

# GREEN HORIZONS

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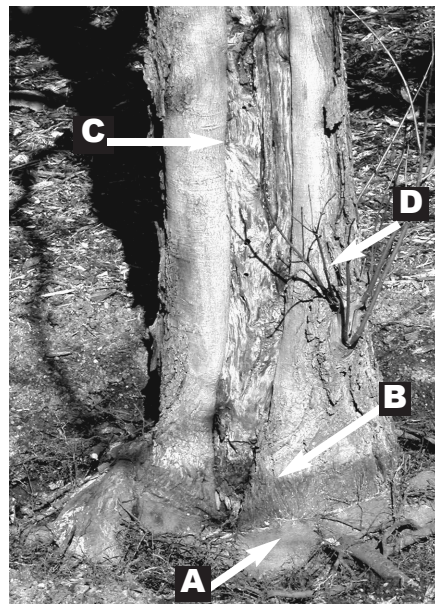
## Community Forestry

### Who's Killing Our Planted Trees? ... We Are!

by **Hank Stelzer**  
Extension Forester

**T**hey are out there, everywhere. Landscape trees planted years ago that just don't seem to be as tall as they should be. They leaf out later and drop their leaves sooner than their natural cousins. Even with frequent summer rains, their leaves look like someone took a blow torch to their edges. Then it finally happens. One spring they don't leaf out at all. Or during a summer thunderstorm, they suddenly topple in a gust of wind.

These are not the notoriously fast-growing yet short-lived trees most people love to plant, like Bradford pear, Siberian elm and silver maple. We are talking about oak, maple and ash. (cont. page 3)



Stem girdling root (A) encircles the tree when the soil line (B) is more than 1-2" over the tree roots.

Tell-tale above ground signs of possible SGRs include slow-healing wounds (C) and stem sprouts (D).

## Horticulture

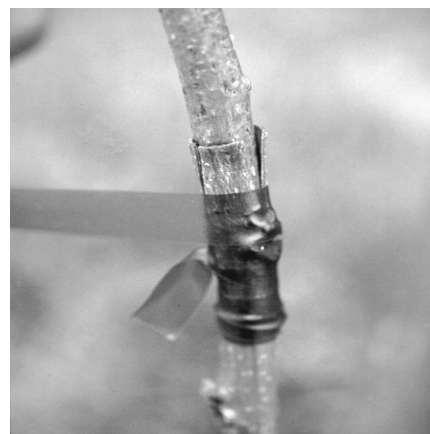
### Field Grafting Nut Trees: The Key to Quality

by **Ken Hunt**  
Nut Tree Specialist

**I**f you have native pecans or black walnut on your property, or have purchased seedling nut trees in the past few years, you may want to learn how to graft your trees so you can enjoy nuts that are easy to crack, have improved disease resistance and bear bountiful yields. Several grafting field days are planned in May across the state and will offer an opportunity to try your hand at grafting.

Two types of field grafting will be demonstrated: the 3-flap graft and the bark inlay graft. The 3-flap graft is used on trees with shoot diameters approximately the size of your finger that are in easy reach, therefore this

grafting technique is suitable to small trees (see figure below).



Grafting trees is an essential skill for achieving optimum quality nuts.

This 3-flap grafting technique can be learned quickly and will be demonstrated at upcoming grafting field day events in May.

(cont. on page 7)

## **Spring maintenance of riparian buffers optimizes benefits**

Riparian forest buffers serve several important functions, including reducing non-point source pollution in streams; reducing erosion from surface water runoff; and maintaining a habitat for wildlife and plants, both on the land and in the water. With careful planning, three-zone buffers can also provide profitable sources of income from timber and horticultural products, like decorative woody florals and forest farming plantings.

However, regular maintenance is essential if a riparian forest buffer is to accomplish these functions. Controlled burning can be an important tool for maintenance of the grass portion of a riparian buffer practice. As a “living filter,” it is essential that each buffer component be managed to maintain vigorous growth and maintain uptake and nutrient storage. For example, where warm season grasses are used, it is recommended to use a spring burn every couple of years in order to reduce the accumulated dead leaf matter and lessen competition from weeds and cool season grasses.



A spring prescribed burning of a riparian buffer will reduce weed competition and accumulated dead leaf matter.

Spring is also the season to consider replanting or reseeding of riparian buffers. Warm season grasses work well in the outer zone (zone one) of a riparian buffer and can be planted densely to reduce runoff. In most cases, grasses with stiff stems work best to reduce water flow rates. Always use flood tolerant grasses. A good example of a flood-tolerant warm season grass is Switchgrass, a good choice because its deep roots filter well and will over time add organic matter to the soil. Indian-grass and big bluestem are other warm season grasses well-suited for riparian buffers. For a list of additional warm and cool season species to use in riparian settings, contact your local Natural Resource Conservation Service, University Extension agent or the Department of Conservation.

