

# Quarterly Newsletter

October, November, December 2010

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*Preserving Soil & Water  
through Conservation*

## Make 4-H a Family Affair!

Debra Henk, 4-H Youth Specialist in Iron County is calling for all kids and parents to come find out about 4-H. A recruitment and information meeting will be held **Saturday, October 16, at 10 am** at the Iron County Courthouse. Adults, if you have special skills (like cooking, livestock management, woodworking, scrapbooking, or just about anything) and want to be a part of helping kids become responsible adults, please come and find out how to volunteer for the most rewarding thing you can do.

4-H is a volunteer-led organization that reaches boys and girls through small groups called clubs. 4-H members choose from over 40 projects in which to participate during the 4-H calendar year. Most projects use hands-on learning experiences to teach subject matter and life-skills such as cooperation, leadership, and decision-making - skills that can be applied over and over for a lifetime.

Members have fun with friends at meetings, social activities, tours, trips, camps, and fairs. They learn to do interesting things such as take care of animals, plants, redecorate their rooms, fix their bikes, take pictures, practice cooking and collect rocks. And, they help others learn more about their 4-H projects, provide leadership to younger members, as well as serve others through community service activities.

Want to race bicycles? Become a veterinarian? Take award-winning photographs? 4-H members have the opportunity to learn more about activities of their interest through projects. In addition, 4-H members can participate in community service projects, attend county fairs, camps, club parties, trips to other states and countries, and more!

4-H is for boys and girls who will reach their 8th birthday and will not reach their 19th birthday by January 1 of the current year. Younger children, from 5 thru 7 can become Clover Kids. 4-H is open to everyone, regardless of race, religion, color, disability, gender, or place of residence.

If you are interested in becoming a member or a volunteer, and can't make the information session, please call Debra Henk at the Iron County Extension Office, 573-546-7515.



**Find Out About 4-H  
4-H Info Meeting  
Saturday  
Oct. 16th @ 10 am  
Iron County Courthouse**

University of Missouri, Lincoln University,  
U.S. Department of Agriculture & Local  
Extension Councils Cooperating

University of Missouri Extension does not discriminate on the basis of race, color, national origin, sex, sexual orientation, religion, age disability or status as a Vietnam-era veteran.

## Compost This!

**by Sarah Denkler, University of Missouri Extension Horticulture Specialist**

Composting is a great way to create home grown organic matter without wondering just what sources were used to make it. While it does require some effort on your part, if you have the desire, you can achieve a long lasting reward for your garden.

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## Thousand Cankers Disease

### USDA Forest Service

Dieback and mortality of eastern black walnut (*Juglans nigra*) in several Western States have become more common and severe during the last decade. A tiny bark beetle is creating numerous galleries beneath the bark of affected branches, resulting in fungal infection and canker formation. The large numbers of cankers associated with dead branches suggest the disease's name—thousand cankers disease.

The principal agents involved in this disease are a newly identified fungus (*Geosmithia* sp. with a proposed name of *Geosmithia morbida*) and the walnut twig beetle (*Pityophthorus juglandis*). Both the fungus and the beetle only occur on walnut species. An infested tree usually dies within 3 years of initial symptoms.

Thousand cankers disease has been found in many Western States. The fungus and the beetle have not been found east of the Great Plains. However, a number of factors suggest that this disease could establish in eastern forests: the widespread distribution of eastern black walnut, the susceptibility of this tree species to the disease, and the capacity of the fungus and beetle to invade new areas and survive under a wide range of climatic conditions in the West.

**Disease Symptoms** - The three major symptoms of this disease are branch mortality, numerous small cankers on branches and the bole, and evidence of tiny bark beetles. The earliest symptom is yellowing foliage that progresses rapidly to brown wilted foliage, then finally branch mortality. The fungus causes distinctive circular to oblong cankers in the phloem under the bark, which eventually kill the cambium. The bark surface may have no symptoms, or a dark amber stain or cracking of the bark may occur directly above a canker. Numerous tiny bark beetle entrance and exit holes are visible on dead and dying branches, and bark beetle galleries are often found within the cankers. In the final stages of disease, even the main stem has beetle attacks and cankers.

**Geosmithia sp.** - Members of the genus *Geosmithia* have not been considered to be important plant pathogens, but *Geosmithia morbida* appears to be more virulent than related species. Aside from causing cankers, the fungus is inconspicuous. Culturing on agar media is required to confirm its identity. Adult bark beetles carry fungal spores that are then introduced into the phloem when they construct galleries. Small cankers develop around the galleries; these cankers may enlarge and coalesce to completely girdle the branch. Trees die as a result of these canker infections at each of the thousands of beetle attack sites.

