

# MARYLAND Home & Garden

Winter 2011 - 2012

UNIVERSITY OF  
MARYLAND  
EXTENSION  
*Solutions in your community*

## Join In and Learn with Grow It Eat It

*Jon Traunfeld, Extension Specialist, Fruits and Vegetables,  
and State Master Gardener Coordinator*

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### Websites

- [Home and Garden Information Center](#)
- [Grow It Eat It](#)
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Check out the [Grow It Eat It](#) website this winter. We have lots of useful information for newbie and advanced gardeners. And while you're looking around don't forget to put your garden on the map by joining the [GIEI Network](#).

Here are a few recently received money-saving tips from Karen Blanford, a gardener in the GIEI Network: "I am not sure I actually save money – I certainly spend too much on my gardens every year! But here are a few things that help in the vegetable garden –

1. Start from seeds, not plants. If you can't use the whole seed pack, buddy up with a friend and share. Or if you have 10 seedlings but only want 5 of that type, swap seedlings with your buddy. Save leftover seeds and use them the next year.
2. If you use compost regularly, you probably don't need fertilizer to get spectacular results. Do you care if you get one less zucchini?
3. Use newspaper as a mulch.
4. Mix your own soap solutions to use as bug sprays.\*\*\*
5. Slugs also don't care how cheap the beer is in the slug traps (aka cat food cans).
6. Use leftover cardstock-weight papers or packing materials to make cutworm collars (3" tall strips, 8" long, made into a circle and stapled).
7. Use tree trimmings for constructing your trellises.
8. Be consistent in canning or freezing your crops when they are first harvested.

\*\*\*(HGIC comment: Commercially available insecticidal soap is less likely to burn leaves than household liquid detergents. If you decide to make up your own soap solution to control aphids, spider mites, young caterpillar and beetle larvae: mix 2 TBS. of a mild soap with 1 gallon of water. Spray upper and lower leaf surfaces of a small section of one plant to evaluate effectiveness and signs of leaf burn).

### Blueberries with a Drawl

Want to add some blueberry plants to your expanding food garden? UME has long recommended Northern highbush cultivars like 'Bluecrop'. But farmers and gardeners are also finding success in Maryland with Southern highbush cultivars. These are derived from crosses between Northern highbush and rabbiteye (Southern) cultivars. Southern highbush blueberry plants can withstand brief periods of 0°F. temperatures. UME researchers planted

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'O'Neal', 'Ozark Blue', 'Jubilee', and 'Reveille' in 2005 at the Central Maryland Research and Education Center in Upper Marlboro. The plants are growing and producing well. They are also trialing some rabbiteye cultivars that produce larger plants (8-10 ft. tall) capable of producing 8-14 lbs. of fruit per plant. Rabbiteye cultivars will grow best where winter temperatures do not go below 10° F. This is another example of growers adapting to climate change.

**UME Focuses on Youth Gardening**

Many UME programs are related to growing, evaluating, preparing, and eating food. That's one big reason why I love my job! Research shows that kids who grow their own food plants are more likely to try new foods and more likely to eat more fruits and vegetables. The White House kitchen garden has brought much needed attention to the problems of youth obesity and inactivity, UME faculty and Master Gardener (MG) volunteers have been busy developing and supporting youth gardens across the state to improve nutrition and health.

The GIEI website supports these gardens with timely information and the HGIC staff is on hand to answer questions and solve problems. UME's Master Gardener (MG) and Food Supplement Nutrition Education (FSNE) programs will conduct three training sessions in 2012 to sharpen the skills of our faculty and volunteers as we focus more attention on youth gardens.

Here are three great examples of UME-supported youth gardens:

curriculum objectives and 500 lbs. of produce were donated this year to a local food pantry. Sabine recently entered the garden in a [Mother Earth News](#) Garden photo contest. The editors of the magazine will pick two winners from the top 25 gardens (in terms of votes). After gardeners in the GIEI Network learned about the contest they got busy and voted, shooting the KCMS garden from 64th place to 8th place in less than one week!



*Master Gardener Diyan Rahaman teaches students the abc's of vegetables*

**FSNE and MG Container Garden at Washington Grove ES in Montgomery Co.** FSNE Educator Lynn Rubin and MGs Diyan Rahaman and Don Snyder guided 3rd grade students as they grew and tasted fresh vegetables at school. Students learn gardening, nutrition, and food preparation from the [Growing Healthy Habits](#) curriculum.



*Proud middle schoolers show off their bounty.*



*"The kids really, really loved it," said Claire Gardner, first-grade reading teacher at Cedar Grove Elementary School.*

**The Kent County Middle School Victory Garden**, under the leadership of Sabine Harvey, Master Gardener and Horticulture Program Assistant for UME, Kent Co., has been a shining example of a successful school garden. This garden has helped the school and teachers achieve

**"Salad Science" (Gardens at GreenKids Schools in Montgomery Co.)** GreenKids is a grant-funded educational outreach program of the Audubon Naturalist Society. University of Maryland Salad Tables® were built and set-up



Getting ready to harvest for a “salad party”.

in school courtyards along with EarthBoxes. Students and teachers worked with Audubon staff and Master gardeners to plant, grow, and harvest salad greens. The spring and fall programs end with “salad parties”!

