GREEN HORIZONS

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Removing unwanted trees from your woodland: Part I

To be effective, the girdle must completely encircle the tree.

Hank Stelzer, Extension Forester

Whether one talks about crop tree release (last issue of Green Horizons) or timber stand improvement (TSI), the fact of the matter remains, "How does one remove all the unwanted trees?" Undesirable trees with commercial value can be sold, making the operation an income-generating forest management activity. Some undesirable trees may be used for lumber, firewood or other products. The remaining unwanted trees can either be cut down or killed in place.

Felling Trees

There are several things you need to consider if you decide to cut down these trees.

First and foremost is safety. Cutting small understory trees for firewood is one thing; cutting co-dominant and dominant trees from the forest canopy is another matter altogether. The tree you cut needs to fall all the way to the ground. Hanging trees are a huge no-no. Even the most experienced foresters I know cringe when they hang a tree. They know the risk of injury is high and every hung tree is different from the last.

Second is damage to the crop trees. Chances are good that unless you have been taught the technique of directional felling (how to fell a tree in the direction you want it to fall), you could end up damaging the very tree you are trying to save.

Third is accessibility. Unless you plan to remove all those down trees (not recommended), you will find it extremely difficult to move around in your woods. And you can forget about driving that new ATV out to your deer stand.

The last consideration is fire danger. This operation will place a lot of fuel onto the forest floor very fast. With that much wood on the ground, an innocent Missouri ground fire can grow in intensity and cause serious damage to your crop trees.

The safest and most efficient way to remove undesirable vegetation is to kill the trees and leave them standing. As they decay "on the stump," the branches will come down a piece at a time. With no limbs, when the trunk eventually does fall, it will do very little damage. **(cont. pg. 3)**

EOFC mechanized forest thinning trial results

In the Winter 2005 issue of Green Horizons, we included a story about a mechanized forest thinning trial sponsored by the Eastern Ozarks Forestry Council (EOFC) and the Missouri Department of Conservation. The trial was designed to help determine the best methods for thinning Ozark hardwood stands. Due to space constraints, only the key findings are presented here. A complete description of the results "Productivity, Economics and Environmental Impact of Conventional and Mechanized Equipment of Thinning Ozark Forests," is available online at **www.eofc.org**. *Authors are Peter Becker, research coordinator, Eastern Ozarks Forestry Council; Jason Jensen, resource forester, Missouri Department of Conservation; and Dennis Meinert, soil scientist, Missouri Department of Natural Resources.* ***(Manuscript condensed for Green Horizons by Hank Stelzer, Extension Forester)***

Study Overview

To refresh our readers' memory, the study site was a 70-year old, overstocked upland oak forest in northern Wayne County near Greenville, Mo. The dominant trees were black oak, white oak, post oak, hickory, and shortleaf pine. The mature black oaks had been stressed by a three-year drought and mortality was readily apparent. The slopes of the study site ranged from 3 to 60%, with an average slope of 30%. The topsoil was 3-6 inches deep, and soils were moderately to well-drained.

A crop tree management system was applied by marking trees selected to be left in the forest on the basis of expected longevity, quality, overall health and potential for growth response. Due to the declining condition of the black oak, **(next page)**

Missouri Master Wildlifer Program Begins

The Missouri Master Wildlifer Program is designed for landowners who are interested in including wildlife considerations into their current management objectives. Participants will obtain the knowledge and tools necessary to enhance habitat for a variety of wildlife species that can be enjoyed by themselves, family and friends, and outdoor recreationists.

The program will first be offered live via Interactive TV at the following sites:

Location:	Contact Information:
Reeds Spring	Tri Lakes TCRC, Chris Dean (417) 272-8707
Salem	Salem TCRC, Ray Walden (573) 729-8163
St. Joseph	NW Missouri Regional Extension Office, Karma Metzgar, (816) 279-6064
Nevada	Nevada TCRC, Leslie Carroll-Bartlett, (417) 448-1212
Columbia	Boone County Extension and the MU campus, 226 Heinkel Bldng., Don Day, (573) 445-9792
Jackson	Cape Girardeau County Extension Center, Gerald Bryan, (573) 243-3581
Carrollton	Carroll County Extension Center and the Public Library, Parman Green, (660) 542-1792

Program Schedule:

2/28 Basic Ecological Principles & Wildlife Management
3/2 Bobwhite Quail and Grassland Birds
3/7 White-tailed Deer
3/9 Eastern Wild Turkey
3/14 Waterfowl
3/16 Furbearers and Wildlife Damage Management
3/21 Ponds and Streams
3/23 Enhancing Wildlife Diversity on Your Property

For more information, contact Bob Pierce at (573) 882-4337; or email piercer@missouri.edu

Mechanized forest thinning trial
(cont from page 1)

shortleaf pine and white oak species were favored. The initial intent was to remove sufficient timber to open at least two sides of the crown of leave trees. Due to the presence of red oak borer and the general poor health of the red oaks, the availability of suitable leave trees was quite low, and substantially larger amounts of timber were removed. The crowns of nearly all leave trees were opened on four sides, and the resulting stand resembled a shelterwood cut.