For zone two of a riparian buffer, consider smaller trees and shrubs adjacent to large trees (zone three) to provide long-term retention of nutrients. Red osier dogwood and curly willow planted in this zone can provide additional income when marketed to local florists.

### **Replanting and reseeding:**

Replanting and reseeding are important maintenance practices during the first few years following establishment of a riparian buffer and can be done in the spring or fall. An annual inspection should be made to identify areas in need of replanting or reseeding. Woody plants should be replanted within a row if more than three or four consecutive seedlings have died. Spot planting can be done quickly with just a bucket full of water, seedlings and a shovel.

Replanting in the native grass/forb zone may be a bit more involved, depending on the density and quality of grass and establishment. If there is poor establishment, a herbicide like Glyphosate can be used, followed by redrilling. If there is some establishment, but not as dense as desired, the site can be directly redrilled. If the areas needing reseeding are small, hand-spreading the seed and raking it into the ground is acceptable.

During the life of a riparian buffer, trees will begin to compete with each other as they do in a natural forest, and without pruning and thinning they will not maintain an optimal growth rate. Depending on spacing, fast-growing trees such as cottonwoods and poplars will be competing with each other within 5-10 years of planting. Some time between year five and year ten, every second or third tree may have to be harvested to increase water and growth space for remaining trees.

### **Prescribed burning:**

Fire is a good maintenance tool for native grasses and forb plantings in riparian buffers and filter strips. To reduce weed competition during the year, prescribed burns are usually performed early in the spring. During this time, many of the competing cool-season grasses, weeds and woody plants begin growing while the native prairie plants are still dormant. Always develop a prescribed burn plan prior to burning. Assistance is available through NRCA and DNR.

While different burning frequencies may be used, an annual spring-burn for the first three or four years is recommended. **(cont. page 5)**

## Who's Killing Our Planted Trees? (cont. from page 1)

What is the reason? A new exotic insect or disease? A new pollutant to our air or waterways? No! More often than not, we are the problem. We are simply planting our trees too deep.

The result? Stem girdling roots. Stem girdling roots, or SGRs, are the result of roots encircling the tree stem and eventually strangling the stem tissue. Water and nutrients cannot travel up the trunk, depriving the leaves of the building blocks required for photosynthesis. What little food the leaves do produce cannot travel down the stem to the roots, preventing vital water and nutrient absorption. You get the picture.

You may ask how a root can grow up around the stem of a tree. It's simple. By planting a tree too deep, or heaping mounds of mulch around

a young tree, we create an environment for roots to grow abnormally and develop into SGRs.

While SGRs are not necessarily new, (the first cases were reported back in 1937) the phenomenon seems to have become more prevalent during the past 15 to 20 years. Some arborists point to the widespread use of the hydraulic tree spade and the push to get trees out of the nursery and into the landscape. Economic concerns have resulted in the lost art of hand-digging trees in production nurseries.

As a tree makes its way from the nursery pot, to the liner nursery, and finally to the landscape, there is an opportunity for planting a little deeper in the ground. The result is the trunk of an improperly planted tree resembles a telephone pole instead of the trunk's normal flaring

observed in trees growing in the wild. Lest you think this is not a common problem, or one that does not happen in your community, consider this: At a recent urban forestry conference held in Missouri, we air-excavated (used air pressure to blow away the surrounding soil) and found SGRs on seven out of eight trees examined. All eight trees were within 100 feet of each other — right in front of the local park department's maintenance facility!

### Preventing Stem Girdling Roots:

**How deep is too deep?** If there is more than 1" of soil over the flare/branch root area, you are asking for trouble.

**How can I check for proper depth?** An easy way is to take a knitting needle and probe downward through the soil around the circumference of the stem. You are looking for the large roots that are running away from the stem. Once you hit such a root, mark the spot on the needle with your finger and remove it from the soil. If the depth is greater than 1", the tree is too deep.

**What can I do?** A large tree that has been in the ground for several years with a well-developed SGR is a lost cause and should be removed. For smaller and more recently planted trees, remove the excess soil from around the trunk to expose the root flare. If you find an SGR, cut the root with a hand pruner. If you just brought a tree home from the nursery and are waiting to plant it, remove the top of the root ball until you expose the root flare. You might be surprised how much excess soil you have bought!

### Timber Tax Workshop! Saturday, June 19, 2004

9 a.m. to 4 p.m.

Limited to first 50 participants  
Stratford Room, Ramada Inn,  
1510 Jefferson Street,  
Jefferson City, Mo.

