:

Improved forest health resulting from properly thinning and managing the forest.

Intermediate income opportunities while timber matures.

Diversified farm income of land otherwise not used.

Disadvantages of Forest Farming:

Requires intensive management.

Markets for some products are not yet fully developed.

Requires a broad knowledge of both trees/forest and plants to properly manage to improve growing environments for both.

From log to shelf: Ozark Forest Mushrooms fills niche in specialty market

If Dan Hellmuth and Nicola McPherson continue practicing "business as usual," consumers across the country will soon know the beautiful Ozark region of Missouri as the heart and soul of the Midwest's gourmet shiitake mushroom industry.

One of the state's most significant demonstrations of a successful forest farming practice is Hellmuth and McPherson's Ozark Forest Mushrooms in

Timber, Mo. The entrepreneurial couple established the specialty mushroom operation in 1990 on what was then a timber operation, and coordinate every step of the value-added process, from the innoculated log to packaged, consumer-friendly products.

A key to their success is developing an agroforestry practice that works within the natural setting of the land. Under the guidelines of the Stewardship Incentive Program, administered by the Missouri Department of Conservation (MDC), Hellmuth and McPherson harvest a renewable supply of



The owners of the Ozark Forest Mushrooms company, located in the Ozark region of Missouri, are taking their specialty gourmet mushrooms all the way from the forest log to a set of attractive, boxed food mixes.

mushroom bed logs while simultaneously maintaining their forested acres in a healthy ecological state. Consequently, what began 14 years ago with only 100 oak logs in production has grown to include 16,000 shiitake logs in production. Only five acres of the couple's 2,500 forested acres are utilized for the mushroom business.

Hellmuth said the land was clear cut about eighty years ago, a former short leaf pine forest. Now, the forest is a second generation mixed hardwood forest divided into 20-acre sections and rotationally thinned on a 30-year (cont. pg 9)

Landowner Spotlight

Lee Tree Farm succeeds with partnerships and focused goals

What started out as a rural retreat in 1989 is growing into a model tree farm.

John Lee and his wife, Cheryl, were looking for some place away from the bustle of Kansas City where their family could hunt and fish. Nearly 15 years ago they purchased 160 acres northwest of Gallatin, Mo., and are now resident landowners of 320 acres in Davies County. However, it was not until 2000 when they entered a partnership on an adjacent parcel of land that the Lees began actively managing their woodlands. John notes, "It was at that time that I noticed we had bought into a lot of fine timber. But, some of the larger trees were beginning to die."

Not wanting to lose his forest, John contacted Missouri Department of Conservation Resource Forester, Phil Sneed of the Chillicothe office. In a general sense, John and Cheryl knew they placed a premium on their trees, followed by a desire for wildlife and recreation. Phil helped the Lees better define their goals and outline a step-by-step management plan to achieve them in a manner they could not only accomplish, but afford.

Their plan calls for an array of land management activities across the property. To help fund these projects, the Lees have combined payments from Federal incentive programs with timber sale revenues.

Through the Wildlife Habitat Incentive Program (WHIP), they are successfully bringing back quail by converting fescue fields into a rich oasis of brood-rearing and food-bearing native forbs and warm season grasses. "When we started," John said, "we were able to jump up only two quail on the entire farm. Now, after just two years in the WHIP program, we have eight well established coveys of quail."

Timber revenues have played a big part in implementing the Lee's plan. "I have purchased the logs from the

Practices (BMPs) during his timber harvests and confidently cuts down large trees. The Conservation Department's burning seminars put Cheryl's fear of burning down the woods to rest and demonstrated, "...that some textbook concepts really do work!"

What advice do the Lees have for landowners wanting to follow their lead? "Bite off a small section" says John. "Go into an area and say, 'Okay I can do so much today or so much this week'. Do that, stand back and look at it. You'll be encouraged and then take on another section." Cheryl adds, "I think it's important to stay focused on how much you've done rather than how much needs to be done. When you do that, it's a labor of love." To learn more about John and Cheryl's woodland stewardship experiences, come to the 2005 Tree Farm Conference in Columbia. They will be participating in the new Friday evening Landowner Information Exchange Session. For conference information, contact Glenda Fry at the Missouri Forest Products Association (573) 634-3252; or email glenda@moforest.org.



Revenue from timber sales has paid for John Lee's sawmill dry kilns, planer and shed.

partnership just like I would as if I was a logger," said John. Those dollars go back to the partnership to fund management activities on the jointly owned land. "The revenue that I have obtained from selling the graded lumber has paid for the sawmill, dry kilns, planer, and shed."

Both John and Cheryl have taken advantage of numerous landowner education opportunities. Through MU Extension's Master Tree Farmer Short Course and the Missouri Forest Products Association's Professional Timber Harvester Program, John employs Best Management



John Lee shares his diverse timber management experience with fellow landowners during a field day.



cycle. In accordance with MDC guidelines, only certain trees are harvested so that the forest is naturally thinned, never clear cut. The butt logs of the trees are sold to sawmills and the residual branch wood is the main source for shiitake logs. Branch wood has more sapwood, which provides the nutrients for the shiitakes to thrive on.