The three thinning technologies evaluated were:

1. chainsaw felling and extraction by skidder
2. mini-crawler with hotsaw
3. harvester felling and forwarder extraction

General Results

The attitude, skill and performance of the personnel operating the logging equipment -- and not the equipment itself -- are the primary determinants of "good" versus "bad" logging. In the hands of exceptionally skilled operators, all of the logging technologies tested proved capable of thinning Ozark forests satisfactorily. The selection of an appropriate system boils down to issues of productivity (including economics), damage to crop trees, and environmental impact.

Productivity

The crawler/hotsaw was the only logging technology for which production cost exceeded revenue. The operators in this system were very experienced and motivated so its relatively low productivity likely reflects real limitations of the equipment operating in sawlog-sized hardwood stands.

This special "Bobcat-like" harvester grabs the small tree and cuts it off close to the ground with chainsaw.

Average total machine production costs per unit volume did not differ significantly between chainsaw/skidder and harvester/forwarder. However, as technical problems were resolved and the out-state operators became **(cont. pg. 6)**

Removing unwanted trees from your woodland (cont. from page 1)

Girdling

Girdling is the most common technique for deadening a standing tree. Girdling involves cutting a groove or notch into the trunk of a tree to interrupt the flow of sap between the roots and crown of the tree. The groove must completely encircle the trunk and should penetrate into the wood to a depth of at least 1/2 inch on small trees, and 1 to 1-1/2 inches on larger trees. Girdling can be done with an ax, hatchet, or chain saw; however, when treating large areas, a chain saw is the most efficient use of not only your time, but your energy.

A simple spray bottle can apply the labeled herbicide into the girdle.

For those who prefer not to use pesticides, girdling can be used without herbicides. However, girdling alone is generally less dependable (particularly with hard-to-kill species such as red maple and hickories), takes longer to be effective, and can actually stimulate sprouting compared to when herbicides are incorporated into the treatment.

Water soluble forms of herbicides (such as Pathway and Tordon RTU) are most commonly used to get maximum movement of herbicide within the plant. These two herbicides are easy to apply because no dilution is required. They are applied by squirting it on the girdle until the cut surface is wet. Hand-held, pint or quart spray bottles, such as those available at local garden stores, are ideal for applying herbicide to the girdle.

Treatment with an oil-carried herbicide (such as Garlon 4) is recommended in the spring and early summer when "sap flow" is heavy. Water-carried herbicides will usually not be adequately absorbed to be effective during this period.

All herbicides are not equally effective in controlling different species. It is essential that you READ THE ENTIRE LABEL before using any herbicide. An excellent fact sheet from Randall Heiligmann over at Ohio State Forestry Extension (http://ohioline.osu.edu/for-fact/pdf/0045s.pdf) presents forestry herbicides commonly used along with recommended rates.

Herbicides, like all pesticides, are approved (labeled) for specific uses by the Environmental Protection Agency. These approved uses are listed and described on the pesticide's label. Because pesticide labeling may change at any time, you should verify that a particular herbicide is still labeled for your intended use. At the time of this writing, copies of most herbicide labels and MSDS could be obtained online at the Crop Data Management System web site http://www.cdms.net/manuf/manuf.asp. Others are available through the individual manufacturer's web site.

In future issues of *Green Horizons*, we will continue our "Removing Unwanted Trees" series, by looking at injection, basal bark, thin line, and cut stump treatments.

Missouri Department of Conservation assists Missouri towns with shade tree grants

Eric Kurzejeski, MDC Outreach Programs Chief

Shade that blocks the searing heat of a summer day, and leaves that help generate the air we breathe, are among the many benefits of trees in Missouri communities.

Communities large and small have enlisted the help of the Tree Resource Improvement and Maintenance (TRIM) program to ensure the health of trees in Missouri neighborhoods.

TRIM is a cost-share tree care program administered by the Missouri Department of Conservation (MDC) in cooperation with the Missouri Community Forest Council (MCFC). The program provides reimbursement of $1,000 to $10,000 to assist government agencies, public schools and non-profit groups with the management, improvement or conservation of trees on public lands. Projects eligible for TRIM funding include tree inventory, removal or pruning of hazardous trees, tree planting, and training of volunteers and city/county employees to care for community forests. Funded projects are selected on a competitive basis. A panel of judges assesses each proposal for its value to the community; thoroughness as a tree management program; and ability to promote, improve and develop a community's urban forest and economic feasibility.

Grant recipients can receive up to 60 percent of financial assistance needed for their projects. Projects located in communities within The National Arbor Day Foundation's Tree City USA designations are eligible for an additional 15 percent in matching funds.

