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# GREEN HORIZONS

Vol. 4, No. 3

News for people who take their trees seriously

Autumn 1999

## Forest farming: *Increasing income from your forest land*

Sixteen years ago, Dennis Lindberg gave up life in the big city and moved south from St. Louis to Thayer and became a farmer — a forest farmer! Forest farming is an agroforestry practice that uses the existing forest canopy to produce shade to grow products such as mushrooms, ginseng and goldenseal. Dennis is farming ginseng and goldenseal, both of which have value as medicinal plants.

Originally, Dennis practiced “wildcrafting,” which means he collected wild ginseng and goldenseal, in addition to some he had planted on his farm. He learned the location of wild plants from local people. Over the years, however, he noticed a decline in the wild supply of ginseng and goldenseal in the Eleven Point River area, due to people over-harvesting and not leaving



Dennis Lindberg, of Ozark Mountain Ginseng, points out ginseng plants with his son, Josh, as Mike Gold, from the University of Missouri Center for Agroforestry looks on.

sufficient plants to drop seeds and regenerate. Because of this decline, Dennis decided to use his forestland to grow more of his own ginseng and goldenseal, starting Ozark

Mountain Ginseng.

It doesn't take much land. Currently, he has about 3 acres at his own farm and 5 acres at another

*(continued on page 3)*

## Wayne County tree farmer keeps the forest growing



Dr. Newton White

Forestry professionals would all like to work with landowners like Newton White.

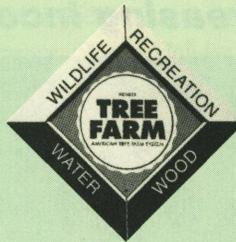
In addition to being interested in learning more about his forest and the practice of forestry, he's always ready to listen to a new idea and follow through on proposed management practices. When a Forester makes a recommendation to Newton, he listens, asks a few questions to make sure he understands, and

says go for it.

He's also a man of action himself. He stands among the very few landowners who has graduated from the Logger Education to Advance Professionalism, or the L.E.A.P. course. A retired orthopedic surgeon, White's switch from the operating room and surgical tools to the woods and a chainsaw was a *leap* in itself.

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*Green Horizons* is published quarterly by the University of Missouri Center for Agroforestry and the College of Agriculture, Food and Natural Resources.

All submitted material is subject to editing for style and length.

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**Missouri Chapter Walnut Council**



## Nut harvest festival at Nevada

"A beautiful crop" is the way Jim Wilson of Nevada, Mo. describes the upcoming pecan harvest. That's great because the Wilson family will be hosting the third annual Nut Harvest Festival on November 13.

The festival is sponsored by the Missouri Nut Growers Association and is intended to show the public how nut crops are harvested and processed as well as to provide a direct market for nut growers. The festival will be held at the Jim and Florence Wilson farm, located 5 miles north of Nevada, Mo. on Highway 71. Harvesting will begin at 10 a.m. and field tours will continue until 3:30 p.m. MNGA members will hold a short business meeting beginning at 9 a.m.

Missouri nut growers will demonstrate processing techniques and will have processed nuts and other nut products for sale at the exhibit area. Food will be served by a local commodity organization. Local craftsmen also will be displaying their products.

Jim Wilson says the festival has opened up markets for Missouri nut producers. With the publicity he received on his hican crop during past festivals he has not been able to supply the demand.

For more information call: (417) 667-8115 or (660) 925-3253.

### Forestry quote

*"Currently in the United States, the value of timber delivered to mills is higher than the annual value of corn, of soybeans or of hay."*

— Gary Hergenrader, president, National Association of State Foresters.

## Forest farming *(continued from page 1)*

farm under cultivation, and has 1-year-old to 16-year-old roots. He sells some roots for medicinal uses and seedlings and roots for transplanting.

Dennis recommends that beginners do two things: First, start small and second, have a market. Ginseng and goldenseal do require work. "Learn how to do it," he says. In addition to planting, time has to be given to controlling diseases such as damping off, blight and root rot. The site, which requires 80 percent shade and is usually a north-facing slope (although Dennis reports success on south-facing slopes), needs to be prepared before planting. And it is critical to get the seeds prepared and in the bed at the right time. One farmer reported planting a half-acre of ginseng seeds at the wrong time and none germinated. One acre of ginseng requires between 30 to 100 pounds of seed, depending on how close you plant. The closer the planting, the more ginseng but also the more chance for disease. Typically, ginseng is harvested when the roots are at least 7 years or older.

