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# Boone County ISU Extension

# Master Gardener Update

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Volume 11, Issue 2

February 2007

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**Next Meeting:**  
**February 20, 2007, 7 p.m.**  
**Extension Office**  
**Speaker: A Surprise!!!**

## Message from the Chair:

*I hope everyone is doing very, very well this fine, cold winter. Today (Sunday) was absolutely wonderful and gives me hope for spring to arrive.*

*If you're like me, you've been reading garden catalogs and trying to figure out where a new something (or more than one something) might fit.*

*Continuing education has already started for me and my sidekick, Larry. We went to the home and garden show in Des Moines and listened to "The Mole Hunter". He gave us some great tips for stopping those varmints as they tear their way through our yard.*

*Nan Hedlund is the new OA at the Extension Office. Be sure to stop by and introduce yourself (or send email).*

*Be sure to check out all the education opportunities in this letter. And remember to mark them down as soon as you get home so you don't forget!*

*We know you want top-notch education each month and we're trying to meet this goal. Gina Christians has been working hard on February meetings plans and is finding it difficult to get a speaker to come to Boone County for one of our meetings. So, that's why our February speaker is still a mystery.*

**--Melanie Erickson**

## EO News

### New Office Assistant at EO

Natalie Hedlund started as the new Boone County Extension Office Assistant on Monday, Feb. 5th. She is a Dec. graduate of ISU in NREM where she worked closely with Jim Pease. She is a 10 year 4-H'er from Knoxville in Marion County. She grew up close to our current Boone County Naturalist Emily Crane Herring. Her email is [natm@iastate.edu](mailto:natm@iastate.edu).

## Winds of Change for the State MG Program

Dr. Donald Lewis has been the Professor in Charge of the Iowa Master Gardener program since 2001. After 6 years at the helm, he has decided to pursue other opportunities in the University. As of July 1, Dr. Cindy Haynes will be stepping into the role of Professor in Charge. No need to fear, Donald will still be around to provide sound entomological advice. We thank Donald for his great years of service and look forward to working with Cindy in the future.

## MG Minute Writers Needed

Help is needed to write MG Minutes. Please contact Cindy Burgar to find out how you can help. Time spent researching and writing can be counted as volunteer service.

## Like to Write? Newsletter Article Writers Sought

If you want to write any newsletter articles, please send completed articles by email to [bcmg@fbx.com](mailto:bcmg@fbx.com) or by postal mail to Linda Cox, PO Box 386, Ogden, IA 50212. Research and writing time counts towards volunteer service.

## Garden Calendars Available

The 2007 Garden Calendar is now available at the Extension Office at a cost of \$8.00 each. They make great Christmas presents.

## Calendar of Activities

2/20—MG Meeting, 7 p.m., EO

3/13—MG Meeting, 7 p.m., EO

## 2007 Project Summary

We didn't receive very many interest surveys back which gives us incomplete information about help for projects. There is also very limited interest in chairing one of the projects.

Following is a brief summary of the projects. Please let us know at [bcmg@fbx.com](mailto:bcmg@fbx.com) or call me at 230-4547 and let me know if you will chair a volunteer project that still needs leadership. If not, we'll be dropping projects for lack of interest.

The chair is responsible for checking the location from time to time, being the contact person for the project, and setting up work sessions.

### Projects with Chairs in Place

4<sup>th</sup> & Story (Miriam)  
Adopt A Road (Janeann)  
Boone County Courthouse (Holly)  
Boone Co. Fair Hort Show (Melanie)  
Boone County Jail (Garwoods)  
Educational Presentations (Program Comm)  
4-H Extravaganza (Karen & Leone)  
4-H Fair Judge's Helpers  
Iowa Arboretum Butterfly Garden (Teresa D)  
Iowa Arboretum Holiday Tree Decorating (Connie)  
Master Gardener Minute (Cindy B)  
Newsletter Articles (Linda C)  
Pondsitting for CIWGA Tour  
RSVP Caregiver Project (Gina)  
RSVP Elderly Garden Help (Melanie)  
Swede Point Park, Madrid (Holly)  
Youth Adult Garden Challenge (Melanie)

## Fair Themes in 2007

The Boone County Fair will be held July 18-23, 2007 with the theme "Aim for the Stars".

The Iowa State Fair will be held August 9-19, 2007. This year's theme is "Sounds Like Fun".