"We were very pleased with the diverse slate of applications we received this past June," said Justine Gartner, manager of the TRIM program for the MDC Forestry Division. "Forty projects were selected to receive a total of $326,743 in grant funding this fiscal year. When combined with local matching funds of $148,803, nearly $500,000 was garnered to support tree management programs in Missouri's communities."

Of the 40 projects selected to receive TRIM **(cont. pg. 6)**

Chestnuts: Not just for roasting anymore — Market research and consumer outreach at the University of Missouri Center for Agroforestry

Rachel McCoy, MU Center for Agroforestry

Taste of the Kingdom, a value-added agricultural food products company, Kingdom City, Mo., offers sauces and jellies made with chestnuts from the Center for Agroforestry HARC research farm each year at the Missouri Chestnut Roast. The products are a popular draw for visitors, with supplies selling out year after year.

Consumers and producers across the Midwest may find themselves humming the familiar "Chestnuts Roasting on an Open Fire" tune all year long, thanks to ongoing research and outreach efforts to establish the chestnut industry conducted by the University of Missouri Center for Agroforestry (UMCA). Many people are familiar with the American Chestnut tree, once an abundant source of lumber and nut production across the southeast and eastern regions of the U.S. In addition to harvesting the tree for lumber, rural communities stored hundreds of pounds of chestnuts for livestock feed and selling to consumers, making the nut a substantial source of economic viability. Unfortunately, in 1904, the chestnut blight (introduced from Asia) was discovered in the American Chestnut tree, and the species was nearly eliminated from the American forest by 1950.

However, Missouri soils and climate are excellent for production of the sweet, starchy and versatile Chinese varieties of the chestnut, which are blight-resistant and can be planted in an orchard or alley cropping practice. The sweet, starchy nuts are high in nutrient content and an excellent addition to soups, meat dishes and desserts, including gourmet recipes.

UMCA is working to establish a viable chestnut industry, focusing its efforts on three key areas: national market research, production techniques/orchard management and increasing consumer demand and awareness. The long term objective is to change the image of chestnuts from that of a holiday tradition to a healthy year round food. The outcome of this effort will be an active program that reaches out to potential producers and establishes a multi-million dollar chestnut industry within the state of Missouri and surrounding states.

At the consumer level, the University of Missouri Horticulture and Agroforestry Research Center (HARC), New Franklin, Mo., is the site of the annual Missouri Chestnut Roast -- the Center's premier outreach event. The Chestnut Roast is an outstanding opportunity to introduce families and landowners to the broad range of possibilities and benefits agroforestry practices can provide. Hundreds of visitors each year enjoy their first sample of sweet, Missouri-grown roasted chestnuts, along with a variety of products featuring locally-grown black walnuts and pecans, as well as recipes and nutritional information to peak their interest in purchasing nut products.

The 2005 Missouri Chestnut Roast on Oct. 29, drew a record crowd of more than 4,000 guests from across the state to the HARC farm. Sales of fresh chestnuts and food samples of chestnut products from Missouri vendors were among the most popular of the day's events. Guests filled the demonstration tent for the live bat demonstration, including children of all ages who came to enjoy this special presentation for the Halloween season. Tours of the 1819 Hickman House introduced visitors to a rare form of early Missouri architecture, and guided bus tours of the research farm remained full throughout the day. Food enthusiasts lined up to view the chestnut cooking demonstration by local chef Craig Cyr of The Wine Cellar and Bistro, Columbia, Mo., many enjoying samples of his delicious dishes. Tree grafting, wreath making and wood lathe demonstrations were new events this year. With live bluegrass music and spectacular views of the fall leaves across the Missouri River Hills, the day proved an enormous success.

For additional information about the Center for Agroforestry's chestnut research and the annual Missouri Chestnut Roast, visit **www.centerforagroforestry.org**. Nutritional information, recipes and market research for chestnuts are also available.

Top: Ken Hunt, far right, UMCA chestnut research post-doctoral fellow, explains the growing process and market potential of the unique nuts. Fresh-roasted samples from the HARC farm chestnut research orchards are an annual highlight of the Missouri Chestnut Roast.

Bottom: Cheryl Jensen of the Native Plant Society demonstrates wreath making from decorative woody florals at the Chestnut Roast. Woody florals such as curly willow and red osier dogwood can be grown in agroforestry practices like riparian forest buffers for additional income opportunities.

Landowner Spotlight – Missouri landowners honored by national, state organizations for forest stewardship and service

This Landowner Spotlight honors two Missouri landowners, ***Richard Stricklin and Terry Truttmann****, who were recently recognized with national awards from the American Tree Farm System: The BASF Outstanding Achievements in Sustainable Forestry award and the Outstanding Inspector of the Year award.*

The American Tree Farm System® (ATFS) is a national program that promotes the sustainable management of forests through education and outreach to private forest landowners. Founded in 1941, the ATFS has 33 million acres of privately owned forestland and 51,000 family forest owners who are committed to excellence in forest stewardship. Tree Farmers manage their forestlands for wood, water, wildlife and recreation with assistance from 4,000 volunteer foresters. ATFS is a program of the American Forest Foundation, a nonprofit organization that works for healthy forests, quality environmental education, and informed decision-making about our communities and our world.