Big kids are also getting the food gardening bug! Projects are springing up on the College Park campus, including a new School of Public Health garden organized and run by students. I led a Salad Table and Salad Box-building workshop there in October. HGIC and GIEI are partners for these green campus projects that I expect will grow in number and size in the coming years.

If you love to grow food do us all a favor and teach and share your knowledge and skills with a young person in 2012!!



Students working on a Salad Box for a small home garden.



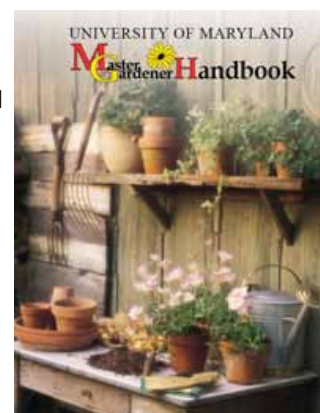
Finished Salad Table built by U of MD students for campus garden.

**Not sure what to get your garden lover this holiday season? Give the gift of practical, up-to-date, expert information...in the form of the **Maryland Master Gardener Handbook**.**

For gardeners who wish they knew more, this is a treasure trove of academically researched and experientially tested information on effective and sustainable horticulture.

Produced by faculty at the University of Maryland College of Agriculture and Natural Resources, this indispensable gardening tool makes a wonderful addition to the reference library of both beginning and seasoned gardeners. It features a “Bay-Wise” approach to gardening that will help readers improve soil quality, nurture plants, and manage most pests without pesticides. It also explains many of the “hows” and “whys” of horticulture, with special emphasis on diagnosing and solving plant problems.

The spiral-bound 640-page Maryland Master Gardener Handbook is divided into 28 chapters, and also contains 400 color photos. Order your copy online or by mail, by going to <http://mastergardener.umd.edu/Handbook.cfm> , Click on either the “Online” or the “Order Form” link. You have your choice of electronic purchasing or printing out an order form and mailing it with your check for \$69 (made out to the University of MD) to: MG Handbook, University of Maryland Extension, 12005 Homewood Road, Ellicott City, MD 21042



## Pantry Raid - Indian meal moth, *Plodia interpunctella*

Mike Raupp, Professor & University of Maryland Extension Specialist, Ornamental Horticulture, IPM

Pies, cookies, cakes, breads, stollens and other delectable holiday treats spring from ovens everywhere during this season of culinary delight. Cupboards and pantries receive lots of attention and activity. In this festive season, many hopeful bakers open pantries only to be greeted by swarms of small flying insects, a most unwelcome surprise. What are these invaders?

A number of insects infest stored food products. This includes a variety of beetles and moths that attack spices, grains, dried fruits, cereals, nuts, and pet foods. A cosmopolitan member of the raiders of the closed pantry is the Indian meal moth, *Plodia interpunctella*. The adult insect is a rather small moth just slightly larger than ½ inch in length with wings banded white and rusty red. They flit about the pantry or cupboard in search of mates and tasty products rich in carbohydrates, fats, and proteins.

One interesting infestation I recently witnessed raged in a package of organic sunflower seeds. Although the package was unopened, the clever female moth laid her eggs on the surface of the crinkly plastic bag. Upon hatching, the tiny larvae, caterpillars in fact, found a small gap in a seam of the package and crawled inside to dine on nutritious seeds. The small caterpillars spun silken galleries from which they sallied forth to eat. As they grew, more silk was produced and the digested remains of the meals, called frass, was voided and entangled in the silken strands to form a nasty messy web. Two excellent clues signaling the presence of meal moths are the presence of silk and frass within a bag of flour, grain, seeds, or pet food. After the larvae completed their development, they gnawed holes in the bag and went nomadic, wandering about the walls and ceiling of the pantry in search of a protected spot to spin cocoons and develop into pupae. Sometimes vagabond larvae enter cracks between shelves, lids of jars, electrical sockets, or seams behind baseboards to pupate. From the pupae emerged the next generation of adults intent on finding new bags and boxes of stored products to infest.

How did these pests arrive in the first place? It is possible that the original infestation of meal moths arrived with cereal, seeds, dried fruit, or grain as a few tiny eggs within a package from the store. After hatching from the eggs, a few small caterpillars in a bag of seeds in the back of a closet are likely to go unnoticed, but these colonists are capable of generating sufficient moths to generate a full blown infestation. Meal moths are also able to survive outdoors and are commonly found in caches of nuts or seeds stored by squirrels or rodents. Adult moths may originate outdoors and invade indoor pantries during warm weather when doors and windows are open. Mice often enter homes in autumn and winter seeking shelter and bringing stockpiles of seeds with them. These seeds and the associated moths may be a source of infestations indoors.



Adult Indian meal moths like these two stuck in a pheromone trap often flutter about pantries and cupboards.



Meal moth caterpillars excavate seeds and generate scores of pellets of frass, a polite term for insect excrement. Frass is often a good sign of a meal moth infestation.



Strands of silk on the inside of food containers are another clue of a meal moth infestation.