## Book Review

By Mike Kurtz, BCMG

**NATIVE ALTERNATIVES TO INVASIVE PLANTS** by C.Colston Burrell: Brooklyn Botanic Garden Inc. 2006

The U.S. government defines an invasive species as one "that is not native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health". An invasive plant replaces a native by outgrowing, leafing out earlier and in general robbing other native plants out of water and nutrients.

Be on the lookout for nonnative species bearing fleshy fruits (example, barberry or burning bush) that can be dispersed by birds. Mr. Burrell recommends planting regionally native species to preserve the natural character of your area and "preserve the relationships of native plants and the butterflies, birds and other creatures with which they coevolved." A native plant is one that that occurs without direct or indirect human interaction. The book goes on to describe alternatives to invasive plants and also the current invaded range of these invasives.

I have plenty of plenty of these "invasive " plants in my yard such as butterfly bush, burning bush, foxglove, Rose of Sharon, for example, of some common names and I do not intend to cut them down. However, we as students of horticulture, should strive to extol the identity of and benefits for the use of native plants.

## Iowa Arboretum

**SOUP NIGHTS --February 23, March 30, 4-7 p.m. -- \$5 per person.**

## Reiman Gardens

### WINTER ADMISSION

This winter, Reiman Gardens is offering reduced admission rates. From Dec. 1 through April 30, 2007, guests up to age 17 are admitted for free. Admission for seniors and adults is reduced to \$5. Children age 12 and under must be accompanied by an adult.

### VOLUNTEER OPPS AVAILABLE

Contact Reiman Garden for volunteer training dates and times. They have many different types of volunteer service available.

## **DOWNTOWN FARMER'S MARKET HELD AT THE GARDENS**

The Ames Downtown Farmer's Market is coming to the Gardens on Wednesday mornings 9 a.m. to 1 p.m. January 3 through February 28. **In addition to Wednesday mornings, the Ames Downtown Farmers Market will operate at Reiman Gardens (indoors) every Saturday morning in February and March (9 a.m. to 1 p.m.).** Vendors will sell their wares from tables in the Gardens' event hallway. The Gardens will not charge admission to Farmer's Market customers, but donations are accepted.

In the winter, vendors sell apples, honey, winter squash, free-range chickens and turkeys, frozen summer garden vegetables, popcorn, candy, handcrafted jewelry, hand-sewn products, soaps, pies, cookies, kringla, breads, rolls and more.

Regular admission to the Gardens is free for kids to age 17 and reduced to only \$5 for adults for the winter season. The Gardens and the Christina Reiman Butterfly Wing are open daily from 9 a.m. to 4:30 p.m. Reduced winter admission is valid through April 30, 2007. For more information about Reiman Gardens, call (515) 294-2710, e-mail [reimangardens@iastate.edu](mailto:reimangardens@iastate.edu), or visit [www.reimangardens.iastate.edu](http://www.reimangardens.iastate.edu).

## **STREAM OF PASSION DISPLAY AND EXHIBIT OPENS AT THE GARDENS**

### **January 16 -**

As a stream touches many landscapes during the course of its flow, ISU botanist Louis Pammel influenced other plant lovers during the course of his life. Reiman Gardens' first Conservatory display of 2007, "Stream of Passion: Plant Lovers of Iowa State

University," showcases the relationship and mentorship between Louis Pammel and his students, George Washington Carver and Ada Hayden – one that started from their love of plants.

The horticulture display will run through April 1.

The horticulture display in the Conservatory features a center "stream" of woodland plants suggesting Pammel's presence with landscapes on either side representing Ada Hayden and George Washington Carver. Pammel is characterized by ferns and coral bells planted with a wide spacing inspired by the habitat of a woodland floor. Hayden is signified by sedges and flowers planted to suggest a prairie habitat and a variety of cultivated plants are used to symbolize Carver's love of flowers and his contributions to plant breeding and in the economic use of plants.

For more information call (515) 294-2710, e-mail [reimangardens@iastate.edu](mailto:reimangardens@iastate.edu), or visit [www.reimangardens.iastate.edu](http://www.reimangardens.iastate.edu).

## **HAZEL'S KITCHEN SCHEDULES HIATUS**

Due to slow wintertime attendance, Hazel's Kitchen will suspend its daily lunch service through April 2.