The BASF Outstanding Achievements in Sustainable Forestry award recognizes individual achievement in spreading the practice of sustainable forestry in the United States. The ATFS and BASF Corp. honor the individual who has achieved significant results in their community by effectively reaching out to forest landowners and/or the general public to demonstrate the benefits of sustainable forestry.

The Outstanding Inspector of the Year award honors an ATFS volunteer inspector. Outstanding inspectors give their time to ATFS, and perform considerable outreach efforts to educate the public and private landowners on the benefits of sustainable forestry. The honored individual is selected from four regional winners. Many Outstanding Inspectors of the Year are also honorees of the hardhat awards, which recognize inspector efforts to introduce ATFS to hundreds of new Tree Farmers.

Missouri Tree Farmer receives 2005 BASF Outstanding Achievements in Sustainable Forestry Award

Washington, D.C. – The American Tree Farm System® (ATFS), a program of the American Forest Foundation, along with BASF Corp., named **Richard Stricklin** of Mountain View, Mo. as the winner of the BASF Forestry Products Outstanding Achievements in Sustainable Forestry Award for 2005. Stricklin received his award during the National Tree Farmer Convention held in Springfield, Mass.

The BASF award recognizes individual achievement in spreading the practice of sustainable forestry in their communities. Stricklin has worked tirelessly for years volunteering as chair of the Forestry and Wildlife Committee of the Top of the Ozarks Resource Conservation and Development Council, a 10 county, non-profit organization, and as a Tree Farmer.

Stricklin has constantly sought out new ways to reach local timber owners in the Ozarks. With the Top of the Ozarks Resource Conservation and Development Council, Stricklin has headed a diverse portfolio of activities including a television pilot on the Ozarks, resource publications and websites, educational workshops, and multiple projects and initiatives focusing on land management and sustainability. His projects take all facets of sustainable forestry into account, creating effective, balanced projects. Stricklin's commitment to proper management of forestland extends to his own 160 acres of forestland. He has been a certified ATFS member since 1987 and was certified as a Forest Crop Land Cooperator in 1990. Annually, Stricklin personally implements 10 acres of timber stand improvement based on his long term management plan developed with the Missouri Department of Conservation, converting poor forestland to rich short leaf pine.

"Richard deserves this recognition," said Bob Simpson, Senior Vice President, ATFS. "His passion for sustainable forest management has reached beyond measurement in the Ozarks. He has selflessly dedicated his time, energy, and knowledge to improving the land to which he is dedicated."

Stricklin has been a consistent voice in the Ozarks for nearly two decades, contributing to the acceptance and implementation of sustainable forestry practices across the Ozarks. He was selected by five independent judges to receive the award and the $5,000 cash award from BASF, presented at the 2005 National Tree Farmer Convention in Springfield, Mass.

For more information please contact Brigitte Johnson, APR, Director of Communications, 202.463.5163, Email bjohnson@forestfoundation.org or visit ATFS at www.treefarmsystem.org

Terry Truttmann named national "Outstanding Tree Farm Inspector of the Year"

Joyce Baker, Communications Coordinator , Missouri Forest Products Association

The Missouri Forest Products Association and the Missouri Tree Farm Committee extends its congratulations to **Terry Truttmann**, Missouri Department of Conservation, Chillicothe, for winning not only the Regional Tree Farm Inspector of the Year, but also the American Tree Farm System's (ATFS) "Outstanding Inspector of the Year" award.

Truttmann was nominated for Regional Tree Farm Inspector of the Year by the Missouri Tree Farm Committee in June. All regional nominations are reviewed by ATFS staff, who with assistance from American Forest Foundation staff, selects the Outstanding Inspector of the Year from among four regional finalists. The American Tree Farm System **(cont. pg 8)**

MDC assists communities with TRIM grants (cont. from pg. 3)

funding, 13 were communities with a population of less than 3,000. “Almost all of these small communities were located in traditionally rural parts of the state, demonstrating that small communities can be successful in writing TRIM grants,” said Gartner. “Communities including Neelyville (pop. 381), Union Star (pop. 432), Rocheport (pop. 255), and Houston (pop. 2118) did a superb job articulating their project and received funding.”

TRIM grants were also awarded to government agencies such as the Parks and Recreation Departments in Columbia, Gladstone and Wentzville; schools including St. Louis Community College-Meramec; and groups including the Putnam County Care Center. The Missouri Community Forestry Council (MCFC) is committed to urban and community forestry issues in Missouri. The council meets regularly to advise the state of Missouri on the best ways to preserve, protect, expand and improve our urban and community forests. For more information, visit www.mocommunitytrees.com/pages/1/.