What should you do if you find these rascals in a pantry or cupboard? First, remove all goods and products from the storage area. Vacuum the cupboard, pantry, or cabinet like there is no tomorrow. Carefully inspect all cracks, corners, crevices, and seams in the cupboard and remove any larvae or pupae you find. Seal as many of these refuges as possible with caulk. Remove and replace loose paper used to line shelves. Inspect any pots, pans, glasses or other items occupying the pantry where food will be stored and remove any meal moths on these items as well. Inspect opened and unopened bags and boxes of food for signs of silk, frass, larvae, or moths. If in doubt, toss it out. My pantry pest guru recommends the “deep chill” treatment for unopened packages you might want to salvage, but are suspect by association. Place unopened bags in the freezer for one week, remove them for one week, and then freeze again for a final week. The intermittent week of thaw tricks eggs into hatching and the tiny caterpillars are then killed by the second trip to subzero land. When you purchase items that might serve as food for meal moths, seal them in strong plastic storage containers with tightly fitting lids. This will help prevent any moths you might have missed from laying eggs that hatch into larvae capable of infesting your food. Try not to store prime foods like grain or dried fruit for very long periods of time. The longer stored products remain on a shelf, the more likely they are to be infested by an itinerant moth that

happens by. One approach useful in alerting you to an incipient invasion of meal moths is to purchase and deploy pheromone traps. These small triangular boxes are placed inside your pantry or cupboard. Inside is a sex pheromone that attracts the male meal moth from many feet away. The ever-hopeful male senses the pheromone; a chemical signal released by a female, and is tricked into believing that a receptive beauty waits inside the open-ended trap. He flies inside to find his mate, but instead becomes snared by a sticky substance lining the inside of the trap. By placing these traps within a pantry, you can detect the emergence of male moths that may be the harbingers of a burgeoning population of moths in your cupboard. This advanced warning serves as a signal to initiate a search and destroy mission. Adventures like this are always a good way to get some much needed exercise after the holidays and have a clean pantry to boot.

*The Handbook of Pest Control, Ninth Edition, by Arnold Mallis was used as a resource.*

To learn more about a variety of insects, visit Mike Raupp's [Bug of the Week](#) website.



The gardens have been put to bed for the winter (well, for most of us) but the GIEI team is already gearing up for Season 4!

In response to your suggestions in Season 3, we added more food gardening classes, added more content to the [Plant and Pest Problems](#) page including images and video, kept you connected to current happenings in the garden with Social Media sites, beefed up the [Youth Gardening](#) page, and added a lot more [videos](#) to our already hefty media library...just to name a few!

- 🍅 MG's taught 151 food gardening classes to 4,681 Marylanders
- 🍅 63,725 Pageviews to the [GIEI blog](#) in 10 months of 2011 - 68.2% are new visitors to the GIEI blog

## Season 3 Roundup

*Ria Malloy, Home and Garden Information Center*

- 🍅 94,808 [GIEI website](#) unique visitors in 10 months of 2011 - a 34% increase over all of 2010 and a 99% increase over 2009
- 🍅 620,301 worldwide lifetime views of videos on our [YouTube channel](#), an increase of 202% in the last 12 months
- 🍅 489 YouTube subscribers, an increase of 337% in the last 12 months

Stay tuned...we have a few surprises up our collective sleeves for Season 4. Look for the March 2012 Grow it Eat It Network News for details. Don't miss out – join the [GIEI Network](#) today and stay connected!

# Winter Tree Identification

By Nevin Dawson, Forest Stewardship Educator, University of Maryland Extension

As broadleaf trees begin to drop their leaves, it may seem that they are also losing their identity. Leaves are certainly the easiest way to identify a tree, and tree ID is certainly more difficult without them, but most species provide plenty of clues to their identity throughout the winter months of dormancy.

Winter is a great time to plan your spring and summer forest management, but a good management plan must consider the needs and benefits of each species. If you'd like to improve wildlife habitat, for example, you wouldn't want to remove all of the oaks and hickories, which are a great food source. Winter tree ID is also a great way to get to know the characteristics of each species that are usually hidden when the leaves are in place.

This article will give you an idea for what you should be looking for when trying to identify a dormant tree, but in order to match up a tree's characteristics with its name, you'll probably need a guide of some sort. Peterson field guide is a favorite for its clear illustrations and helpful layout. Winter Tree Finder by Watts and Watts is a cheap and simple dichotomous key that specializes in the identification of dormant trees. Virginia Tech University has an excellent website with several free [interactive keys for tree identification](#).



Sycamore, American planetree, *Plantanus occidentalis*



Crape myrtle, *Lagerstroemia indica*

The first place to start is from a distance. Decide whether the plant is really a tree or if it might actually be a shrub. Generally if its mature height is greater than 15 feet it can be classified as a tree. Take a look at the overall shape of the tree. Does it have a tall straight and clear trunk like a tulip poplar or does it still have the stubs of dead branches and a crooked trunk? If it's growing out in the open, what shape does the crown resemble? Is it oval like a sugar maple, vase-shaped like an elm, or pyramidal like a pin oak?

Also look for remnants from the growing season. Are there dead leaves still hanging on like willow oak? Maybe you can find some dried fruit in the crown like dogwood. Now take a few step closer and examine the bark. Look for distinctive patterns like the smooth white bark of beech or the shaggy orange bark of river birch.

Most trees have alternate branching, meaning that the branches tend to take on a slightly zig-zag shape, with twigs emerging first from one side and then from the other, like hickory.

If you look closer, you'll see that the scars left by dropped leaves follow the same pattern.