**Don't miss this workshop!** Cost is \$35 before June 1; \$45 after June 1, and includes meals, breaks and all workshop materials. The instructor is Dr. Bill Hoover, Dept. of Forestry and Natural Resources, Purdue University. Bill is a national expert in tax treatment of timber, director of the National Timber Tax website and co-author of Ag Handbook 718, "Forest Owner's Guide to the Federal Income Tax." For lodging: information, call the Ramada Inn at (800) 392-0202; the workshop contact is Bruce Palmer, at (573) 522-4115 x3113 or [bruce.palmer@mdc.mo.gov](mailto:bruce.palmer@mdc.mo.gov). Sponsors are MU Forestry Extension, Missouri Department of Conservation, Missouri Society of American Foresters and Missouri Consulting Foresters Association.

### Register now ... for your hands-on tour of agroforestry projects!

**June 23-25, 2004**

Agroforestry research sites in  
Missouri and Iowa  
Registration deadline: June 1

You are invited to the **World Congress of Agroforestry Pre-Congress Tour**, a motorcoach tour of the Missouri and Iowa research and on-farm demonstrations of the five agroforestry practices, held June 23-25, 2004. The UMCA technology transfer team is coordinating the tour with assistance from additional sponsors. For a tour itinerary and registration information, visit [www.centerforagroforestry.org](http://www.centerforagroforestry.org) and select the Upcoming Events page. Registration by phone is available by contacting Julie Rhoads, UMCA, at (573) 882-3234. Deadline is June 1.

For more information, visit  
[www.cnr.umn.edu/FR/extension/StemGirdlingRoots.html](http://www.cnr.umn.edu/FR/extension/StemGirdlingRoots.html)



## Project CommuniTree enhances landscapes through community stewardship program

by **Nancy von Brecht**  
**Executive Director**  
**Forest ReLeaf of Missouri**



Project CommuniTree, a Forest ReLeaf program, brings neighbors together to care for trees.

In the state of Missouri, we are fortunate to have a not-for-profit organization dedicated to guiding and inspiring personal and community stewardship of Missouri's trees and forests. That organization is Forest ReLeaf of Missouri, established in 1993 and now in its 11th year of reversing the decline of our urban and community forests through a variety of tree-planting and education programs.

Forest ReLeaf's flagship program is Project CommuniTree, the region's first community-assisted tree nursery. The 10-acre nursery is located in St. Louis County near Lambert-St. Louis International Airport. At the site, volunteers supervised by a staff forester pot up and care for seedlings provided by the National Tree Trust and the Missouri Department of Conservation. After several years under cultivation, the four to six-foot trees are distributed free of charge for planting on public and not-for-profit properties statewide.

Currently, 14,000 seedlings are under cultivation at the nursery, with a projected 5,000 trees to be transplanted annually over the next several years. In its first ten years of operation, Forest ReLeaf has successfully distributed nearly 48,000 trees, including more than 21,000

free trees through Project CommuniTree.

In 2003, 100 trees were awarded to Front Porch Alliance, a non-profit, faith based partnership that is working to revitalize the Ivanhoe neighborhood of urban Kansas City, Mo. Patsy Shawver, Front Porch Alliance executive director, said the community's strategic plan included 100 positive changes, one being the inclusion of more trees. "Many of the residents have lived here 40 years or more, and remember when the streets were lined with beautiful trees," Shawver said. "Planting trees from Project CommuniTree is bringing back this picture of the neighborhood they remember so fondly."

Last year was the first year Front Porch Alliance planted trees through Project CommuniTree, and the residents are preparing for another planting this spring. Shawver said each block within the Ivanhoe neighborhood has identified a block coordinator to oversee the planting and maintenance of trees in their area. "The neighborhood is very grateful for its trees, and proud of them, too," Shawver said, "It's exciting to think about how the residents will continue to enjoy these trees for years to come."

Ten to twelve different species are usually available each spring and fall through the program. Anyone may apply for the trees; however they must be planted on public or not-for-profit property. Applications are accepted year-round, and the

trees are distributed on a first-come, first-serve basis to qualified applicants who agree to care for them for at least three years after planting. When awarded, the trees must be picked up at the nursery in Berkeley, Mo. (Please note: Applications are now being accepted for the fall; the deadline for the spring harvest is past.) Volunteers are always needed year-round at the nursery on Mon-



Project CommuniTree volunteers are an important aspect of the program's success.

day, Wednesday, and Friday mornings. Some opportunities are also available on Saturdays on an as-needed basis during the peak nursery season from March through November. Prospective volunteers are encouraged to contact Forest ReLeaf to learn more about this wonderful opportunity to help "green-up" our communities!

Major funding for Project CommuniTree is provided by Ameren, The Home Depot Foundation and the Missouri Department of Conservation. For more information about the program, or Forest ReLeaf's other tree-planting and education initiatives, call (314) 533-5323, toll-free at (888) 4-RELEAF (473-5323); or visit [www.moreleaf.org](http://www.moreleaf.org).



## Spring riparian buffer maintenance (cont. from page 2)

Following establishment of a good stand of desired grasses and forbs, a burning cycle of once every three to four years can be used. The burning cycle is usually defined by the accumulation of dead plant material on the ground, weed species invasion and general vigor of the plant community. Fall burns also can be used to stimulate forb growth more than the grass growth. However, they may be problematic if adjacent crops are not harvested.