TRIM Grant Basics:

- TRIM is a cost-share tree care program administered by the Missouri Department of Conservation (MDC) in cooperation with the Missouri Community Forest Council (MCFC).
- The program provides reimbursement of $1,000 to $10,000 to assist **government agencies, public schools and non-profit groups** with the management, improvement or conservation of trees on **public lands**.
- Applications for funding are available in mid-March and due **June 1**. To receive an application, contact Justine Gartner, MDC Forestry Field Programs Supervisor, by email at Justine.Gartner@mdc.mo.gov; or call (573) 522-4115, ext 3116.

The Bid Box

Two sales from this past fall are representative of the strong market for quality timber, including such species as black walnut and silver maple. In both cases the harvested trees were marked by a forester, and an estimate of volume and value given to the landowner.

Boone County:
- 148 trees, from approximately 5 acres
- 35,105 board feet (estimated volume, Doyle scale)
- Mostly silver maple, some cottonwood and sycamore
- One bid received -- $3600
- Return per acre: $720 for harvesting mature timber

Montgomery County:
- 422 trees, from approximately 26 acres
- 129,936 board feet (estimated volume, Doyle scale)
- More than half were silver maple, with other bottomland species also included; plus several black walnut
- Bids ranged from **$12,647 to $23,850**
- Return per acre: $917

Remember: If you are considering selling timber from your land, always remember that your best preparation prior to selling your timber is to know what you have and an estimate of its value.

Mechanized forest thinning trial (cont. from pg. 2)

accustomed to Ozark conditions, the production cost of the harvester/forwarder technology was 14% less than that for chainsaw/skidder.

Industry observers readily acknowledged the high productivity of the harvester/forwarder, but presumed that its high capital cost would make it cost ineffective, even for commercial logging operations not involving small-diameter tree removal. Ownership costs for the harvester and forwarder are relatively high, but several factors could moderate the total machine costs.

Scheduled hours should account for bad weather days, and tracked equipment (such as the harvester/forwarder) can operate in weather and ground conditions unsuitable for wheeled equipment (such as a conventional cable- or grapple-skidder). During the study, the conventional equipment was unable to operate due to rain, whereas the mechanized equipment operated efficiently and without rutting. Also, the utilization rate (percentage of scheduled hours that are productive) of **(cont. pg. 9)**

Conventional felling and skidding is not practical for removing small-diameter trees from the forest.

University of Missouri Center for Agroforestry

Specialty Mushroom Workshop

Feb. 17-18, 2006

Ramada Inn Conference Center Columbia, Mo

Who Should Attend? Anyone interested in learning the basics of production and/or marketing techniques for specialty gourmet mushrooms including shiitake, oyster and Stropharia. University of Missouri research faculty members, professional mushroom growers and marketers will provide participants with the knowledge and skills needed to get started with growing and marketing mushrooms. Exhibitors from the industry will be on hand to provide information about mushroom production supplies and establishing successful markets. A hands-on tour of the mushroom cultivation sites at the University of Missouri Horticulture and Agroforestry Research Center, New Franklin, Mo., will feature demonstrations of steps involved in growing mushrooms.

Registration is limited to 60 participants. Please send in your form and payment early to ensure your attendance at this workshop. Early registration fee postmarked before Feb. 13 is $89 per person; registration fee postmarked after Feb. 13 and walk-ins is $99 per person.

For registration information, or to print a brochure, visit www.centerforagroforestry.org and select Upcoming Events; or call Julie Rhoads, UMCA Events Coordinator, at (573) 882-3234 or email rhoadsj@missouri.edu.

Nicola McPherson, right, is a featured speaker at the upcoming Specialty Mushroom Workshop. McPherson and her husband, Dan Hellmuth, operate a successful specialty mushroom business near Timber, Mo., utilizing sustainable agricultural practices to produce fresh mushrooms and value-added mushroom products year-round.

Riparian buffer field day addresses streamside challenges; income opportunities

The maintenance of existing forests and the establishment of new trees in areas adjacent to streams (and prone to flooding) can be challenging. The University of Missouri Center for Agroforestry (UMCA), and its collaborative researchers, addressed this challenge at a field day in October, focusing on current riparian buffer research and its application on the land.

Titled "Managing Riparian Forests and Riparian Buffers," the field day was hosted at the University of Missouri Horticulture and Agroforestry Research Center at New Franklin, Mo. Topics included design and maintenance of riparian forests and buffers; planting configurations to reduce erosion; species selection; wildlife management; value added opportunities and cost-share/incentive programs. The Center for Agroforestry extends special thanks to the Missouri Department of Conservation, the USDA Natural Resource Conservation Service and the University of Missouri for the expertise their personnel contributed to the program. A tour of the recently installed riparian forest buffer demonstration area at the HARC farm was a field day highlight, including streamside forests managed for timber production and decorative woody florals planted for reduced erosion, enhanced water quality and landowner income opportunities.

"This field day provided an effective forum for landowners and diverse resource agencies to come together and share information," said Dusty Walter, UMCA technology transfer specialist. "As science delivers new insights to enhance our resource stewardship, demonstrations and field days at University farms and centers across the state will continue to deliver this information to the owners and managers of our land resources."