Hazel's will open for its planned special events including the Second Sunday Gardens' Brunch, offering brunch from 10-1 on March 11, Easter Sunday and Mother's Day. Hazel's is also offering unique menus in the Gardens' monthly Botany Lunches which begin on January 25 at noon and are also scheduled for February 22, March 22 and April 26.

Hazel's will resume regular daily service on Tuesday, April 3 with a grand re-opening and new menu.

## **Continuing Education Opportunities**

Actual program time would count towards continuing education hours.

### **Free Landscape Design Workshop in Winterset**

The Madison County MG's are hosting "How to Maximize Your Landscape Dollar" on Saturday, February 24 from 9 a.m. to Noon. The featured speaker will be Ann Marie VanDer Zanden, ISU Horticulturist and Professor of Landscape Design. To pre-register, call 515-462-1001.

### **Think Spring Garden Seminar February 24**

The Warren County MGs and the Indianola Parks and Rec are sponsoring "Think Spring Garden Seminar" at the Great Hall at Simpson College on Saturday, February 24, 8:30-3:00. Speakers will be **Marcia Leeper** editor of "Garden Gate" Magazine, **Elwynn Taylor**, ISU Professor of Ag Meteorology and **Kelly Norris** of Rainbow Iris Farm. The cost is \$35, lunch and refreshments included. Plus great goody bags! See more information at this web site

<http://www.indianolaparks.com/hort.asp>

For questions, feel free to contact [dkkick@msn.com](mailto:dkkick@msn.com).

## Winter Gardening Fair 2007

Linn County MGs will hold their Winter Gardening Fair at Kirkwood Community College in Cedar Rapids on Saturday, February 24. Thirty-nine classes will be offered from 9 a.m. to 4 p.m. Each session is \$9.00

A free keynote presentation, "**Create a Colorful Garden filled with Birds, Butterflies and Blossoms,**" will be presented by nationally recognized author and teacher **Melinda Myers** at 1 p.m. To see a full list of classes or register to attend, visit [www.extension.iastate.edu/linn](http://www.extension.iastate.edu/linn) or call (319) 398-1022 or 1-800-332-8833. Contact the Linn County Master Gardeners at (319) 447-0647 or Linn County Extension at (319) 377-9839 with questions.

## Creative Construction for Your Yard

The program, Creative Construction in Your Yard, will be held Tuesday, February 27, at the Elks Club on Hwy 59 S. in Shenandoah is sponsored by ISU Extension in Page County. Creative Construction for Your Yard will give you gardening ideas and show you how to build hypertufa troughs and water gardens. The program will start at 4 p.m. and will end by 8:15 p.m.

Gary Whittenbaugh, Iowa representative for the American Conifer Society, will present "*Making and Gardening with Hypertufa Troughs.*" Gary will plant a hypertufa trough during his speech and provide information on plant selection and cultural practices.

Back by popular demand, Jamie Beyer, owner of Midwest Waterscapes in Boone, will talk about "*Constructing Water Gardens.*" Jamie will discuss types of water gardens, steps for construction, and levels of maintenance

The cost is \$20 per person, which includes refreshments, dinner, and handouts. The deadline for pre-registration is February 23 to ensure a dinner and packet. MG's will receive three continuing instruction credits. For more information, call the Page County Extension office at 712-542-5171 or toll free at 877-596-7243.

## Dubuque County Spring Garden Seminar in Early March

Saturday, March 3, 7:45 AM to 2:15 PM  
Northeast Iowa Community College  
Town Clock Center

680 Main St., Dubuque, Iowa 52001

Phone: 563-557-8271 ext. 380

Cost is \$10.00 per person, includes appetizers, light lunch and door prizes. Pre-registration is encouraged. Walk-ins the day of the seminar will be accepted if space

allows. For more information, call Sherry at 563-582-2498 or Judy at 563-553-1623 or e-mail [jgansemer@yousq.net](mailto:jgansemer@yousq.net). Please make checks payable and mail to: Dubuque County Extension Office, 14858 West Ridge Lane, Suite 2, Dubuque, Iowa

### SPEAKERS

**Dr. Donald Lewis**

**Chad Blocklinger**--Chad is a foreman at 7 Bluffs Landscaping in Dubuque. He is a member of the American Hosta Society and Vice President of the Dubuque Regional Hosta Society.