There is a small group of species, however, that have opposite branching. This forms a herringbone pattern, where each twig has another twig or twig scar directly across from it on the branch. The leaf scars also follow



'Winter King' Green Hawthorn, *Crataegus viridis*  
'Winter King'

this pattern. You can remember the species that form this group with the phrase “MAD-Cap Horse.” This stands for maple, ash, dogwood, the Caprifoliaceae family—including honeysuckle, viburnum, and elderberry—and horse chestnut.

This would also be a good time to look for any unique features, like the spines of a wild honey locust or the corky ridges on sweetgum twigs.



*Cluster of terminal buds on Pin Oak  
Photo courtesy of Southern Illinois University*

If you’ve gone through these steps and the tree still seems nondescript, it’s time to look more closely at the twigs. Take another step closer and grab a twig if you can. Look closely at the terminal buds on the tip of the branch. Are they clustered together at the tip like oak? Are they large and fuzzy like magnolia?

The leaf scars can also give clues. They can be crescent-shaped like blackgum, or large and shield-shaped like hickory. Look for the small

dots inside the leaf scar called bundle scars. These were the hookup points for the plumbing between the tree and the leaf, and the pattern and number of them can give you more clues. Tree of heaven has many bundles, while blackgum only has three.

Check for dots or lines called lenticels on the twigs.

Black cherry has elongated lines, while choke cherry lenticels are round. Slice diagonally through a twig with a knife to expose the pith, the inner core. Several species, like black walnut, have chambered piths with many lines crossing the grain of the twig.



*Black cherry lenticels - photo courtesy of Southern Illinois University*

Although much more challenging than summer tree ID, winter tree ID can be a rewarding way to help you plan your summer forest management while getting to know your trees a little bit better.

## Selecting a Christmas Tree

*Ray Bosmans, Professor Emeritus, University of MD*

Tis the season to look for a Christmas tree. A beautiful healthy quality tree adds a lot to the décor of the season. Purchase your tree from a local source to help assure freshness. Some of the most commonly available types of Christmas trees include: Scotch pine, white pine, firs and spruce. When shopping for a tree on the lot the first test of freshness is to hit the butt of the trunk against the ground and see how well the needles stay on. A heavy shedding of needles is an immediate sign that the tree has already started to dry out. A dry tree will continue to drop its needles even faster once in your home.

When you get the tree home, cut off about an inch or more from the trunk to expose fresh new tissue and place the tree in a pail of water. If you are not ready to move it indoors, store it in water and place in a shaded location out of wind. To help reduce water loss from the needles you can apply an anti-desiccant to the needles. Anti-desiccants are available at most garden centers.

Once indoors set the tree up in a stand that holds a lot of water, keep the water reservoir filled each day. Adding a flower/tree preservative will help reduce bacteria growth that can clog the trunk’s vessels. Christmas trees, because of their sap, are very flammable especially when dried out. Keep the tree well away from the drying heat of registers, radiators, electric heaters or fireplaces.



A fun way to get a very fresh tree is to cut your own from the many Christmas tree farms in Maryland. Visit our UM Extension website "[MarylandAgriculture.info](http://MarylandAgriculture.info)" to find a "Cut-Your own " farm near you.

The most popular species of trees sold as Christmas trees are the Douglas fir, Balsam fir, Fraser fir, white pine and Scotch pine.

**Douglas Fir:** Douglas fir has very soft green or often blue-green needles. Its well-known for its very sweet 'citrus-like' fragrance. It also has excellent needle retention.

**Canaan Fir:** Often labeled as 'Balsam' fir it is very similar in overall appearance to the Fraser fir. Its needles are longer ( ½ - 1 ¼ inch) and have more blue-green color on the upper needle surface. It has a relatively soft feel to the needles and branches; its needle retention is rated as good to very good. It is also known for its pleasant aroma.

**Scotch Pine:** This is the most commonly grown Christmas tree in our region. It has short 1 - 2½ inches long, stiff, dark, slightly bluish green needles. It has strong branches that hold heavy ornaments very well. It is also well known for its outstanding needle retention, even when dried out it still holds its needles longer than any other Christmas tree.

**Fraser Fir:** The Fraser fir has short, firm dark green needles and strong branches that hold heavy ornaments very well. It has excellent needle retention and an added bonus for Fraser is its very long-lasting fragrance.

**White Pine:** White pine is the second most popular pine grown as a Christmas tree. It has long needles, 2 - 5 inches, that are very soft. The branches are soft and flexible. This makes it a very pleasant tree to decorate, but the flexible branches do not hold very heavy ornaments. Its needle retention is rated as very good to excellent.

**Colorado Blue Spruce:** This is an exceptionally attractive tree with an excellent shape and a beautiful silvery blue green color. The needles are short (¾ - 1 ¼ inch), sharp and very stiff. This feature can make the tree very unpleasant to decorate. Its needle retention is good but only if it is kept properly watered; it will drop its needles very rapidly if allowed to dry out.

A well-cared for Christmas tree should last four weeks indoors, long enough to make it through the holiday season. After the holidays you can place the tree in your yard as a welcome shelter for wildlife. Most municipalities recycle Christmas trees into mulch or compost. Check with your local town or county about disposal either by curbside pick up or taken to a drop off site.