For more information about riparian forest buffers, see the UMCA Agroforestry in Action guide "Establishing and Managing Riparian Forest Buffers," available online at www.centerforagroforestry.org, at the Publications link; or email umca@missouri.edu to request a copy.

This field day was made possible, and funded in part, by the Forest Land Enhancement Program administered through the Missouri Department of Conservation.

Larry Godsey, economist, Center for Agroforestry, discusses cost-share incentive programs for riparian forest buffers at the field day.

Landowner Spotlight: Missouri land/forest owners honored (cont. from pg.5)

(ATFS) awarded the Wes Meier Award, a special wood and marble plaque, to Truttmann for "Outstanding Inspector of the Year" during the National Tree Farm Convention in September

Terry Truttmann, center, addresses questions and offers advice about forest stewardship and management as an active ATFS Tree Farmer and resource forester for the Missouri Department of Conservation.

2005. The Outstanding Inspector of the Year Award honors one ATFS volunteer inspector annually. Outstanding inspectors are recognized for donating time to the ATFS and performing considerable outreach efforts to educate the public and private landowners on the benefits of sustainable forestry – criteria well-suited to Truttmann's longstanding commitment to promoting forestry stewardship in Missouri.

Truttmann manages a nearly 6,000-acre state land conservation area while actively promoting the Tree Farm organization by conducting or participating in promotions and field tours. He organizes an annual fall color driving tour on his conservation area to highlight forestry practices, averaging 1,000 participants. Truttmann's acreage is also recognized as one of several quail emphasis areas in the state, and he coordinates intensive quail management practices with other MDC staff.

Truttmann has been employed as a Resource Forester for the Missouri Department of Conservation for the past 15 years, and promotes the Tree Farm program with a display at community events including fairs, local Soil and Water Conservation District and Natural Resource Conservation Service functions.

"We have been very active in our region to promote the program and get pictures and articles out whenever any of our regional Tree Farmers are awarded," said Truttmann. The previous two State Tree Farm winners came from his region.

During the past five years, Truttmann has completed 49 Tree Farm reinspections. His list of responsibilities includes serving as the regional Tree Farm Chair in Region 1 for eight years, and as newsletter editor prior to that for five years. He has not only reinspected many of these Tree Farms, but has also developed plans, inventories, marked timber stand improvement projects and timber sales for landowners. Until last year, he covered seven counties, and as of this year, handles private land forestry calls in three counties in Northwest Missouri. He is a Society of American Foresters (SAF) certified forester and served as the secretary/treasurer last year for the Missouri SAF. He now serves as current chair for the organization.

The Missouri Forest Products Association's (MFPA) mission is to encourage the wise use and conservation of our nation's natural resources. MFPA promotes the business of all forest-related industries and encourages closer working relationships among forest product firms, forest owners, producers, and harvesters. This networking helps improve procurement, processing, research, and marketing of forest products. For more information, visit **www.moforest.org**

The Missouri Tree Farm Committee is a program of MFPA. Its mission is to promote the maintenance and improvement of private lands for forest growth, quality, wildlife, habitat, soils, recreational benefits, wetland and watershed protection.

Missouri Tree Farm Conference, February 24-25

The Missouri State Tree Farm Committee invites all woodland owners to attend the 26th Tree Farm Conference at the Stoney Creek Inn in Columbia, Mo., Feb. 24-25. Themed **"Creating Value-Added Woodlands,"** the format is expanded this year with a full-day field day at the MU Horticulture and Agroforestry Research Center in nearby New Franklin, Mo. Participants will learn how to evaluate tree crowns and crop tree management techniques. Attendees will also see specialty wood products entrepreneur Paul Easley of Moweaqua, Ill., turn "junk" logs into green blanks that can used for a wide array of value-added products. In the evening, landowners will have the opportunity to share their personal experiences in woodland management.

Saturday presentations will focus on Quality Deer Management, specialty wood products, Missouri timber price reports and eastern red cedar market analyses. The conference concludes with a presentation on new horizons for utilizing Missouri's small-diameter trees. For more information, contact the Missouri Forest Products Association's Education Coordinator, **Glenda Fry**, at 573-634-3252, email **Glenda@moforest.org** or visit the association's web site at **www.moforest.org**.

EOFC mechanized forest thinning trial results (cont. from pg. 6)

mechanized equipment is higher than that of conventional equipment. However, the durability and reliability of the harvester head processing tough hardwoods is yet to be fully tested in the Ozark woods. There was no replication of operators or equipment within technologies, and the areas logged were small and fragmented by normal operating standards. In addition, no account was taken of mobilization, overhead, or profit in production costs. Further, revenues were inflated by the relatively high proportion of sawlogs in these thinnings, and by high sales prices for sawlogs due to shortages caused by wet weather. All of these factors prohibit further generalization of these conclusions.