**Bob Hackbarth**--Bob is owner of the Hosta Leaf in Colesburg, Iowa. He is a Delaware County MG and a member of the Dubuque Regional Hosta Society and American Hosta Society

**Ron Barkow**--Ron is a Dubuque County MG and a member of the Dubuque Herb Society. He has worked for over 30 years in the floral and gardening industry.

**Bernie Curran**--Bernie is a very active member of the Dubuque County Extension MG Program. He is a retired executive, turned tree farmer.

## Atlantic Gardening Seminar March 24

The Ninth Annual Atlantic Garden Seminar will be held Saturday, March 24 at the Atlantic High School. A variety of topics from basil to dahlias will be offered. Look for more details to come in future updates.

## Siouxland Flower, Lawn & Garden Show

March 23 and 24

Bluff Area Family Center

Sergeant Bluffs, Iowa

There is a great list of speakers who have committed to our program. We'll have two seminars going at all times during the show. We also have somewhere around 60 vendor slots A powerpoint slide show is available from the Woodbury county office.

Questions can be directed to: Mimi Shanahan (712) 276-2157 [mimishan@iastate.edu](mailto:mimishan@iastate.edu) Sherry McGill (712) 276-2157 [mcgills@iastate.edu](mailto:mcgills@iastate.edu)

## SPECIAL ANNOUNCEMENT

### Iowa Community Tree Steward Program Offered in Polk County in 2007

This summer ISU Extension Forestry and Horticulture is offering the Iowa Community Tree Steward Program this May and June 2007.

The Iowa Community Tree Steward Program is intended for citizens and professionals who wish to learn more about trees and tree care. The course consists of six hands-on classes that cover tree identification, tree selection, landscape planning, pruning, planting, disease and insect management, risk tree assessment, and much more. The classes will take place from 6-10 pm. Cost is

\$30 per person. Dates are May 15, 22 and 29, and June 5, 12, and 19.

The program is sponsored by ISU Extension, Iowa DNR, Iowa Urban and Community Forestry Council, Trees Forever, Iowa Arborist Association, and the USDA Forest Service.

Contact your County Extension Office or Tivon Feeley for further information about the Iowa Community Tree Steward Course at 515-294-6739 or [cfeeley@iastate.edu](mailto:cfeeley@iastate.edu). For a copy of the [C T S Class Schedule 2007](#) or a [C T S 2007 Application form](#), click on the appropriate link.

## Polk County MGs 2007 Education Program Schedule

All programs are held at the ISU Extension Office, 5201 NE 14<sup>th</sup> Street Des Moines. From 7:00-9:00 p.m. You will receive two hours of education credit (CEUs) for each class you attend. All programs are free of charge for Polk County Master Gardeners, Master Gardener interns, and any Master Gardener seeking to recertify. For questions about these classes or any other Master Gardener training, please call 261-4200. Volunteer service and education Polk County Master Gardener website:

<http://www.extension.iastate.edu/polk/yardgarden.htm>

### Thursday February 15, 2007

#### What's New with our Old Reliables

Speakers: *Ed Moran, landscape manager, Reiman Gardens, Ames*

Buck roses and peonies are foundation plants that prove themselves in the garden year after year. Ed will discuss Reiman Garden's extensive collection of these plants and how they're managed for optimal bloom and long life. He'll also provide highlights of upcoming displays and events found on the Reiman Garden calendar for 2007.

### Thursday March 15, 2007

#### Plant Breeding (not propagating) for the Backyard Gardener

Speaker: Nan Ripley, regional v.p., *National Hemerocallis Society*

Think about it.... How great would it be to breed an all new cultivar of daylily or iris and then name it after your grandchild, mother, or even yourself Wow! Nan will explain doable details for home garden plant breeding

(breeding, not propagating) to create new and original plant varieties. She'll bring photos of plants she has created at her own garden in Nevada, Iowa.

### Thursday April 19, 2007

#### What's New at the Master Gardener Plant Sale

This program has become a Polk County tradition. It's our annual sneak preview of what's to come in the way of new and unusual annuals offered at this year's MG Plant Sale

AND

#### "So What's Happenin' in Your Garden this Summer?"

Speaker: Polk County Master Gardeners  
Last year's "30 Ideas in 30 Minutes" session was such fun, we decided to try it again on a different topic. We'd like to hear what you're planning for your garden this summer. So please come with one creative idea you're hoping to accomplish in the 2007 growing season. Maybe it's a problem you hope to solve, a new design concept, or plants you'll be shopping for, even if it's just your wish list. We'll have fun, and like last year, we'll all go home with lots of new ideas!