Burning the riparian prairie component of a riparian buffer can be tricky due to the close proximity of shrubs and trees. Such a burn requires numerous people, careful planning, attention to fuel sources and amounts, and attention to wind. Using a small, slow backfire (a fire that burns into the wind) helps to keep the fire more controlled while it is close to neighboring shrubs and trees. A fire break is often mowed or raked between the shrubs and/or trees and the native prairie component. The fire break can be wetted if the fuel is dry.

A good strategy is to burn when steady wind (10-15 mph) is blowing into the buffer toward the stream. This way, a backfire can be started with a drip torch along the mowed break and allowed to burn into the

prairie grass filter. The fire moves slowly because it is burning into a prevailing wind. Once the backfire has burned a strip of 10 - 15 feet in width, a head fire (burning with the wind) can be lit along the crop field and allowed to burn rapidly with the wind. If there is heavy corn stover left along the crop edge, care must be taken to keep the fire out of the field. This can be done by raking or wetting the stover just before the fire is lit. The crew, equipped with fire rakes, fire swatters, and backpack sprayers, should patrol the burn to keep it contained. Fires should be kept small and well controlled (start small to test the wind, moisture conditions, and train your crew). A water tank in a pickup truck fitted with a small pump and garden hose can be very useful for wetting down the fire break and corn stover. If you have not performed a controlled burn before, you should ask for assistance from a local natural resource professional with experience dealing with controlled burns. Consideration should be given to the influence of burning on nesting birds.

Ideally, you should burn in sections; burn only one side of the creek or break a prairie stand into three or four sections and

burn one each year. Fall burns eliminate winter cover and late spring burns can destroy nests. However, fire helps to maintain native plant health. Most native prairie plants will grow more vigorously, produce more flowers and produce more seeds after a fire. The active growing points of most prairie plants are below the soil surface, and are therefore unaffected as the fire rapidly passes over. After the fire, these plants are stimulated by warmth of the blackened ground and the nutrients that were released from burned plant material.

**Replanting and Prescribed Burning sections reprinted with permission from Iowa State University Extension; for more information visit [www.extension.iastate.edu](http://www.extension.iastate.edu)**



When performing a prescribed burn, keep the fires small and monitor the wind speed.

## Missouri Arbor Day poster winner advances to national contest

Michelle Marchiony, a fifth-grade student at Holy Infant School in Ballwin, Mo., is the Missouri state winner in the 2004 Arbor Day National Poster Contest. The contest, sponsored nationally by the National Arbor Day Foundation and Toyota Motor Corp., asked students to create a poster reflecting the theme "Trees are terrific in cities and towns!" More than 2,000 fifth-grade students from 67 Missouri schools participated. Marchiony's poster will be sent to the National Arbor Day Foundation for national competition and displayed at the U.S. Botanic Garden in Washington, D.C.

The national winner will be recognized on National Arbor Day Awards Weekend, April 30 - May 1, 2004.



## From trash to cash: UMCA explores profitable Eastern Red Cedar Market

Recently the Center completed an in-depth Eastern Red Cedar Market Analysis, which includes information gathered from landowners and cedar processors from 16 states. Copies of the Eastern Red Cedar Market Analysis and Directory are available at the Center's web site at [www.centerforagroforestry.org](http://www.centerforagroforestry.org), under the UMCA Publications link, or by writing to Center for Agroforestry, University of Missouri, 203 ABNR, Columbia, MO 65211.

by Jason Jenkins,  
Senior Information Specialist  
University of Missouri-Columbia

While it's as common as oak or hickory in Missouri forests, eastern red cedar often is regarded as a "trash" tree, one that is more likely to be thrown onto a burn pile than onto a truck headed to the mill. Yet despite this less-than-stellar reputation, a University of Missouri analysis of the U.S. eastern red cedar market finds that Missouri landowners may be underestimating the value of their cedar stands and missing an opportunity to turn "trash" into cash.

"Many landowners don't like cedar because they see it as a nuisance," said Michael Gold, associate director of the University of Missouri Center for Agroforestry, who led the study. "Like multiflora rose, it's spread by birds and will take root almost anywhere. It's a very invasive, competitive species that's hard to control."

Though most landowners are satisfied simply to rid their property of cedar, Gold, MU agroforestry economist Larry Godsey and MBA candidate Mihaela "Ina" Cernusca looked at the state's predominant native conifer from a different perspective.

"Like other opportunities in agroforestry, landowners ask 'How much

money can you make?' and 'Where do you sell it?'" Gold said. "Even though we knew cedar was bought and sold, we didn't have the data to answer those questions with certainty, so that's why we conducted the market analysis."



The Eastern Red Cedar market generates nearly \$60 million in annual sales.