Damage to Crop Trees

Damage to the bole (main stem) of the crop trees was low and comparable among technologies. The frequency of all residual trees with any amount of bole damage in all harvested plots was 3% in chainsaw/skidder, 13% in crawler/hotsaw, and 11% in harvester/forwarder. The exceptionally low incidence of damage in chainsaw/skidder reflects the loggers' expertise. Crown damage was significantly greater for the harvester/forwarder, but still acceptable. Thus, crop tree management is feasible at acceptable levels of environmental impact for all three technologies.

Environmental Impact

Relative to other soils nationwide, the stony soils of the Ozarks resist compaction and permit multiple entries by heavy equipment. Therefore, there was no real difference in soil disturbance and compaction among the logging technologies. But the crawler/hotsaw did appear to expose relatively more soil than the other technologies. Soil compaction sufficient to impede rooting was rare because the heavy equipment traveled over felled tree tops.

Operator Impressions

- *Harvesting (thinning) small-diameter trees with conventional equipment is inefficient and costly.*
- *Directional felling with chainsaws in hardwood stand is challenging, but worked well here because of the wide spacing between crop trees.*
- *Cutting went better than expected with the crawler/hotsaw. This equipment and one chainsaw feller would work well producing grade logs.*
- *Hills were not too steep for safe, productive operation of the harvester/forwarder.*
- *Branch removal was sometimes difficult for the harvester.*
- *When teamed with a cut-to-length machine, it is important to have a steady and reliable flow of trailers on which to offload timber.*

Observer Impressions

- *Handling times by the forwarder could have been reduced if a color marking system had been employed on the harvester head to distinguish log grades.*
- *Excessive harvester/forwarder down time would be fatal to a business because of high ownership and operating costs so proper daily maintenance, an assured timber supply, and reliable haulage are all essential.*

Techniques used by harvester operators to minimize impacts to leave trees and soils include:

- Place harvester slash onto the path of the machine and having the forwarder follow this same path
- Reach up with the harvester to remove forks from trees before felling the main stem to reduce damage to tops of leave trees
- Plan a path through the stand that brings the harvester within reach of the maximum number of cut-trees with the minimum amount of machine movement
- Minimize the amount of forwarder travel by creating as few piles of pieces as possible

Editor's Note: Missouri's forest have been thrown out of balance by indiscriminate over-cutting, over-grazing and lack of proper management. The results from this study suggest that mechanized harvesting is a viable option to help bring Missouri's forests back into balance by removing the small-diameter trees that are currently choking the State's woodlands. The EOFC is actively seeking additional funding to replicate the study in order to obtain more comprehensive data for detailed economic analyses.

This harvester not only cuts the tree, but removes limbs and "bucks" the main stem into logs.

Missouri Woodland Steward Short Course Update

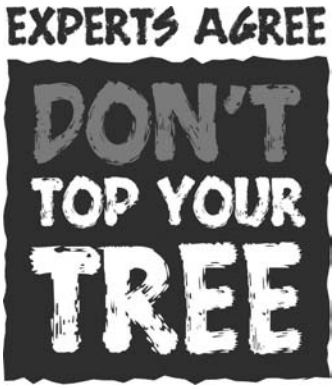
Confirmed Sites:
Neosho, Mo. For landowners in the southwest counties of Barry, Jasper, McDonald, and Newton. Indoor sessions will be February 7, 9, 21, and 28 in the Agriculture Building on the Crowder College campus in Neosho. Field trip will be March 4 at Skip Mourglia's Tree Farm. To register, contact John Hobbs at MU Extension, (417) 223-4775, or email hobbsj@missouri.edu.

Early Stages: Initial discussions are underway in the following counties and the short course will be available in the coming months. For updates, contact Hank Stelzer, (573)882-4444; or email stelzerh@missouri.edu.

Region and County:	Contact Name:	Region and County:	Contact Name:
NORTHWEST: Andrew, Buchanan, Clinton, DeKalb	Tom Fowler 816/279-1691	**SOUTH CENTRAL** Camden, Miller, Morgan	Ted Fry 573/369-2394
		Douglas, Ozark	Mick Gilliam 417/683-4409
Caldwell, Daviess, Livingston	Kevin Hansen 660/646-0811		
		Texas, Wright	Ted Probert 417/741-6134
		Oregon, Shannon	Stacy Hambelton 417/778-7490
EAST CENTRAL Montgomery, Warren	Richard Janes 636/456-3444	**SOUTHEAST** Butler, Carter, Ripley	Bruce Beck 573/686-8064
Lincoln	Charles Ellis 636/528-4613	Madison, St. Francois, Perry, Ste. Genevieve	Kate Keeley 573/883-3548
St. Charles, St. Louis	Scott Killpack 636/970-3000	Iron, Reynolds	Debra Henk 573/546-7515
Franklin, Jefferson, Washington	Matt Herring 636/583-5141	Wayne	Russell Ramsey 573/663-2251
		Stoddard	David Guethle 573/568-3344
		Bollinger, Cape Girardeau	Gerald Bryan 573/243-3581
CENTRAL Carroll, Chariton, Saline	Parman Green 660/542-1792		
Boone	Don Day 573/445-9792		
Callaway, Cole	Jim Jarman 573/642-0755		
WEST CENTRAL Clay, Jackson, Lafayette, Ray	Julie Abendroth 816/776-6961		
SOUTHWEST Benton, Dallas, Hickory	Wesley Tucker (417) 745-6767		
Christian, Greene, Polk	Gaylord Moore 417/862-9284		