The walnut twig beetle is native to Arizona, California, and New Mexico. It has invaded Colorado, Idaho, Oregon, Utah, and Washington where walnuts have been widely planted. The beetle has not caused significant branch mortality by itself. Through its association with this newly identified fungus, it appears to have greatly increased in abundance. Adult beetles are very small (1.5 to 2.0 mm long or about 1/16 in) and are reddish brown in color. This species is a typical-looking bark beetle that is characterized by its very small size and four to six concentric ridges on the upper surface of the pronotum (the shield-like cover behind and over the head). Like most bark beetles, the larvae are white, C shaped, and found in the phloem. For this species, the egg galleries created by the adults are horizontal (across the grain) and the larval galleries tend to be vertical (along the grain).

Visually inspecting walnut trees for dieback is currently the best survey tool for the Eastern United States. Look for declining trees with the symptoms described above. If you suspect that your walnut trees have thousand cankers disease, collect a branch 2 to 4 inches in diameter and 6 to 12 inches long that has visible symptoms. Please submit branch samples to your State's plant diagnostic clinic. Each State has a clinic that is part of the National Plant Diagnostic Network (NPDN). They can be found at the NPDN Web site: [www.npdn.org](http://www.npdn.org). You may also contact your State Department of Agriculture, State Forester, or Cooperative Extension Office for assistance.



(Small branch cankers)



(Exit holes)



(Walnut twig beetle)



(Walnut twig beetle galleries)



Visit the SWCD web site for more information on the Cost-Share program, local projects, upcoming events, photos and more at: [www.swcd.mo.gov/iron](http://www.swcd.mo.gov/iron)

Soil test kits are available through the Extension office

EXTENSION

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- Debra Henk, 4-H Youth Development Specialist and County Program Director
- Elaine Willhite, Office Manager

Soil Savers Corner

Happy Harvest 

- Autumn Bonfire
- Cool Nights Harvest
- Hayride
- Leaf Pile
- Marshmallows
- Pumpkin Patch (Set Clocks Back)
- S'mores
- Syrup

C E D I R Y A H K  
M R U S P O G A C  
A D I T U N S R A  
R O P G M I T V B  
S Y R U P U H E S  
H L T B K W G S K  
M U L O I K I T C  
A S E N N O N U O  
L E A F P I L E L  
L R T I A Z O R C  
O O W R T D O H T  
W M D E C K C D E  
S S Y C H E G M S

(continued from page 1)

When creating compost you start with fiber, food and water. The fiber is any material you want to change into compost. The food is usually nitrogen and perhaps lime, added to feed the microorganisms that work to break down your fiber. Water is necessary to keep the microorganisms alive and active. Kitchen scraps add other sources of nitrogen and fiber to the mix. Small layers of soil are also used to incorporate the organisms that do the decomposing. Oxygen is also necessary but is readily available.

When creating your compost make sure that you add enough fiber, nitrogen, water and green material to create a minimum 3 foot by 3 foot mass. Raking leaves from your yard in the fall can easily achieve the minimum 3 foot size alone but it is best to include other materials. This will give you the best results for quick decomposition as well as a richer product from your final result in the spring. If you compost in a heap with no sides to contain the mass then your heap will need to be 5 foot wide in order to achieve a 3 foot height.

Start by layering your pile with leaves, soil, nitrogen, water, and kitchen scraps; repeating these layers until the pile reaches the minimum size required. Do not use kitchen scraps that include meat, dairy or grease as these will attract wild animals to the area.

As the pile begins to actively decompose, it will heat up. This can be seen as steam leaving the surface of the pile. The pile usually spikes hot quickly and then the temperature levels off. Once the heat begins to dissipate further, it is time to turn the pile and add air to the mix. As the pile "bakes", the center of the pile will decompose and use the available oxygen. Turning the pile helps to incorporate air throughout, aiding in the continued decomposition of all portions of the pile.

There are many advantages to composting. The use of compost can provide a slow release of nutrients. Compost improves the texture and structure of soils by increasing the amount of organic matter in your garden. Additionally, many landfills do not accept yard waste so composting helps to reduce the pressure on landfills and the need to find an alternative disposal method. Compost will help to increase the population of earthworms which will continue working to improve soil structure. Research has shown that soil treated with compost produces plants with fewer disease problems. Try composting. It does require a commitment but is really not as hard as you might think. The reward easily offsets the time you put into it. *University of Missouri Extension Publications, "Making and Using Compost" # G6956 & "How to Build a Compost Bin" # G6957*, by Christopher Starbuck, have more information.