Knowing your market, or where you will sell the ginseng, is critical. Dennis has built up a market for his seedlings and transplants at several locations in West Plains and in feed stores and farm centers. He also sells mature roots to a buyer who then sells them to medicinal companies. While it is a lot of work, Dennis says it is also profitable. He can sell his seedlings and transplanted roots for \$1 to \$2 each. The price on ginseng and goldenseal varies, depending on whether it is wild or cultivated. The wild is more valuable but also harder to find. For Dennis, the price varies between \$100 to \$250 per pound of dried roots. He estimates he can produce 1,000 to 2,000 pounds of dried ginseng per acre.

*For more information on where to get seeds, and how to plant and market ginseng and goldenseal, see the list of forest farming resources on page 4 of this issue.*



Josh Lindberg points out a 3-year-old ginseng plant near his house in Thayer, Mo.

Ginseng roots are priced according to whether they are wild or cultivated.



## Wayne County tree farmer *(continued from page 1)*

Like every good Tree Farmer, Newton has a written forest management plan. And last spring, right on schedule, Newton was ready to plant the trees called for in the implementation schedule. At the suggestion of his consulting forester, Newton contacted Bob Dixon, his neighbor and a Tree Farmer himself, to get some recommendations for site preparation. It was formerly fescue pasture, which is highly competitive with trees. Once the fescue was taken care of, one small problem remained: someone had to plant the trees!

The difficulty arose from the

small size of the area to be planted. It was too small to attract one of the large out-of-state planting contractors, so Consulting Forester, Doug Enyart, suggested that Newton get some help from family or neighbors to plant the trees. Doug's idea was to use the experience as an educational activity to expose more people to forestry and involve them in active management of the forest.

On planting day, Newton brought his son and his daughter's boyfriend, both residents of St. Louis, to share the new experience. To ensure that there would be enough "experienced" labor to get

the job done, Keith Enyart, son of consulting forester Doug Enyart and an experienced tree-planter (with several thousand trees to his credit), also assisted.

Except for a few minor snafus, at the end of the day, the crew had become planting experts! All in all they planted 700 trees. Everyone enjoyed the day and the world is richer by three new experienced tree planters, two networked Tree Farmers and a freshly planted pine stand.

*Doug Enyart is forester/owner of Clearwater Forest Consultants, Piedmont, Mo.*

## Sources of information on growing ginseng and goldenseal

### American Ginseng

Write to: Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102,  
Or: [www.conservations.state.mo.us/nathis/flora/ginseng/ginseng.html](http://www.conservations.state.mo.us/nathis/flora/ginseng/ginseng.html)

### American Ginseng: Green Gold

Author: W. Scott Persons. Publisher: Bright Mountain Books, Inc., 138 Springside Rd., Asheville, NC 28803  
(A good, very readable guide on ginseng production)

### Advances in Goldenseal Production

Horticulture Information Leaflets  
North Carolina Cooperative Extension Service  
*Sources of Goldenseal Seeds, Plants, or Roots* No. 123,  
[www.ces.ncsu.edu/depts/hort/hil/hil-123.html](http://www.ces.ncsu.edu/depts/hort/hil/hil-123.html)  
*Advances in Goldenseal Production* No. 131,  
[www.ces.ncsu.edu/depts/hort/hil/hil-131.html](http://www.ces.ncsu.edu/depts/hort/hil/hil-131.html)

Appropriate Technology Transfer for Rural Areas (ATTRA), P.O. Box 3657, Fayetteville, AR 72702  
Phone: 1-800-346-9140; Fax: (501) 442-9842

This agency makes information available to individuals about many topics dealing with life and technology in rural areas, including ginseng. Materials may be ordered from the toll free number.