If you enjoy receiving the HGIC e-newsletter, stay in touch more often by "liking" us on Facebook and following us on Twitter.

Is all this social media technology new to you? Facebook is an online gathering spot where you can connect with friends and people who have similar interests. Go to [HGIC's facebook page](#) for a preview. Like what you see? Click the Facebook Sign Up button to get started. If you are already on Facebook, enter Home and Garden Information Center in the search field and click on the like button. Once you "like" the HGIC page, you can read posted comments, post questions, and comment on posts by others.

Twitter is another way we are communicating with Marylanders. Tweets are very short messages (140 characters or less) and often include hyperlinks to other web sites or publications. To learn more visit [our twitter page](#) and click the Join today button.

## Winterizing Your Aquatic Garden

*Ray Bosmans, Professor Emeritus, University of MD*

Maintaining a backyard pond/aquatic garden usually does not require much attention, except for this time of year when you need to prepare it for winter. If your pond is at least 18 inches deep you will be able to successfully overwinter fish, amphibians, and plants without any worry of them freezing to death.

The real threat to the fish and other aquatic life during the winter is the harmful effect of decaying leaves that have fallen into the water. A heavy accumulation of tree leaves and dead aquatic plants release compounds that darken the water and as the leaves break down will consume precious oxygen from the water. Severe oxygen depletion kills fish and hibernating frogs.

If you did not cover your pond with screen earlier this fall, now is the time to thoroughly remove all the accumulated tree leaves and the dead foliage of the aquatic plants. Build a screen cover to prevent more leaves from blowing into the water during the winter. If you have a filtration system or a waterfall, it's good to keep them running all winter; the moving water created by them will not freeze and it helps aerate the water. However, remove and store concrete fountains and statuary. If left in the water



over winter they will be badly damaged by the ice. As an added precaution to help your fish breathe better, place a floating stock tank heater in the pond. This will keep an area free of ice thus permitting oxygen to get into the water. This is a 1000 watt electric device. Be sure to plug it into a Ground Fault Interrupter Circuit outlet to prevent a possible dangerous electric shock. Following these steps will help assure that your fish, wildlife and plants will survive the cold winter conditions.



# How do you decide when to remove a tree?

Virginia Williams, CPH, University of Maryland Extension, Home and Garden

When a tree develops problems, it is frequently difficult to decide when to remove the tree. Dying trees that are not in danger of falling on people or structures can be allowed to die in place without human intervention. Old dead trees also serve as places for various species of wood peckers to find food and a place to nest. If money is no object and the owner wants to keep the tree as long as possible, trees can frequently be maintained for many years by cutting out all dead or diseased portions and watering deeply when needed. Unfortunately continually removing dead wood is expensive and sometimes neighbors are concerned about the possibility that the tree may fall on their property. Trees provide shade and climate moderation, hold soil in place, help keep air and water clean, increase property value, provide beauty. To decide whether to remove a tree, a number of questions need to be asked, the pros and cons weighed.

Many tree pruning and removal jobs are too much and very unsafe for the average do it yourselfer. Hire a professional. A professional is a "Certified" Arborist, this is a person who is fully insured, licensed and certified by the State.

## Is it a desirable species?

Undesirable trees include black locust, Siberian elm, box elder, mulberry, poplars, Bradford pear, silver maple, tree of heaven, mimosa, catalpa, empress tree, and willows. Characteristics that make some trees "undesirable"

include: weak wood prone to frequent breakage, always dropping large quantities of debris, shallow roots that damage lawns and pavement, often infested with diseases or insects specific to the tree species or being an invasive species by prolific reseeding in the landscape.

**How healthy is the tree?** If 50% of the tree is damaged, it probably should be eliminated. A tree that is in decline can continue to survive for many years but will always have limited or abnormal growth and appearance. Trees that have been damaged by herbicide frequently have

misshapen leaves, but frequently can recover.

**Is there trunk damage?** Vertical cracks, seams, dead branch stubs and large, older wounds suggest internal decay. Severe damage to the main trunk often warrants removal of the tree. If the damaged area is less than 25 percent of the circumference of the trunk, the wound could gradually heal over and no permanent injury should result.

**Is the tree hollow?** Because the life support tissue, the xylem and phloem, of a tree is on the outer edges of the trunk many trees will live for years with a hollow trunk.

The issue is the compromise of the trunk strength making the tree dangerous. A guide to help in decision making is if one-third of the interior of the tree is hollow or rotten, it probably should be removed.

## Are there large dead branches?

Large trees that have had their tops broken or large damaged limbs are a danger to people and property. If less than 25% of branches are damaged, tree will probably survive. Crossed or rubbing branches should be removed. Narrow branch angles especially of the main trunk are particularly prone to splitting and should be corrected. This is best done when the tree is young. If a narrow crotch is too large to remove the two co-dominant leaders could be cabled to relieve the strain

and avoid breakage. This procedure is performed by a professional.

**Are all dead branches on one side of tree?** If so, tree will be lopsided and potentially hazardous. Dead branches that are all on one side of a tree can be a symptom of root or trunk damage on the affected side. Such trees should be evaluated by a professional.