“People in this area have a skill with cord wood, timber cutting, tree identification, the entire business,” Hellmuth said. “What we’re doing is similar to cutting cord wood for firewood or cord wood for the charcoal industry. This is an agroforestry practice that works with the land we have in this part of the country.”

The business is also sustainable. The couple is currently investigating forest certification through the Forest Stewardship Council, and through funding from a USDA SARE grant, a new greenhouse has recently been completed with a wood furnace for burning spent/culled shiitake logs for heat during the winter months. “We’re not actually depleting our forest resources over time,” said Hellmuth. “Basically, we’re turning waste wood into high value food and then using the spent logs for fuel value to heat our greenhouse in order to keep production all winter long.”

Hellmuth and McPherson have given particular emphasis to targeted marketing of their value-added boxed mixes and products.

Ozark Forest Mushrooms (cont. from pg. 7)

“The biggest marketing challenge for a rural area is that most of the mushrooms are a fairly high value specialty food, and the largest market is in some of the state’s bigger cities,” said Hellmuth. “We are marketing products to St. Louis and need to deliver them to the city on a weekly basis.”

Markets for Ozark Forest Mushrooms include restaurant owners, chefs, catering companies and organic food stores. The mushrooms are refrigerated within one hour of picking to retain optimum freshness and quality, and then shipped directly to customers.

“If you’re trying to manage your market, you want to have a constant supply of mushrooms every week. Your customers expect that,” said McPherson.

The operation competes in the niche market for organic products by not using any artificial fertilizers or herbicides in the growing and packaging process, demonstrated by the USDA organic logo Hellmuth and McPherson obtained through the Missouri Department of Agriculture.

Consumer education is another invaluable aspect of a successful mushroom business. McPherson gives customers a flier telling the story of their operation, their local employees and the growing process. As an effort to reinforce the connection between customers and locally-grown foods, Ozark Forest

Mushrooms has become part of a chef’s collaborative to promote local farms and local foods to area restaurants.

“Cross-marketing with other locally grown foods in the area helps build the name recognition and connection to the food and land customers seek,” McPherson said.

“It’s hard work that doesn’t stop, like milking cows,” McPherson said. “There are a lot of long days and weekend marketing events, but when I walk into a restaurant and see my mushrooms on the menu, or walk into a supermarket and see our products on the shelf, that gives me huge pleasure and makes all the work worthwhile.” For more information, visit www.ozarkforest.com.

Nicola McPherson will be a featured presenter at the upcoming UCMA Specialty Mushroom Workshop, Dec. 3rd and 4th in Columbia, Mo. See page 10 for workshop details.

Right: Nicola McPherson and Dan Hellmuth discuss production strategies. Below: Production of Ozark Forest Mushrooms utilizes only 5 of the owners’ 2,500 acres.





Specialty Mushroom Workshop Dec. 3—4, 2004



**Ramada Inn
Conference Center
1100 Vandiver Dr.
Columbia, Mo**

Sponsored by The University of Missouri Center for Agroforestry; The University of Missouri College of Agriculture, Food and Natural Resources; Field and Forest Products; Ozark Forest Mushrooms

Who should attend? Anyone interested in learning the basics of production and marketing techniques for specialty gourmet mushrooms including shiitake, oyster, *Stropharia* and truffles. University of Missouri research faculty members, professional mushroom growers and marketers will provide participants with the knowledge needed to get started with growing and marketing mushrooms. Exhibitors from the industry will be on hand to provide information about mushroom production supplies.

Workshop events include lectures on outdoor and indoor log cultivation for shiitake mushrooms; University of Missouri progress toward truffle cultivation; guided tour of the HARC mushroom research area; log inoculation demonstration and an optional Missouri specialty food and wine tasting.

Early registration deadline: Nov. 1. Fee is \$59 per person for Friday evening mixer and Saturday workshop, and an additional \$25 for Saturday evening food and wine tasting event. Registration after Nov. 1 is \$69 per person. **For a registration form and more information,** visit www.centerforagroforestry.org; or contact Julie Rhoads, UMCA events coordinator, at (573) 882-3234; email rhoadsj@missouri.edu.

1st World Congress of Agroforestry addresses challenges, successes

The University of Missouri Center for Agroforestry played a key role in the 1st World Congress of Agroforestry, held June 27-July 2, 2004, in Orlando Florida.

The conference, titled "Working Together for Sustainable Land Use Systems" represented two years of planning among a global organizing committee of distinguished researchers and innovators of the agroforestry field.

Gene Garrett, UMCA executive director, served on the World Congress global committee and presided over the Science and Education in Agroforestry congress plenary session.

Additional key speakers at the conference were Dr. P.K. Nair, director of the Center for Subtropical Agroforestry at the University of Florida's Institute of Food and Agricultural Sciences. Dr. Nair was chairman of the Global Organizing Committee and is also a co-founder of the World Agroforestry Centre, Nairobi, Kenya.

Dr. Nair's address called agroforestry "no longer a practice in search of science" and cited a need for greater numbers of university-trained professionals in agroforestry to share the expanding body of scientific knowledge about agroforestry.