## Sources of ginseng and goldenseal seeds, roots, or plants

Beersheba Wildflower Gardens, Stone Door Road, Beersheba Springs, TN 37305. Phone: (615) 692-3575

Companion Plants, 7247 No. Coolville Ridge Road, Athens, OH 45701. Phone: (614) 592-4643  
Fax: (614) 593-3092. E-mail: [complants@frogn.net](mailto:complants@frogn.net)

Condon Enterprises, Inc., 4300 W. Stewart Ave., Wausau, WI 54401. Phone: (715) 845-9489

Elixir Farm Botanicals, Brixey, MO 65618. Phone: (417) 261-2393. (Small quantities, only)

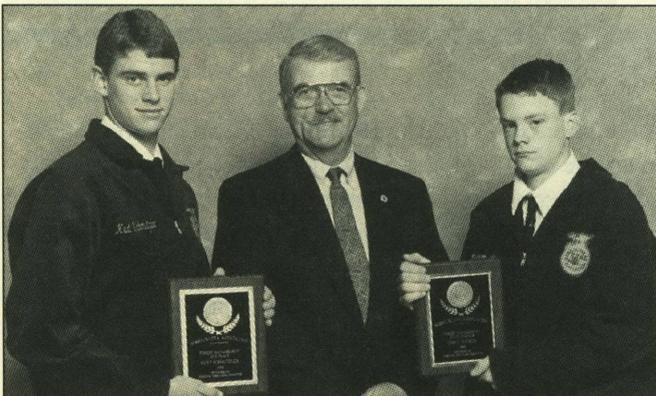
Bill E. English, American Ginseng Gardens, 440 Mtn. Meadow Lane, Flag Pond, TN 37657. Phone: (423) 743-3700 (evenings)

Dennis Lindberg, Ozark Mountain Ginseng, Rt. 1 Box 1223, Thayer, MO 65791. Phone: (417) 264-2027

Nature's Cathedral, Inc., 1995 78th Street, Blairstown, IA 52209. Phone: 1-800-944-0687

Scott Persons, Tuckasegee Valley Ginseng, Box 236, Tuckasegee, NC 28783. Phone: (704) 293-5189

## Award winners



Young forest managers were recognized by the Missouri Tree Farm Committee at the 1999 state FFA convention. State winner was Corey Patrick of the Clopton FFA Chapter (right) in northeast Missouri, and second place went to Kurt Schmutzler of the Savannah Chapter (left) in northwest Missouri. Tree Farm Committee chairman Larry Harper made the presentations.



Dr. Harold E. "Gene" Garrett, Director of the University of Missouri Center for Agroforestry was presented with the 1999 Terry Johnson Agroforestry Award at the Sixth North American Agroforestry Conference in Hot Springs, Ark. in June. Dr. Garrett was recognized for his more than 20 years of agroforestry work in Missouri and nationally. (L-R: Keith Ticknor, National Forest Ecologist, USDA-NRCS; Gene Garrett; Greg Ruark, Director of the National Agroforestry Center in Lincoln, Neb.; and Sandra Hodge, University of Missouri Center for Agroforestry.)

# Cattle vs. trees revisited

It is generally accepted that cattle damage trees. But do cattle damage trees under plantation conditions when the grazing is tightly controlled? That's the question Larry Harper set out to answer on HarperHill Farms near Butler, Mo.

At a recent field day, Harper showed visitors preliminary results of grazing 26 head of steers in a black walnut plantation. The demonstration is part of a SARE grant project in cooperation with the University of Missouri Center for Agroforestry. The primary purpose of the demonstration/research project is to determine the amount and type of damage cattle may inflict on trees in an agroforestry system.

In the first year of the grazing trial, the 26 head of steers were placed in the plantation on April 22, weighing 575 pounds. The grass growing in the alleys between the 40-foot tree rows is mostly brome with some fescue creeping in and lespeza and other legumes seeded for summer grazing. The trees are 20 feet apart within the rows. Most all trees have been grafted to known nut-producing varieties. The grafting process has created a wide range of tree heights from 2 feet to 17 feet throughout the plantation. Prior to grazing, all trees were measured for height and diameter.

Under the agroforestry system used at HarperHill, the steers are rotated through a series of 15 paddocks measuring slightly more than an acre each. The steers were moved every day so they had the freshest, most nutritious forage in front of them at all times. One of the questions to be addressed by the trial was to see if cattle would browse the trees under such controlled grazing conditions.

The simple answer is: "Yes, cattle do browse trees even when presented with the best forage possible."