**Are there sprouts coming from the base of the tree or epicormic shoots (small branches coming from the**



**trunk?** These sprouts are a response to severe stress indicating that there is something wrong with the tree. This is very typical of trees that have endured recent new home construction injury, over-exposure to the sun after thinning a forest or soil compaction. Have such trees evaluated by a professional. These are an indication that all is not well with the tree.

**Is there trunk rot or a large fungus growing near the base of the tree?** Not all mushrooms growing under trees are associated with root diseases, but fungi growing on the tree are an indication of internal rot.

**Has there been excavation near the tree causing root damage?** If 50% of the root system is damaged, it probably should be removed.

**Is the tree leaning?** Leaning trees are more of a hazard than those growing vertically. A sudden lean indicates breakage or weakening of roots and tree should probably be removed immediately. A lean of more than 15% from vertical probably should be removed.

**Is the tree under power lines?** Trees under power lines should mature at heights less than 25'. A tree that is growing into power lines will need to be thinned out. During wet weather, electricity can arc as much as ten feet to wet tree foliage and ground out causing a power failure or property damage. Removal of trees limbs anywhere near power lines is never for the homeowner to do themselves. The price for an accidental touching of the power lines or a grounding arc of deadly electrical current to a ladder, pruning tool or a person will be devastating. Always hire a professional for these dangerous jobs.

**What is the history of the tree?** Some previous pruning jobs can cause problems years later. A situation that follows the old, outdated, practice of "topping" trees is breakage of the regrowth. Another cause of a gradual decline of trees is caused by a change in the soil level over the root system. If three inches or more of soil has been piled over the root system of the tree, it will probably die. If caught early before stress symptoms develop many trees can be saved.

**What is the environment in which the tree lives?** Another important factor in a trees possible need for removal is its environment. Trees growing on rock ledges or near a body of water frequently have shallow root systems. The removal of nearby trees is a common problem after new construction. Trees that are suddenly exposed to sunlight are severely stressed by the sudden change in exposure. Unfortunately, trees that are spared

from removal during construction often die 3-5 years later. They succumb to soil compaction, grade changes and the sudden exposure to full sun after being grown in a forest.

**How much space is available for tree growth?** Trees in the forest grow very well close together, therefore planting shade trees in groves replicating nature is fine. In such sites they will grow together as in nature to become one large mass. When it comes to your house, it is best not to have trees actually hanging over the roof. Generally large trees should be at least 20 feet from your house. On the other hand small trees, such as a dogwood, may be planted as close as 6 feet from the house.

Finally, some other considerations that can help you make a decision about the removal of a tree include:

- Are there other nearby trees whose growth will be enhanced if the tree is removed?
- Is the location of the tree such that it interferes with sight lines in traffic flow, stoplights, etc.?
- Does the tree have historic or sentimental value? When a tree has historic or sentimental value, more expense is justified to salvage it. However, if a tree is losing large branches, it is likely time for it to be replaced.

If you have questions about the health or safety of any tree, consult a [certified arborist](#) to have an onsite evaluation. Locate arborists certified through the International Society of Arboriculture.



# Chemicals in Plants that are Noxious for Insects May be Healthy for Humans

Mark P. Mattson, Ph.D., Master Gardener Intern, Harford County, Maryland

There is abundant scientific evidence that diets rich in vegetables, fruits, teas and spices are beneficial for health (Crozier et al., 2009; Willcox et al., 2009). For several decades the conventional wisdom has been that there are chemicals in the plants (phytochemicals) that scavenge oxygen free radicals in cells (Kris-Etherton et al., 2002). However, this antioxidant theory for the health benefits of diets rich in plants is being increasingly scrutinized in light of emerging findings suggesting a very different way in which phytochemicals can promote health. While there are some chemicals in plants that certainly can scavenge free radicals (vitamins E and alpha-lipoic acid, for example), consumption of these chemicals has not been shown to result in improved health when evaluated in controlled scientific studies. Several lines of research now suggest that phytochemicals can improve health by a different mechanism - by causing mild adaptive stress responses in cells of the body and brain.

The take home message of this article is that some of the chemicals in plants that are beneficial for human health evolved as toxins to dissuade insects and other predators. That is why such chemicals are concentrated in the skins of fruits, the delicate buds of vegetables, and the leaves of tea (*Camellia sinensis*). However, in the relatively low amounts typically consumed by humans the phytochemicals activate adaptive cellular stress response pathways that make cells resistant to more severe stress and disease. This notion of “what doesn’t kill you makes you stronger” has been termed “hormesis” by scientists who define it as “a process in which exposure to a low dose of an agent or environment that is damaging at higher doses induces a beneficial effect on cells and organisms” (Mattson and Calabrese, 2010). Evidence supporting this concept of hormesis is very strong with regards to the health-promoting effects of exercise, dietary energy restriction and cognitive stimulation (Figure 1). Experiments have further shown that exposure of cells and animals to moderate levels of elevated temperature, ischemia or oxidative stress can increase their resistance to subsequent more severe stress.