### Summer Bus Trips

The Polk Co. Master Gardeners will be hosting 2 bus trips this summer – the first is June 2<sup>nd</sup> with the final destination Prairie Pedlar in Odebolt, IA and a week-end trip August 24, 25, 26 to Rockford, IL.

In Rockford we will visit the Anderson Japanese Gardens ([www.andersongardens.org](http://www.andersongardens.org)) reputed to be the finest Japanese Garden in North America. That's all the bus trip info for now – so mark your calendars and watch for the details shortly.

## Other Garden Events

### "Living Green" Home & Garden Show

February 24th, 2007 at 10 am

Southern Prairie YMCA 1201 W. Townline, Creston  
Southwest Iowa's showcase of vendors who are working with "green" ideas and products to improve indoor and outdoor environments. See the latest in decorating, construction, reconstruction, landscaping, conservation practices and entertainment.

10:00 AM -3:00 PM

Admission/Fees: \$2/person, children under 5 free

### English Garden Tour in May

The Des Moines Botanical Gardens and the Iowa Arboretum are joining together for an English Garden tour in May '07. If interested, call or email the Iowa Arboretum.

### Iowa Flower, Lawn and Garden Show & Sale in March

The Iowa Flower Show is a gardeners paradise. Over 100,000 square feet of breath-taking gardens on display and gardening products for sale. There will be local experts on hand to answer questions and give advice. There is something here for everyone.

Event Days:

March 16, 2007, 1:00 PM - 8:00 PM

March 17, 2007, 10:00 AM - 7:00 PM

March 18, 2007, 11:00 AM - 4:00 PM

Iowa State Fairgrounds, Varied Industries Building  
*Adults, \$7.25; Seniors, \$6.25; Children ages 6-12, \$4.25; Children ages 5 and under are free.*

## Extension Information

### Ask the ISU Experts

Got gardening questions? Contact the Hortline at (515) 294-3108 (Monday-Friday; 10 a.m.-noon and 1-4:30 p.m.) or send an e-mail to [hortline@iastate.edu](mailto:hortline@iastate.edu). For more gardening information visit us at Yard and Garden Online at [www.yardandgarden.extension.iastate.edu](http://www.yardandgarden.extension.iastate.edu)

### Pruning Grapevines in the Home Garden

1/22/2007

For many home gardeners, pruning grapevines is often a difficult, confusing chore. Fortunately, an understanding of the growth and fruiting characteristics of the grapevine should help simplify the pruning process.



Grapevines produce fruit clusters on the previous season's growth. Before pruning, a grapevine may have 200 to 300 buds capable of producing fruit. If the vine is not pruned, the number of grape clusters would be excessive and the grapevine would be unable to ripen the large crop or produce adequate vegetative growth.

The purpose of pruning is to obtain maximum yields of high quality grapes and to allow adequate vegetative growth for the following season.

The most desirable time to prune grapevines is late winter or early spring. In Iowa, pruning can begin in late

February and should be completed by early April. Grapevines pruned at this time of year may "bleed" heavily. However, the loss of sap will not harm the vines.

To maximize crop yields, grapevines are trained to a specific system. The most common training system used by home gardeners is the four-cane Kniffin system. The four-cane Kniffin system is popular because of its simplicity. In a four-cane Kniffin system, the canes of the grapevine grow on two wires, one located 3 feet above the ground and the second 6 feet high.

If using the four-cane Kniffin system, select four canes on the upper wire, two going in each direction. Also, select four canes on the lower wire. To aid identification, some gardeners tie brightly colored ribbons or strips of cloth on those canes they wish to retain. All remaining one-year-old canes should be completely removed.

Going back to the upper wire, select two of the remaining four canes (one going in each direction). Prune these canes back to one or two buds. These short one or two bud canes are referred to as renewal spurs. The renewal spurs provide the shoots or canes that will produce next year's crop. Prune the remaining two canes on the upper wire back to eight to thirteen buds. The number of buds left on the fruiting canes is determined by plant vigor. If the grapevine is vigorous, leave thirteen buds per cane. Leave only eight buds per cane if the grapevine possesses poor vigor.