It is noted that the steers established a browse line on the taller trees at about the 6-foot height. Trees shorter than 6 feet were severely damaged

from both browsing and rubbing.

How tall must a walnut tree be before rubbing and browsing damage would be termed acceptable? From this first year trial it appears that a tree that is 10 feet tall or more is not adversely affected. The reason is that limbs would be pruned to the 6-foot level on this tree height anyway. Rubbing on the taller trees was minimal, perhaps because the shorter trees were more attractive as head and neck scratchers.

However, Harper says smaller trees, including new plantings of seedlings, can be protected from the cattle. Simply stringing an electric poly wire down each side of the tree row about 3 feet from the trees will discourage browsing. Trials at the Horticulture and Agroforestry Research Center at New Franklin, Mo. and at the Missouri Department of Conservation's Seat Farm in north Missouri have proven this method. Cost of the poly wire and temporary posts is not prohibitive, especially when you figure at least a 7-year life for the fencing materials. It comes out to \$10 to \$15 an acre depending on the width of tree rows.

The payoff from this system is in the early cash flow. If plantations can be grazed immediately after planting, the return on investment over the



One type of agroforestry at HarperHill is a walnut/forage/cattle silvopastoral practice.

lifetime of the plantation is greatly increased because of the income during the early years. The steers in the HarperHill trial gained 1.5 pounds per day over a 90-day period.

A secondary payoff comes with reduced mowing especially for nut-producing plantations. Each mowing costs from \$7 to \$10 per acre.

Measurements for effects of trampling and compaction will be taken this fall, and the experiment will be repeated next year. Harper believes that one effect of the grazing will be even better forage because of stimulation of hoof action.

## Newsletter deadlines

*Because your newsletter must be in the mail at least 30 days before the next organization meeting and another three weeks is needed to get it ready and through the printing process, the deadline for the Winter 2000 issue is:*

**November 1, 1999**

*Send your newsletter material to:  
Sandy Hodge, 203 Anheuser-Busch Natural Resources Bldg., Forestry Program,  
University of Missouri, Columbia, MO  
65211. Phone (573) 884-6729.*

*Your management tips, ideas and experiences are most welcome!*

## Are tree farmers real? (Part 2)

*In the Summer 1999 issue of Green Horizons we shared Arlyn Perkey's comments on how Tree Farmers who suffer major crop losses are not eligible for government disaster payments. The following is more commentary by Perkey with some specific thoughts on what Tree Farmers and timber owners should do to correct this inequity. Perkey is a forester with the USDA Forest Service at Morgantown, W. Va. and a Tree Farmer.*

Timber should be viewed as a legitimate agricultural crop. It is a fiber crop, just as cotton and wool are fiber crops. It is unique in that for most family farm Tree Farms, actual received income is not annual — it's periodic.

That doesn't make Tree Farmers less creditable as farmers. In our verbal communications about Tree Farming, we need to refer to trees as an agricultural crop, a fiber crop. If we expect others to consider timber a legitimate crop, we have to describe it that way ourselves.

The Small Business Administration cites a law as the basis for their

decision not to provide disaster assistance to Tree Farmers. The Farm Service Agency is basing their decision (to deny disaster assistance) on interpretation at the national office. It appears logical that the rationale for Congress prohibiting SBA from getting into the agricultural arena is because the USDA is intended to provide assistance to that community.

The only way Tree Farmers will be treated equitably as farmers is if they consistently insist on and expect equitable treatment through appropriate channels. My intent is not to berate any government agency. My purpose is to call attention to a gap in service between two government agencies that should be filled. It appears most logical to me that the Farm Service Agency should fill the gap.

Tree Farmers can learn about and support the Tree Farm National Operating Committee's resolution to the U.S. Congress on tax code reform.

*"Be it resolved by the Tree Farm National Operating Committee that the U. S. Congress reform the tax code to allow Tree Farmers to take*

*losses over and above their basis in response to presidentially declared natural disaster, thereby encouraging the continued ownership of such disaster-affected lands, relieving pressure to convert said lands to non-forest uses, and enabling the continued sustainable management of forests for the benefit of all Americans."*

We need to recognize that, as growers, the longer our crop is exposed to the elements, the greater the risk of loss. This fact favors application of more intensive management practices to grow the desired products in a shorter time. This strategy doesn't eliminate the risk, but it does lessen it.