Top Ten Horse Nutrition Tips by Marcia Hathaway, University of Minnesota Department of Animal Science



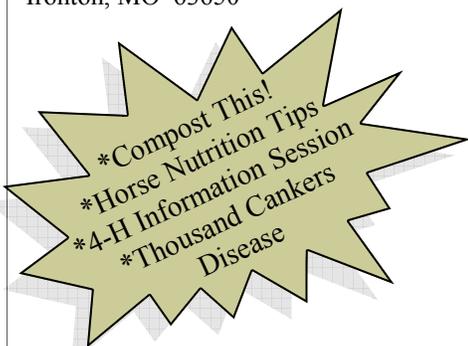
1. Always supply unlimited quantities of clean, fresh water.
2. Maximize forage intake – forages are an ideal source for energy, help maintain gastrointestinal-tract function and keep your horse from becoming bored.
3. Minimize concentrate consumption – cereal grains such as oats and corn should not too frequently replace the forage component. A mature horse should not be fed more than .3 to .4% of its body weight in cereal grains.
4. Calcium to Phosphorous ration (Ca:P) should be between 3:1 and 1:1.
5. Supplement minerals and vitamins – Vitamins are essential to a horse's diet, and it may be necessary to supplement some vitamins.
6. Balance a horse's ration in the following order: energy, protein, minerals, vitamins. An economical and nationally wise approach to feeding your horse would be to consult a reference or a doctor. Special requirements should be made to ensure that requirements for energy, proteins, vitamins and minerals are met.
7. Monitor your horse's body weight and body condition score
8. Maintain your horse's teeth in good chewing condition. Teeth must be filed down to avoid sharp points that can make chewing painful.
9. Change feedstuffs gradually.
10. Feed each horse as an individual.

**Upcoming Events:**

- ◆ **Oct. 11th** - Columbus Day - Our offices will be closed
- ◆ **Oct. 28th** - Lady Land Owner Tour
- ◆ **Oct. 31st** - Halloween
- ◆ **Nov. 2nd** - Election Day
- ◆ **Nov. 7th** - Day Light Savings Time Ends
- ◆ **Nov. 11th** - Veterans Day
- ◆ **Nov. 25th** - Thanksgiving Day - Our offices will be closed
- ◆ **Dec. 21st** - First Day of Winter
- ◆ **Dec. 25th** - Christmas Day - Our offices will be closed

UNIVERSITY OF MISSOURI  
**Extension**

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Ironton, MO 63650



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**Plants Poisonous to Livestock** by Kendra Graham, Livestock Specialist University of Missouri Extension

Most of the time poisonous plants taste or smell bad to the animal. However, if the animal is desperate for something to eat, a poisonous plant may taste pretty good. Animals can also accidentally eat a poisonous plant when grazing or eating grains. Some poisonous plants can still be toxic in the hay bale. This makes it all the more worthwhile to monitor your pastures and fields and kill plants that could be harmful.

There are several poisonous plants common to Missouri. Jimsonweed, snow-on-the-mountain, croton, buttercup and wild indigo are typically found in open pastures. Plants like white snakeroot, bracken fern, pokeweed and buckeye are normally found in shady areas. Creeks and ditches serve as growing areas for water and poisonous hemlock, black nightshade and horse-tail. Fields that have been cultivated can accommodate cocklebur, jimsonweed, milkweed, pigweed and Johnsongrass in them. Wild cherry, perilla mint (purple mint), milkweed and pokeweed are found along fence and hedge rows.

Several signs associated with the consumption of toxic parts of plants are difficult breathing, dilation of the pupils, poor appetite, staggering, weakness, convulsions, paralysis, diarrhea, vomiting, excessive salivation, high fever, bloat and possibly death. Horses tend to have more problems with toxicity due to the fact that they cannot vomit.

If you suspect any of your animals consumed a poisonous plant, call a veterinarian immediately. If the animal has died, the stomach contents need to be analyzed to determine which type of plant was eaten. Inspect your pastures and fencerows for suspicious plants and have them identified by you local extension office or the Weed Identification Service at the University of

Missouri. It is best to remove your livestock from the infected areas until all of the poisonous plants have been destroyed. Eradicate the toxic plants by mowing or spraying with the recommended herbicide.

**No-Till Drill Available**

The Iron County SWCD has a Tye Pasture Pleaser no-till drill available for rent. The drill can be used with smaller tractors (40 hp minimum) if they are equipped with remote hydraulics. The cost to rent the drill is \$8 per acre, with a minimum charge of \$50. Call Iron County SWCD at 573-546-6518 to check for availability.



Check the batteries in your smoke alarms when you set your clocks back on Nov. 7th