Prune the four canes on the lower wire the same as those on the upper wire. When pruning is complete, no more than 60 buds should remain on the grapevine. When counting the number of buds on the grapevine, include both the buds on the fruiting canes and those on the renewal spurs.

Tools required to prune grapevines include a hand shears, lopping shears, and saw. Brightly colored ribbons or cloth strips can be used to identify fruiting canes and renewal spurs.

For most home gardeners, pruning grapevines should be relatively easy with a basic understanding of pruning principles, the right tools, and a little courage. Additional information on pruning grapevines can be found in *Pruning Grapevines* (RG 502) and *Growing Grapes in the Home Garden* (PM 1707). Both publications can be obtained at your Iowa State University (ISU) Extension county office or the ISU Extension Online Store at [www.extension.iastate.edu/store](http://www.extension.iastate.edu/store).

**1/17/2007**

### **How can I propagate a grapevine?**

While grapevines can be propagated by several methods, they are most commonly propagated by taking hardwood cuttings. Hardwood cuttings are made from the dormant canes of the preceding year's growth. Cutting material should be collected in late winter.

Home gardeners pruning their grapevines in March can make cuttings from the pruned material. Grape cuttings should be approximately pencil-size in thickness and 12 inches long. When making the cuttings, the bottom cut should be just below the lowest bud while the upper cut should be 1 to 2 inches above the top bud.

After making the cuttings, loosely tie them in a bundle. Place the cuttings in a plastic bag with some lightly moistened peat moss, then store in a cool location, such as a refrigerator or garage. As soon as the soil is workable in spring, remove the grape cuttings from cold storage. Set the cuttings in the ground vertically with only the top bud just above the soil surface.

### **What are the differences between the various types of sweet corn?**

Standard (su), supersweet (sh2), and sugar-enhanced (se) are the three major types of sweet corn. They differ in sweetness, keeping quality and seed vigor.

Standard sweet corn varieties possess the traditional sweet corn flavor and texture. Unfortunately, the ears of standard sweet corn varieties retain their quality for only one or two days in the garden. Also, standard sweet corn varieties don't store well as the sugar is quickly converted to starch.

Supersweet or shrunken-2 sweet corn contains up to twice the amount of sugar as standard varieties. (The common name shrunken-2 is derived from the shrunken or wrinkled appearance of the dry kernels.) Also, the conversion of sugar to starch occurs at a much slower rate. As a result, supersweet varieties may be harvested and stored over a longer time period.

Supersweet varieties, however, do have some drawbacks. Yields of supersweet varieties are generally lower than standard sweet corn. Also, the seeds of shrunken-2 varieties are smaller than standard sweet corn varieties and germinate poorly in cold soils. While standard sweet corn can be planted in late April in central Iowa, supersweet varieties should not be planted until mid-May.

The sugar levels of sugar-enhanced sweet corn are between those of standard and supersweet varieties. The soft kernel pericarps make sugar-enhanced sweet corn tender and easy to chew. The harvest and storage periods of sugar-enhanced varieties are slightly longer than standard sweet corn. It's generally recommended that sugar-enhanced varieties be planted one week later than standard varieties.

The newest type of sweet corn combines some of the characteristics of supersweet and sugar-enhanced sweet corn and is referred to as synergistic sweet corn. Synergistic varieties have higher levels of sugar than sugar-enhanced sweet corn. Their kernels are more tender than supersweet varieties. Synergistic varieties should be planted later than standard varieties as their seeds germinate poorly in cold soils.

### **When should I start caladiums indoors?**

Plant caladiums indoors four to six weeks before the average last frost in your area. Tubers should be planted 1 to 2 inches deep. When planting tubers, place the knobby side up. The knobs are the tuber's eyes or buds.

### **Holiday Cactus**

Holiday cactus should not be thrown out after the holiday season. This is a wonderful houseplant that can last for decades indoors. It too requires short days to initiate blooms. Place plants in a sunny window during the winter and spring. In late spring transfer plants outdoors to a shady location and water and fertilize as needed.

Bring plants indoors before frost and in early October place plants in a window of a guest bedroom or other room that is rarely used in the evening. Generally the natural photoperiod or night length for a few weeks will be sufficient to initiate blooms. Try not to have the lights on for long periods during the first few weeks as this can delay flowering. Holiday cactus prefer drier soils than poinsettia, but not as dry as a typical cactus. It is especially important not to let plants dry out

completely when setting flower buds, as they will drop quickly in response to drought.