Whether it's fires in Florida, floods along the Mississippi River, gypsy moth defoliation in Pennsylvania or ice damage in New England, natural disasters happen to Tree Farmers, too. It is not expecting too much to be treated equitably by agencies charged with administering disaster relief and acknowledging deductible losses. The benefits Tree Farms provide to society certainly warrant the same support that society provides to other agricultural producers.

## Missouri Tree Farm 50th Anniversary Celebration

1999 marks the 50th anniversary of the adoption of the American Tree Farm program in Missouri. A celebration commemorating this event will be held by Tree Farmers and foresters at the oldest continuous single ownership tree farm in the state — Shannondale Tree Farm — which is approximately 20 miles south of Salem, Mo.

The celebration will focus around a field day at Shannondale on Friday October 15th.

There will be several field presentations covering topics such as

stream corridor management, soils, timber stand improvement, selective harvesting and wildlife management. In addition, there will be indoor programs including films and videos documenting the history of forest resource use in Missouri. There will also be demonstrations of historic woodcraft.

Registration should be made as soon as possible — attendance is limited. Facilities and shuttles can

only accommodate about 200 people. To reserve your spot at this event, return the form below with payment. Registration includes lunch and commemorative items. Registration confirmation will be sent to you closer to the date of the event with a schedule, nearby accommodations information, etc. If available, registration at the door will be \$5 more. Pre-registration deadline is October 1, 1999.

Name(s) \_\_\_\_\_ Adults # \_\_\_ @ \$10 = \$ \_\_\_\_\_  
Address \_\_\_\_\_ Children (under 12 years old)  
# \_\_\_ @ \$5 = \$ \_\_\_\_\_  
Total remitted \$ \_\_\_\_\_

*Make checks payable to and mail registration to:*

*Jeff Fulk — Tree Farm 50th, HCR 62, Box 340, Salem, MO 65560.*

## Around the state...



### **Grafting demonstration at HARC**

Twenty landowners listened intently as Dr. Bill Reid described the "3-flap" and "bark-in-laid" graft. Reid, director of the Pecan Research Field at Kansas State University gave a grafting demonstration in May at the Horticulture and Agroforestry Research Center in New Franklin, Mo.

### **Non-timber forest products workshop**

Approximately 40 people attended a workshop on non-timber forest products in Piedmont, Mo. on May 25th.

Sandra Hodge, University of Missouri Center for Agroforestry discussed growing and marketing specialty forest crops and trees. Dennis Lindberg, Ozark Mountain Ginseng, presented information on growing ginseng, goldenseal and shiitake mushrooms. Bill Yoder, Missouri Department of Conservation, talked about collecting and selling wild nuts and seeds, and discussed regulations on state lands. Pepper Martin, U.S. Forest Service, provided information about regulations and permits for gathering on Forest Service land. The workshop was sponsored by the Big Springs Resource Conservation and Development, the U.S. Forest Service, the USDA Natural Resources Conservation Service, the University of Missouri Center for Agroforestry and Ozark Electric Cooperative.

### **Field day puts it all together**

Walnut Council members, nut growers and anyone interested in seeing the latest progress on the ultimate in nut producing plantation establishment will want to put October 8, 1999 on their calendars. That's when Forrest-Keeling Nursery and its manager, Wayne Lovelace will demonstrate all they've learned in the last 3 years about the best techniques for plantation establishment.

Forrest-Keeling nursery has established itself as one of the largest nut tree seeding producers in the Midwest. They are specializing in RPM trees that are grown in a series of containers. The roots are air pruned so that a mass of feeder roots are developed. Lovelace reports that the nursery will have between 15,000 and 20,000 walnut and pecan seedlings available this year. Of those, nearly 2,000 are grafted walnut and 1,500 are grafted pecans. The remainder are seedlings grown

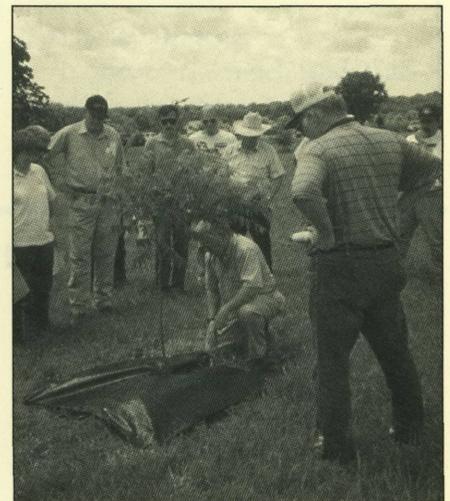
from nuts from known varieties.