Dr. M.S. Swaminathan, acclaimed by *Time* magazine as one of the twenty most influential Asians of the 20th century and described by the United Nations as the "father of economic ecology," also presented a keynote conference address. Dr. Swaminathan emphasized the value of agroforestry in reconciling short-term food and livelihood needs with

long-term environmental conservation on a global scale.

"The first World Congress had an enormous impact on me personally and led me to realize just how far agroforestry has come in the past few

decades," said Garrett. "The advantages of the age-old practice of growing trees and crops together, which have been largely ignored for so long because

of a lack of scientific underpinnings, are now being recognized and accepted. Today, agroforestry is truly a science-based technology that offers both poor and wealthy nations many opportunities, including the reduction of poverty and providing ecosystem services. This congress demonstrated to me that agroforestry has finally come of age."



Gene Garret, UMCA executive director (left) and Michael Gold, UMCA associate director (right) address conference attendees at the 1st World Congress of Agroforestry in June in Florida. The event brought agroforestry researchers and professionals from more than 80 countries together to address the ongoing challenges and successes of agroforestry on both a local and a global level.

Conference abstracts, summaries and photos are available at www.conference.ifas.ufl.edu/WCA/

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Center for Agroforestry hosts Pre-Congress Tour of Midwestern Agroforestry



Rosemary Lott, tour participant from Kingston, Australia, takes notes on pine straw production at the HARC farm.

Prior to the 1st World Congress of Agroforestry, a group of twenty-four attendees representing 8 countries received a first-hand look at agroforestry practices in the Midwest. The Pre-Congress Tour of Midwestern Agroforestry Practices, coordinated by the Center for Agroforestry, highlighted agroforestry demonstration areas and landowner efforts across Missouri

and Iowa on June 23-25, 2004.

Tour stops in Iowa included the Iowa State University windbreak practice demonstration area, Ogden; the Bear Creek Riparian Buffer Demonstration area located near Story City; and Ben's Black Walnut

Orchards and processing facility, Centerville. In Missouri, tour stops included the Deer Ridge, Henry Sever, and Ross Jones Farm alley cropping practice demonstrations near Novelty; University of Missouri Greenley Memorial Research Center; Shepherd Farms located in Clifton Hill; and the pine straw, silvopasture, flood lab, clonal trial and alley cropping demonstration areas at the University of Missouri Horticulture and Agroforestry Research Center, New Franklin, Mo.



Pre-Congress Tour participants explore the windbreak practice demonstration area at Iowa State University.

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Gene Garrett (left) discusses agroforestry in the coming decades with Surindar Hara, (right) from Haryana, India, at the 1st World Congress in Florida.

We welcome your thoughts!

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Calendar of Upcoming Events

Oct. 30, 2004: "Realizing the Value of Trees in the Farming System" Agroforestry Workshop and Field Tours, Southwest Research Center, Mount Vernon, Mo. 8:30 - 4 p.m. Sponsored by the Missouri Farmers Union and the Kansas Farmers Union, workshop discussions include integrating forestry management on the farm; nuts as a growing market; lease hunting as an additional income and non-timber products. Fee: \$8 if pre-registered; \$10 at the door. For more information see page 3 of Green Horizons or visit www.missourifarmersunion.org.

Nov. 4-6, 2004: 12th National Small Farms Trade Show, Boone County Fairgrounds, Columbia, Mo. For more information, visit www.smallfarmtoday.com or call (800) 633-2535.

Nov. 5-6, 2004: Central Region Woodland Stewardship Conference, Lied Conference Center, Nebraska City, Neb. Session topics include alley cropping, woodlands for wildlife, handling and care of tree seedlings, insect and disease updates and cedar management. Registration before Oct. 29 is \$35; after Oct. 29, registration is \$40. For a registration brochure or information, contact Hank Stelzer, extension forester, at (573) 882-4444 or email stelzerh@missouri.edu

Dec. 3-4, 2004: Specialty Mushroom Workshop, Ramada Inn, Columbia, Mo. Hosted by the Center for Agroforestry, this workshop presents the basics of production and marketing techniques for specialty gourmet mushrooms. Workshop events include lectures on outdoor and indoor log cultivation for shiitake mushrooms; University of Missouri progress toward truffle cultivation; a guided tour of the HARC mushroom research area and a log inoculation demonstration. To register, visit www.centerforagroforestry.org or contact Julie Rhoads at (573) 882-3234. Additional details on page 10.

Dec. 12-14, 2004: Missouri Governor's Conference on Agriculture, Tan-Tar-A Resort, Osage Beach, Mo. For more information, visit www.mda.mo.gov.

Feb. 2-4, 2005: Missouri Natural Resources Conference, Tan-Tar-A Resort, Osage Beach, Mo. For more information, visit www.mnrc.org.

Feb. 25-26, 2005: Missouri Tree Farm Conference, Stoney Creek Inn, Columbia, Mo. Contact Hank Stelzer at (573) 882-4444 or email stelzerh@missouri.edu for more information.