### **It Takes Three to Make a Plant Sick**



*Lilac leaves infected with powdery mildew, showing the white, dusty coating typical of this disease. Powdery mildew results when a susceptible plant and the mildew fungus interact in a warm, humid environment.*

By Christine Engelbrecht, ISU Plant Pathology

It may take two to tango, but three things are required to make a plant sick. An understanding of this fundamental “Plant Disease Triangle” forms a basis for managing plant health.

The first “side” of the triangle is so obvious it may be overlooked. In order to have a plant disease, you must have a plant. More specifically, you need a susceptible plant, one that is able to get a particular disease. Each plant species is prone to a unique set of maladies. Crabapples and oaks get different diseases. Within a species, plant varieties differ in their susceptibility to various diseases. For example, some crabapple cultivars are decimated by apple scab while others are unaffected. The overall health and vigor of an individual plant also affects its susceptibility to disease.

The second “side” of the Plant Disease Triangle is also simple. Besides a susceptible plant, there must be an organism that can cause disease, or a pathogen. Most plant pathogens are fungi, which can cause leaf spots, root rots, mildews, wilts, and a variety of other symptoms. Besides fungi, bacteria, nematodes (microscopic worms) and viruses are other examples of common plant pathogens.

The third “side” of the triangle is perhaps the least obvious, but it is crucial. The susceptible plant and the pathogen must interact together in a favorable environment in order to result in plant disease. For many fungal diseases, “favorable environment” means warm and wet. But some diseases are favored by cool weather, dry conditions, or a certain soil pH. Each disease is favored by a slightly different combination of humidity, temperature and other environmental factors. Even when a large population of a pathogen is present on a susceptible plant, there will be no disease unless the conditions are just right.

For example, powdery mildew is a common disease of lilac, causing a white, dusty coating on the leaves in mid to late summer. In order to have this disease, three things are required—the plant (a susceptible lilac bush), the pathogen (the powdery mildew fungus), and a favorable environment (in this case, humid but not wet conditions and moderate temperatures).

How can we use this knowledge to manage plant problems? Because three things are necessary for plant

disease, we can prevent disease in our gardens by altering any one of the three factors.

For example, we can reduce the impact of the host plant by choosing disease-resistant varieties or species that are relatively disease free. Several varieties of lilac are available that are resistant to powdery mildew. Maintaining good plant vigor through proper watering and fertilizing will also make plants less prone to disease.

Alternately, we can attack the pathogen side of the triangle. The pathogen can be reduced by removing debris and weeds where it may survive, rotating crops so that pathogens do not survive year to year on the same crop, or controlling insects that may carry the pathogen. In our lilac example, we could remove diseased debris at the end of the growing season, or use fungicides to reduce the amount of the pathogen on the leaves.

The environment can be managed in many ways to reduce disease. Humidity and leaf wetness are often conducive to disease, and these can be minimized by spacing, staking and pruning plants to promote airflow. We can remove weeds that impede airflow. We can change watering practices, avoiding overhead watering that increases leaf wetness, and watering in the morning rather than the evening so leaves have time to dry out before night. In our lilac example, spacing the bushes to maximize airflow between them and planting them in full sun can help to minimize humidity in the canopy, thereby reducing powdery mildew problems.

By understanding that three things are required for plant disease--host plant, pathogen, and favorable environment--we can use a three-pronged approach to manage plant diseases.

*Any comments about this newsletter?  
Anything you want to see in future  
newsletters? Send comments to  
[bcmg@fbx.com](mailto:bcmg@fbx.com).*

## Master Gardener Minutes

### This is a **Master Gardener Minute on February chores.**

The groundhog saw his shadow so that means six more weeks of winter. It's hard to be a gardener and not be able to get your hands dirty, but here are a few things you can do before the soil warms up. First of all, walk around your flower garden. Perhaps you need some background materials such as grasses or evergreens. Do you have bare spots? Is the garden pleasing from your home windows? Now that it's bare bones, it's a good time to plan for the coming season and order plants. Keep your tools in order. Now is a fine time to sharpen lawn mower blades, saws and pruning shears. Wash any pots you plan to use for germinating seeds or for outdoor display with hot, soapy water and a little household bleach. Rinse well. Now is a good time to make trellises or window boxes for next season. And last, my favorite thing to do in the winter, visit your library and pick up an armload of gardening books. This message has been brought to you by Iowa State University Extension Office and Boone County Master Gardeners.