Visitors will view the whole process from nut to the field. In field trials now underway, Lovelace has established a plantation that utilizes every technique to enhance the growth of seedlings. That includes fertilization, irrigation, plastic weed barriers and other ideas that all growers can use.

At a nursery field day 3 years ago, visitors watched a demonstration of field planting trees grown in 2-gallon containers. That planting will be revisited during the October field day. Growth has been fantastic, says Lovelace.

Anyone who anticipates establishing a pecan or walnut plantation for nut production should attend this field day. Lunch will be served by Forrest-Keeling Nursery. Please call the nursery at 1-800-356-2401 to help them plan ahead for the meal.

The field day begins at 10 a.m., Friday, October 8, 1999 at the Forrest-Keeling Nursery, located on Highway 79, about 2 miles south of Elsberry, Mo.



**Wayne Lovelace demonstrates placement of a weed barrier around walnut trees at Walnut Council field day at Harper Hill Farms near Butler, Mo.**

Read *Green Horizons* on the World Wide Web at:  
<http://agebb.missouri.edu/agforest/>

# Calendar of upcoming events

**October 8** Fall meeting of the Missouri Chapter of the Walnut Council. Tour Forrest-Keeling Nursery at Elsberry, Mo. with special emphasis on production and plantation establishment of nut trees produced under the RPM method. Starts at 10 a.m. Lunch provided by Forrest-Keeling. Please call ahead at 1-800-356-2401.

**Oct 12-15** Second Annual National Small Farm Conference, St. Louis, Mo. Regal Riverfront Hotel. For more information check out the website at <http://www.luce.lincolnu.edu/nsfc> or call Ms. Troy Darden, Lincoln University, Jefferson City, Mo., (573) 681-5587.

**October 15** Missouri Tree Farm Program 50th Anniversary Celebration and Tour, Shannondale Tree Farm, Eminence, Mo. (See details on page 6 for registration.) Contact Cory Ridenhour at (573) 634-3252.

**November 4-7** National Tree Farm Convention will be held in Louisville, Ky., with field tours and other hands-on learning sessions. Contact: American Forest Foundation (AFF) at (770) 451-7106 Please note: There is no on-site registration - everyone must pre-register. Registration is \$135 until October 4th, \$150 after that. There are several special tours and activities that cost extra.

**November 5-6** National Small Farm Trade Show and Conference sponsored by Small Farm Today magazine will feature two sessions on nut trees and agroforestry on Friday, Nov. 5 in the morning. Show is held at the Boone County Fairgrounds in Columbia, Mo. and features more than 120 exhibitors. Contact: 1-800-633-2535.

**November 13** Tri-State Forest Stewardship Conference. Quincy Holiday Inn, Quincy, Ill. Contact Mike Bolin (217) 333-2778 or Judy Stoll (217) 333-3650.

**November 13** Third annual Nut Harvest Festival hosted by the Missouri Nut Growers Assn. and Jim and Florence Wilson Family 5 miles north of Nevada, Mo. On Highway 71. Continuous harvesting demonstrations, nut products and crafts for sale, plus food. Harvest tours begin at 10 a.m. MNGA meeting at 9 a.m. Contact: (417) 667-8115 or (660) 925-3253.

**November 20** Central Region Woodland Stewardship Conference, Lied Conference Center, Arbor Day Farm, Nebraska City, Neb. Contact: Wayne Wittmeyer, Missouri Department of Conservation, P.O. Box 108, Jefferson City, MO 65102-0180. (573) 751-4115, ext. 627.

**March 3-4, 2000** The first Tree Farm-Stewardship Days in the new millenium! Mark your calendars. Ramada Inn, Columbia, Mo. Program details to be announced.

*Send your forestry related event dates to: Sandy Hodge, 203 Anheuser-Busch Natural Resources Bldg.,  
MU Center for Agroforestry, Columbia, MO 65211.*

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