Whereas mobile organisms can escape predators, stationary plants must discourage predators by several mechanisms including the production and concentration of noxious chemicals in their leaves, flowers and roots. The numbers and types of such “insect antifeedants” or “botanical pesticides” are remarkably large (Koul,

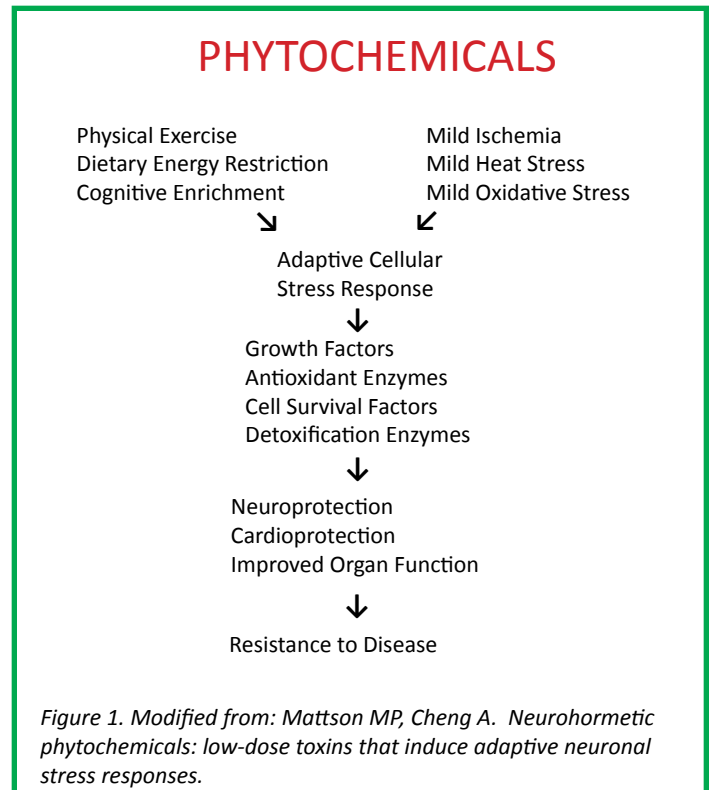


Figure 1. Modified from: Mattson MP, Cheng A. Neurohormetic phytochemicals: low-dose toxins that induce adaptive neuronal stress responses.

2003). Examples include: alkaloids such as nicotine and caffeine; flavonoids such as quercetin and myricetin; terpenoids such as farnesol and camphor; coumarins such as xanthotoxin and coumarin; and cardenolides such as digitoxin. While at high doses many different phytochemicals are carcinogens and/or neurotoxins, at lower doses they can be beneficial for health. For example, phytochemicals that are “carcinogens” when ingested in high amounts can actually prevent the development of cancers when cells or animals are exposed to low doses of the same chemical.

In order to be effective, it is not necessary that toxic phytochemicals kill the organisms that feed on them; instead, the plants need only dissuade organisms from eating them. Accordingly, chemosensory receptors (olfaction and taste) are primary targets of many such biopesticides. Biopesticides that act on chemosensory receptors need be present in the plant only at relatively low concentrations because of the immediate proximity and easy accessibility of chemosensory receptors. One example is capsaicin, the chemical responsible for the striking noxious physiological effects of hot peppers; capsaicin activates specific calcium channels called vanilloid receptors.

Several phytochemicals beneficial for health have been identified (Figure 2) and include:

1. Allium phytochemicals in garlic and onions, that are responsible for the strong smell and taste of these plants. Such chemicals in garlic and onions may prevent cancers by inducing the expression of antioxidant enzymes.
2. Resveratrol, a polyphenol present in high amounts in red grapes and wine, has received considerable attention as the likely chemical responsible for the health benefits of red wine. Resveratrol has been shown to protect the heart against ischemia-reperfusion injury by activating a hormesis pathway.
3. Sulforaphane is an isothiocyanate present in high amounts in broccoli sprouts. It stimulates a transcription factor called Nrf2 that, in turn, induces the expression of genes encoding detoxifying enzymes.
4. Curcumin (diferuloyl methane), the key component of curry spice, is a chemical in the curcuminoid family of phenolic compounds isolated from the roots of *Curcuma longa*. As with sulforaphane, curcumin can activate the hormetic Nrf2 pathway in cells throughout the body.
5. Catechins are polyphenols suggested to be responsible for the anticancer effects of consumption of green tea.
6. Hypericin is a naphthodianthrone hypericin in the extracts of *Hypericum perforatum* L. (St John's wort). Beneficial effects of hypericin/St. John's wort have been reported in models of neurodegenerative and psychiatric disorders, and in human clinical trials in depression and anxiety disorders.

The implications of hormesis as a major mechanism responsible for the health benefits of chemicals in fruits and vegetables are far-reaching. For example, much of the current basic and translational research on phytochemicals assumes that their biological activities are a direct consequence of their antioxidant properties. If, instead, they act as toxins that stimulate cell stress response signaling pathways, then issues such as how much and how often the phytochemical is ingested becomes very important. We already know that it