### This is a **Master Gardener Minute on pruning fruit trees.**

This is a good time to prune your fruit trees. The apple tree probably requires the most attention for seasonal pruning. Here are a few easy steps to follow in pruning your apple trees. The first things that you remove are the broken and damaged limbs. Then you want to remove the branches that are rubbing against one another, as they will injure the tree. On an apple tree, last year's vertical growth on the top of each limb is called a water sprout and should be removed during pruning. This will allow the tree to focus its energy to the more established limbs that actually produce the fruit. Pruning while the tree is in the dormant period, in late winter or early spring, minimizes the insect and disease vulnerability to the tree and greatly enhances the vitality of your next season's fruit crop. This message has been brought to you by Iowa State University Extension Office and Boone County Master Gardeners.

### This is a **Master Gardener Minute on starting seeds.**

This is a good time of the year to consider starting plants from seed. Starting perennials and vegetables from seed is a way to have a wider variety of plants at less expense. Choose a container with drainage holes and wash it with soapy water to kill any harmful organisms. Don't use garden soil. Use only the sterile soil made for seedlings. Follow seed packet directions exactly. Cover the container with plastic wrap or other clear material, that will conserve moisture and protect from drafts. Water the surface carefully or let the water be absorbed up through the soil from the bottom. As soon as the seeds germinate, remove the cover to allow air to circulate. Use a south window or if a lot of seedlings, use a fluorescent light at no more than six inches above the seedlings. In mid-May "harden off" by setting the containers outdoors for a few hours at a time over three or four days and then plant the seedlings in a well-prepared bed. This message has been brought to you by Iowa State University Extension Office and Boone County Master Gardeners.

### This is a **Master Gardener Minute on winter bird feeding.**

Birds are hungry in the early morning and traffic at the feeders is usually brisk. They may snack all day but come out to eat seriously again in the afternoon to fuel their bodies for the coming night. Choose feeders that are easy to fill and clean. An all-purpose tray feeder is indispensable. Hopper feeders are also good because seed is used as needed and is protected from wet or snowy weather. Tube feeders are self-contained so seed stays dry. Determine what kind of seed the tube feeder is designed for. The size of the hole determines whether it is to be used for thistle, birdseed mix or sunflower seed. Don't forget suet feeders. A good supply of calories from suet to boost energy is important. Heated birdbaths are available to provide water and are greatly appreciated by the birds. Most birds will eat two basic seeds: black oil sunflower seeds and white millet. Other appealing seeds are striped sunflower, thistle, safflower, flaxseed and cracked corn. This message has been brought to you by Iowa State University Extension Office and Boone County Master Gardeners.

## **Extension Office**

**The meeting was called to order by Chair, Melanie Erickson at 7:15 pm.**

**Roll Call: Linda Cox, Gina Christians, Carol Erickson, Ted and Deanna Garwood, Teresa Smith, Greg Anderson, Holly Cleppe, Karen Grote, Cindy Burgar, Melanie Erickson and Rich Wrage.**

**November 2006 Minutes were approved by Linda Cox and seconded by Gina Christians.**

### **Old Business:**

**Gina will call Jennifer Roberts again regarding the Historian's Book that she still has to arrange delivery.**

### **Project Updates:**

**We are still looking for people to chair a few projects. Gina and Cindy will talk to Mayor Slight regarding 8<sup>th</sup> and Story. Projects without any interest may be dropped.**

### **New Business:**

**Farmer's Market is being held at Reiman Gardens on Wednesday mornings.**

**Swede Point Park needs assistance with maintenance of prairie plantings.**

**FRC wants us to replant a tree, reseed a grass area and repair border edging.**

### **Other:**

**Social dinner Friday, Jan. 19<sup>th</sup>, 6:30pm at Colorado Grill. Reservations to Melanie.**

**Next meeting is Tuesday, February 20, 7:00pm at Extension Office.**

**The meeting was adjourned at 7:25pm.**

**A very informative and interesting presentation was given by Rich Wrage. Extension Director about his trip to Cuba in 2000. It was enjoyed by all.**

**Submitted by Cindy Burgar, Secretary**