The agroforestry team surveyed red cedar businesses in 16 states, ranging from small operations with annual sales less than \$10,000 to large firms with annual sales more than \$16 million. Their major objectives were to identify market participants, determine the types of products currently marketed, and establish general trends for supply and demand.

"We also examined the forces that coordinate and control the market, and identified the resources and relationships needed to be successful," Gold added. "This included evaluating the threat of new entrants to the market, barriers to market entry, threat of substitute products, rivalry among existing companies,

governmental policies, and the bargaining power of buyers and suppliers."

The analysis estimated that the U.S. eastern red cedar market generates almost \$60 million annually in gross sales and is growing, Gold said. Almost 40 percent of survey respondents indicated that demand for red cedar products had increased in the past 5 years, and about half felt it would continue increasing over the next 5 years, he said.

Gold attributed the industry's growth to the ever-increasing list of uses for cedar. "From mailbox posts and mulch to novelty gifts and paneling, the list keeps growing," he said. "Many high-value products can be produced from small-diameter stock, and cedar's natural rot and insect resistance makes it an attractive substitute for pressure-treated lumber products, especially now that chromated copper arsenate (CCA) is no longer in use."

In terms of available resource, the analysis ranked Missouri among the top four states nationally, along with Arkansas, Tennessee and Kentucky. Gold said the bulk of red cedar suppliers are located in these states, but added that buyers reside across the Midwest. "There is a great deal of variability in prices paid for raw materials, with the highest prices paid in areas where resources are more limited."

The analysis also revealed that in comparison to other states, Missouri is undercapitalized and not yet taking advantage of the opportunity to add value locally. (cont. page 8)

## Field Grafting Nut Trees: The Key to Quality (cont. from page 1)

The bark inlay method works on larger trees, where you stub off the tree with a saw and place the scion in between the bark and wood of the trunk (see figure). Personally, I think the 3-flap graft can be learned even by someone who is all “thumbs,” while the bark inlay graft requires developing a bit of carving skills to shape the scion to fit well onto the rootstock. These two field grafting techniques are explained online at [www.centerforagroforestry.org](http://www.centerforagroforestry.org), under the UMCA publications, “Propagating Pecan and Black Walnut.”

At the grafting field days, you can obtain graftwood from experienced nut growers, and even better, have a chance to talk “nut trees” with friendly folks who enjoy sharing their experiences. You will also have an opportunity to receive guidance on supplies needed to graft, such as a sharp knife, hand pruners, plastic plant tie ribbon, aluminum foil, sandwich baggies and wood or craft glue.

### Upcoming Grafting Events:

**Master Grafter Field Day**  
Thursday, May 6<sup>th</sup>, 9 a.m.  
Carrol Chancellor Farm  
Windsor, Mo.

This field day is ideal for those seeking hands-on practice in grafting nut trees. Participants will be allowed to graft 20 trees with experienced nut tree grafters available to assist and demonstrate field grafting techniques. Black walnut will be used, although Carrol does offer seedling pecan trees that can be used for demonstrations as well. Directions: From Sedalia, continue south on Hwy 65 for approximately 10 miles to Hwy 52. Turn right onto Hwy 52, and travel west for approximately 8 miles. Turn left on Maple Grove Road. The home is the first house on the right, 37497 Maple Grove Road.

**Missouri Nut Growers Spring Meeting and Scionwood Swap**  
Saturday, May 8<sup>th</sup>, 9:30 a.m.  
Norval and Jane Netsch Farm  
Windsor, Mo.

The meeting will include grafting and pruning demonstrations, a

scionwood swap and a project report on the use of cull and undersize trees as lumber, presented by Norval Netsch and the Missouri Sustainable Agriculture Demonstration Program. Free and open to the public. Directions: From Windsor, take Hwy 2 four miles west to Hwy 23. Take Hwy 23 one mile north to Bowen. Take the gravel road 0.6 mile west, and look for an old farm house with red barns on the north side.



*The bark inlay grafting method requires basic carving skills.*

## Chef wins gold-medal with Missouri morels

As you are out enjoying the spring florals, some of the first things to flower are dogwood, red bud, violets and daffodils. You should also be on the lookout for morel mushrooms, especially on hillside slopes and near dying trees. For the past five years, the University of Missouri Center for Agroforestry (UMCA) has been conducting research to evaluate the cultivation of morel and other gourmet mushrooms as profitable crops to add value to agroforestry practices. UMCA researchers are physically mapping the location of each morel that fruits in a designated area with the ultimate goal of establishing and marketing natural populations of the



wild morel mushroom. DNA samples from the morels are also being used to determine if the mushrooms will require growers to reseed them yearly.