Experts Agree: Don't Top Your Tree

By Justine Gartner, Forestry Field Program Supervisor
Missouri Department of Conservation



Thousands of trees are damaged in Missouri every year by topping - the drastic cutting back of large tree limbs. Tree topping is expensive and mutilating. But, most importantly, it ultimately results in early failure or death of trees that are often considered prized assets by the very homeowners who have them topped. How does this happen?

Myth and lack of public understanding are two major reasons. To combat these problems, the Missouri Community Forestry Council and Forest ReLeaf of Missouri have created a public service campaign, "Experts Agree: Don't Top Your Tree." This campaign, which is entering its sixth year of action, is funded in part through grants from the USDA Forest Service and the Missouri Department of Conservation (MDC). Campaign efforts have been designed to inform the public about the hazards of tree topping and to provide wiser alternatives.

Existing materials like the media kit and the tri-fold brochure will soon be accompanied by a nine-minute DVD on the topic created by MDC. This DVD is intended to educate homeowners on the problems associated with tree topping and offers better alternatives. Distribution is expected early in 2006, with copies being sent directly to all Missouri libraries for lending and to many local access cable stations in the state.

In addition the Steering Committee has been hard at work to emphasize the "right species" in the "Right Tree, Right Place" concept by refining and making broadly available regional tree lists. The value of utilizing native species has been emphasized by coordinating efforts with Grow Native!, a joint program of MDC and the Missouri Department of Agriculture. Efforts to educate utility companies not certified by The National Arbor Day Foundation as a Tree Line USA have been stepped up. Finally, the committee has begun development of materials to reach 4th - 6th grade students with the message that trees are good and trees need care.

As materials become available, we hope individuals will share the information to promote greater care and understanding of our trees and forests. Most importantly, we hope people will thoughtfully consider the best manner in which to care for the trees under their ownership.

For more information, visit the Missouri Community Forestry Council's web site at **www.mocommunitytrees.com.**

Editorial Contributors

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Missouri Christmas Tree Producers' Association

Wood Water Recreation Wildlife Tree Farm

Missouri Forest Stewardship

MCFA Consulting Foresters

Missouri Nut Growers Association

Missouri Chapter Walnut Council

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Calendar of Events

Feb. 1-3, 2006: Missouri Natural Resources Conference, Tan-Tar-A Resort, Osage Beach. Details available at www.mnrc.org.

Feb. 3-4, 2006: Missouri Nut Growers Association Winter Meeting and Nut Show, Nevada, Missouri. For additional information contact Jerry Van Sambeek at jvansambeek@fs.fed.us

Feb. 17-18, 2006: Specialty Mushroom Workshop, Columbia, Mo. Hosted by the University of Missouri Center for Agroforestry. Expert speakers, educational presentations and a field tour. For additional information, email Julie Rhoads at rhoadsj@missouri.edu, or call (573) 882-3234. Information and registration form available at www.centerforagroforestry.org. (See pg. 7)

Feb. 24-25, 2006: Missouri Tree Farm Conference, Columbia, Mo. Themed "Adding Value to Missouri's Forest Products," the conference begins Friday with demonstrations on crop tree management and specialty wood products at the MU Horticulture and Agroforestry Research Center in New Franklin, Mo. Friday evening will feature an informal landowner show-and-tell. On Saturday expert speakers will share the latest information on identifying new value-added products from Missouri's forests. Information will be posted soon at www.moforest.org.

Feb. 27 - March 1, 2006: 15th Annual Central Hardwood Conference, Knoxville, Tenn. Co-hosted by the University of Tennessee (Department of Forest, Wildlife, and Fisheries) and the USDA Forest Service Southern Research Station. For more information, contact the University of Tennessee Forestry Department at (865) 974-7346, or visit http://fwf.ag.utk.edu/central/.

March 2, 2006: Mid Missouri Grazing Council Conference, Boone County Fairgrounds, Columbia, Mo. Hosted by the Missouri Department of Conservation, the National Association of Conservation Districts, University of Missouri Extension, USDA Farm Service Agency, and the Natural Resources Conservation Service, this conference includes sessions on forage management; supplemental feeds; predator control; soil fertility and genetic management for beef herds. Program and registration information avaialable at http://outreach.missouri.edu/cmregion/ag/mmgc/grazingconf.shtml. For additional information, contact Jim Jarman at (573) 642-0755, email JarmanJ@missouri.edu; or Ed Gillmore at (573) 893-5188, email ed.gillmore@mo.usda.gov.