Certainly the growing consumer demand for morels indicates a profitable market for landowners, including those harvested from a forest farming setting or through guided mushroom hunting. Chefs across the country are seeking morel mushrooms for special menu options, and the results can be quite creative. At the November Governor's Conference on Agriculture, hosted by the Missouri Department of Agriculture, the “AgriMissouri Chef Excellence Award” was awarded to St. Louis Chef Christopher Desens, the Executive Chef of Racquet Club Ladue, whose gold medal winning recipe features morel mushrooms. (cont. page 11)



## Eastern Red Cedar Market Growing

(cont. from page 6)

“Those who provide the raw resource are at the bottom of the value chain, and they capture the lowest value in the market,” Gold explained. “However, as soon as you do something to that resource, you add value. We have a lot of resource in Missouri, and there's room for producers to get more value from that resource.”

He added that the market is growing for primary and secondary manufacturers, which include sawmills, mulch producers, lumber companies and parts manufacturers. “These are areas where Missouri could move up the value chain.”

To help cedar producers improve their market position, the center has compiled a red cedar market directory. “Cedar is a loosely organized industry, but one that can grow by more effectively connecting buyers and suppliers,” Gold said.

Based on results of the market analysis, the researchers proposed four actions to grow the overall U.S. red cedar market. The first is to create a marketing board.

“This board would be able to coordinate supply and demand, provide a contact for buyers and sellers, and encourage governmental agencies to develop management practices to benefit the growth of high-quality cedar,” Gold said. “It would reduce market inefficiencies that currently exist.”

Other actions include developing an industry infrastructure to regulate quality and quantity standards, encouraging private landowners to manage red cedar stands, and coordinating industry participants and university researchers to develop new market opportunities.

“In the future, we hope to initiate several UMCA research projects to benefit the cedar industry,” Gold said. “Developing a method to vegetatively propagate male cedar trees that don't produce invasive seed is one priority, as is a management system with techniques to maximize growth.”

A red cedar management handbook also is under development in collaboration with the U.S. Forest Service Central Hardwood research unit.

tion of field work and educational collaboration with a faculty member.”

Last year, Dr. Kurtz and Dr. Gene Garrett, Director, University of Missouri School of Natural Resources, met with human resources representatives from the MDC to discuss the project. A committee prepared the criteria for the internships, which are designed to locate and recruit premium students from undergraduate programs in conservation disciplines. The program also includes internship opportunities for graduate-level students.

Rebecca Solum, MDC human resources specialist, explained the program's objectives include exposing students to professional tasks within MDC; mentoring students in a range of conservation initiatives; and offsetting a declining number of candidates for conservation positions. “We hope the students will experience a variety of career options in conservation, and learn about conservation tracks they might not have previously considered,” Solum said. “We also find that the students bring a diverse, technologically skilled level of experience to our programs that is a true asset.”

## New program selects, trains students for leadership in conservation

by Rachel McCoy  
UMCA Information Specialist

**“Wanted: Hard-working, motivated college students with a desire to protect and preserve Missouri's natural resources and begin a future career path through an innovative summer internship experience.”**

Thanks to a new program instituted by the Missouri Department of Conservation (MDC), more than 20 undergraduate students from across the state could answer this request

this summer. The MDC recently introduced an internship program, in collaboration with universities across Missouri, and is recruiting and training top-quality students for future careers in forestry, fisheries, wildlife or parks, recreation and tourism.

“This is much more than just a summer job,” said Dr. William Kurtz, forestry professor, University of Missouri-Columbia. “It's a premium internship opportunity, a combina-

Solum said students with current expertise in conservation disciplines, and those seeking to explore careers in conservation, will benefit from the internship program. “This combination helps to maximize the program's effectiveness at reaching its goals,” she added.

Ryan Dawson, a senior at the University of Missouri-Columbia from Nixa, Mo., applied for an MDC internship and hopes to gain practical experience working alongside a forester in the field. (cont. page 10)

## Weed Control ABCs in New Forest Plantings

by **Hank Stelzer**  
Extension Forester

Weed control is crucial during the early years of a new forest planting. With limited amounts of moisture and nutrients around each planting spot, it is either your seedlings or the weeds.

Some people think that mowing or weed-eating is a good way to control weeds. At best, this practice will improve the amount of sunlight the seedling receives. However, it will not increase the availability of moisture and nutrients for seedling growth. Additionally, a few grasses, such as tall fescue, produce a chemical that inhibits tree growth. During the mowing process you also run the risk of damaging the tender bark of a seedling. These wounds can provide an easy entry point for disease and insects. It can also lead to internal defects, such as heart rot, that can structurally weaken the tree and eliminate the possibility of producing high quality lumber at harvest time.

Weed barriers are another way to control weeds, but they can be costly and labor-intensive to install. Also, in a few cases it has been noted that the mat material does not degrade, and over time may become ingrown into the tree.

A living mulch is vegetation, usually a legume, established at a high enough density to suppress the growth of undesirable weeds. A few examples of living mulches include crown or hairy vetch and sweet, red or kura clovers. While legumes can take up atmospheric nitrogen and return it to the soil, they also compete for available water and nutrients. So, this organic form of weed

control may not be suitable for new plantings.

Chemical weed control means herbicides. The mere mention of the word should not strike fear in your heart. When the right herbicide is selected and properly applied, chemical weed control is the most effective and economical way to insure the survival and growth of your new forest.

Wherever you plant, good weed control begins with site preparation and can be most effective when started the fall prior to a spring planting. Mow vegetation in mid-August and allow the weeds to grow back until they are 6" to 8" tall. Then treat your planting spots with a foliar-applied broad spectrum herbicide such as Roundup™. Today several chemical companies make this glyphosate-based herbicide. Your best bet is to buy an undiluted product containing at least 41% glyphosate and follow the label instructions for mixing and application rates.

Pre-emergent herbicides applied before tree planting kill germinating weed seeds, but do not harm seedling roots unless improperly applied. If you are forced into preparing your site this spring it is not a big problem. You can combine (or "tank mix") the contact herbicide along with this pre-plant treatment. Again, it is essential that you fully read the labels of both herbicides prior to their use in a tank mix. Pay particular attention if there is a period of time either before or after planting when the chemical may not be applied.

Weed pressure will increase through the growing season. Most chemical

treatments begin to lose their effectiveness 60 days after application and are usually totally ineffective 90 days out. Depending upon the environment, site quality and moisture conditions, additional chemical treatments may be necessary. If you applied your herbicide in mid-April, count on a second application in mid- to late-June; maybe even again in early August if summer rains prolong the growing season.

### Weed Control: Internet Resources and Contacts

The following web sites provide information on commonly used forestry herbicides and application methods: <http://forest.wisc.edu/extension/publications/76.pdf>; and [www.oznet.ksu.edu/library/forst2/mf656.pdf](http://www.oznet.ksu.edu/library/forst2/mf656.pdf)

An excellent website for obtaining herbicide labels is [www.cdms.net](http://www.cdms.net).

For specific weed control questions, contact Hank Stelzer, MU forestry extension specialist, at (573) 882-4444; or email at [stelzerh@missouri.edu](mailto:stelzerh@missouri.edu).



A backpack sprayer is a commonly used and effective method for applying herbicides in forest plantings.

## Internship program (cont. from page 8)

"Many landowners are unaware that MDC provides free assistance in developing a forestry management plan, and even cost-share programs, which will often pay a substantial portion of the management operations they decide to implement," Dawson said.

"Active forest management is critical to maintaining healthy forests, and I hope to promote this idea among landowners."



**Ryan Dawson hopes to serve landowners through an MDC summer internship.**

One component of the program that distinguishes it from other internships is the selection process. Students must be recommended for the program by faculty from their university, and will work with a faculty member to plan their internship activities. Monthly reports are presented to the faculty advisor, who schedules an on-site visit with the student during the summer. Tuition fees for college credit hours earned through the internship are funded by MDC, and students also receive an hourly salary. The program is open to students from across the state.

"This program hand-selects and identifies our state's future leaders in conservation and natural resources, allowing employers to reach the best quality students for future hiring potential," said Kurtz. "We're starting now to recruit from an outstanding university student base that will lead the future of natural resources in Missouri."

## Landowner Spotlight: First Timber Sale Reveals Surprises, Insights

by **Rachel McCoy**  
**UMCA Information Specialist**

Don Poore is a busy man.

Since 1964, he has worked to produce row crops and livestock on his 350-acre diversified operation in Monroe County, near Shelbina and Paris, Mo.

Recently, Don committed to another project — his first timber sale.

When the Poores began farm production more than 40 years ago, they made a decision not to clear all the wooded areas, but to allow some to remain in its natural state, which family and friends have enjoyed for hunting and recreation. Last year, the Poores began considering harvesting a portion of this timber.

"A buyer came and walked it with us," Don said, "but after doing some research, we declined that offer. If you appreciate trees, it's hard to cut the woods out. We were waiting for the dollar amount that would justify harvesting the trees."

The next step for the Poores was to seek assistance from consulting foresters. After walking the timber together and discussing management options, Don was surprised by the value of his walnut trees, finding it to be higher than he anticipated. For Don, the time was right to pursue sealed bids. "They talked about replanting, and that seemed like the

best way to manage the forests we have," he said. "To cut out the trees, then start more seedlings, means that down the road future generations will see the benefits. That's the kind of foresight we want to keep in mind."

The process of selling timber highlights the need for landowners to remain aware of preserving the value of their timber, and the importance of keeping it protected from

livestock or other practices that might harm valuable trees. For example, the Poores were surprised to find a deer stand built into one of their trees that didn't belong to friends or family.

Don recommends that any landowner considering a timber sale should contact someone

knowledgeable, like a qualified forester. "Do a walk through and let a qualified forester help you protect and preserve your forested areas—if not for the value right now, do it for the value of the future."

A solid enthusiasm for trees was evident in the foresters, Don said, and he enjoyed the information they shared with him about the age and condition of his trees. One tree was determined to be at least 110 years old and still growing quickly. "We tend to take our forested lands for granted, but when you get out there with an expert, you really see their uniqueness and potential," he said.



**Don Poore, a Monroe County landowner, found his first timber sale a positive experience.**



# The Back Page

## Award-winning morel mushroom pasta (cont. from page 7)

Desens said his recipe for Morel Mushroom Pasta has been popular on the spring menu at the private club for the past three years and is enjoyable because of its simplicity.

"I like to let the flavors speak for themselves," Desens said.

Desens' award-winning morel mushroom recipe is listed below, which also features a variety of Missouri products. Happy hunting!

### Morel Mushroom Pasta AgriMissouri Gold Medal Winner

2 ½ oz. Fresh Black Pepper Fettuccine  
1 Tbs. Clarified Butter  
2 tsp. Shallots, minced  
½ cup morel mushrooms (Chef Desens recommends Ozark Forest Mushrooms)  
¼ cup Asparagus, peeled, blanched and diced

1 Tbs. Stone Hill Winery Seyval  
½ cup Heavy Cream  
1 Tbs. Roasted Garlic  
¼ cup Burger's Country Ham, diced  
1 Tbs. Lemon Zest  
1 Tbs. Fresh Basil, minced from Herb Gathering, Inc  
1 tsp. Fresh Tarragon, minced from Herb Gathering, Inc  
1 tsp. Fresh Parsley, minced from Herb Gathering, Inc  
1 tsp. Fresh Chives, minced from Herb Gathering, Inc  
2 Tbs. Whole Butter  
¾ cup Parmesan Cheese  
To Taste: Salt and Pepper from McCarthy Spice and Blends

In a large pot, bring water to a boil. Add salt and pasta. Heat a large sauté pan over high heat. Add clarified butter. Once the butter is hot, add the shallots and morel mushrooms. Allow to sauté for one minute. Add asparagus. After another minute, deglaze pan with Stone Hill Winery Seyval. Reduce heat and add the heavy cream and the roasted garlic. Stir and allow to reduce. Check the pasta. When done, add to the pan along with the rest of the ingredients. Taste and adjust seasonings. Serve in a warm pasta bowl. Serves 1

With contributions from the Columbia Missourian

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### We welcome your thoughts!

In order to prepare and mail *GH* in a timely manner, the deadline for material for the next issue is:

**June 15, 2004**

Send newsletter material,  
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## Calendar of Upcoming Events

**April 30, 2004 - Celebrate Arbor Day!** Visit [www.arborday.org](http://www.arborday.org) for celebration tips and information.

**May 6, 2004 - Master Grafter Field Day, Windsor, Mo.** This field day begins at 9 a.m. at the Carrol Chancellor Farm in Windsor. Participants will be allowed to graft 20 trees with experienced nut tree grafters will be available to assist and demonstrate field grafting techniques.

**May 8, 2004 - Missouri Nut Growers Spring Meeting and Scionwood Swap, Windsor, Mo.** Event begins at 9:30 a.m. at the Norval and Jane Netsch Farm, Windsor, Mo., and will include grafting and pruning demonstrations, a scionwood swap and a project report on the use of cull and undersize trees as lumber. Free and open to the public.

**May 15, 2004 Quality Timber Management Workshop**, sponsored by the Missouri Walnut Council, Howard County, Mo., 9:30 a.m. to 3 p.m. Registration required; contact Dusty Walter at (573) 884-7991, or email at [walterd@missouri.edu](mailto:walterd@missouri.edu).

**June 23-25, 2004 - World Congress of Agroforestry Pre-Congress Tour** Held prior to the 1st World Congress of Agroforestry, this tour will be of on-farm demonstrations in Missouri and Iowa showcasing the five agroforestry practices. Registration includes chartered bus, meals and lodging. Tour stops include Iowa State University windbreak practice demonstration area; the Bear Creek riparian buffer demonstration area; Ben's Black Walnut Orchards and processing facility; alley cropping demonstrations at Deer Ridge and Henry Sever Conservation areas; and tours of the MU Greeley and HARC farms. Visit [www.centerforagroforestry.org](http://www.centerforagroforestry.org) and select Upcoming Events to register; or contact Julie Rhoads, UMCA events coordinator, at (573) 882-3234. Registration deadline is June 1.

**June 27-July 2, 2004 - First World Congress of Agroforestry, Orlando, FL.** Visit <http://www.conference.ifas.ufl.edu/wca/> for more information.

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

**August 15-19, 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. Registration information is available at [www.nafex.org](http://www.nafex.org); or contact Jerry Lehman at (812) 298-8733. Register by July 15 for lowest rate.