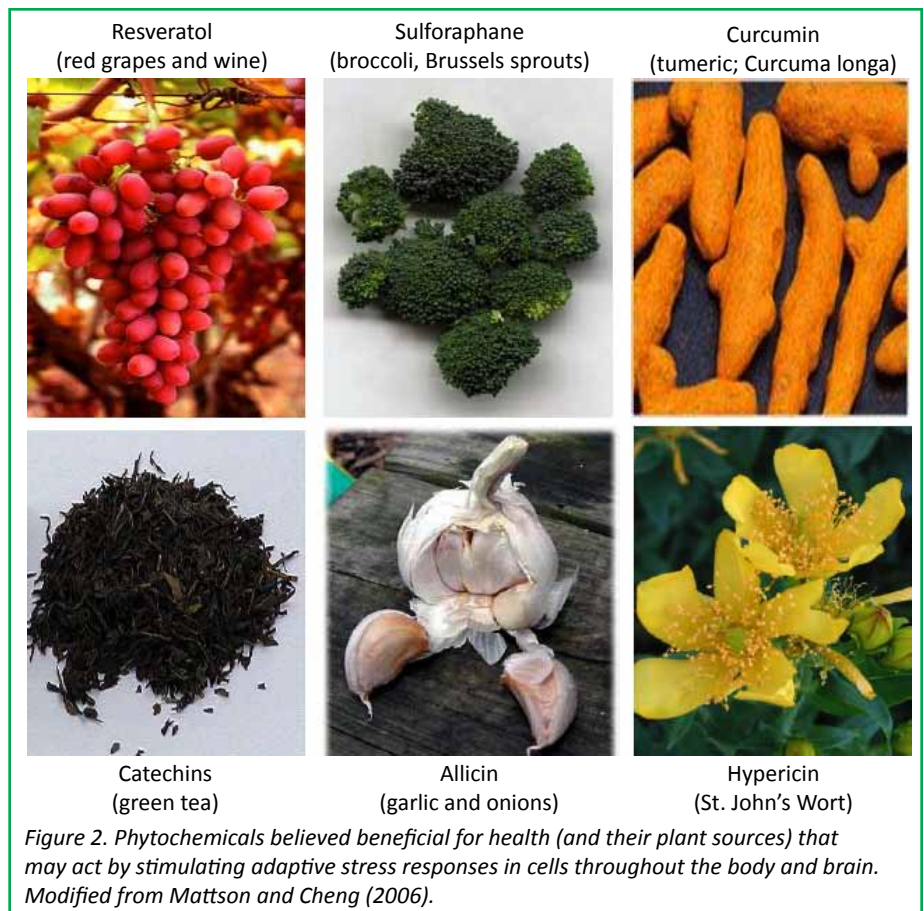


Figure 2. Phytochemicals believed beneficial for health (and their plant sources) that may act by stimulating adaptive stress responses in cells throughout the body and brain. Modified from Mattson and Cheng (2006).

is possible to “overdose” on many different types of plants; for example, apple seeds (cyanide), certain types of mushrooms (phalloidins), etc. As is the case with preclinical drug development, dose-response studies with phytochemicals will be critical to establish the dose range in which hormesis pathways are activated without adverse effects that will likely occur with high doses.

As a prelude to future biomedical research in this interesting area, I have compiled an initial working list of phytochemicals (and their plant sources), from *Ajuga pseudovia* to *Zea mays*, from the lists of phytochemicals in the book entitled “Insect Antifeedants” by Koul (2003), and images of plants from various internet sites. It is my expectation that several of these phytochemicals (and possibly manmade analogs thereof) will be used for health promotion and medicinal purposes in the future. To see my working list of phytochemicals and their plant sources email - mattsonmp@comcast.net.

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\*a pdf of the full text of this article is available upon request from the author (mattsonmp@comcast.net)

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## Proper Watering of Houseplants in the Winter

Ray Bosmans, Professor Emeritus, University of MD

Houseplants often suffer and eventually die during the winter months because of over watering. The early symptoms of over watering are wilting and yellowing. The roots are actually killed by the lack of oxygen in the potting mix caused by water saturation. Tropical houseplants kept in the low light conditions of winter do not need as much water as when growing in bright light. Most houseplant species just barely survive under typical winter light conditions. To prevent over watering always allow the potting mix to dry out between watering. Test the soil 's moisture by sticking your finger into the potting mix. When it is dry, water thoroughly and then do not water again until it is dry once again. Regardless of the type of pot, made sure it has drainage holes in the bottom.

Often to improve the appearance of potted plants, pots are placed inside an ornamental pot or urn. Drainage water that accumulates inside the urn should be poured out.

It's important to not 'over-pot' your plants. A smaller, tighter pot is much less likely to become waterlogged than one that is 'super-sized'. You can experiment a little when developing a watering schedule. You will soon learn how often each plant needs to be watered. The plants will tell you by wilting. Occasional wilting does not do serious harm to a plant. The growing media is also very important; always use a mix that contains peat moss, perlite and/or bark. Don't use soil from the garden for pots. It does not drain very well and can cause prolonged sogginess of the roots as well as introduce insect pests and disease.



Many houseplants can routinely go for extended periods without watering - snake plants, jade plants and other succulents, *Dracaena* species, *Yucca*, *Pothos* and *Schefflera*. Since houseplants are not growing much in the winter you should also withhold fertilization. Fertilizer salts can build up in the pot and burn the roots.

You can still maintain very good growth in winter on small houseplants such as African violets, bromeliads, orchids, etc. by growing them under 'cool white' fluorescent lights. These are found in the typical shop light fixture. Suspend the fixture about six inches above the plants and leave them on for 12 hours each day.

By reducing your watering frequency and using the right type of growing media you can keep your houseplants alive and looking good, even during winter.

# Questions and Answers

by Debra Ricigliano, Certified Professional Horticulturist

**Question:** My house is surrounded by many oak trees. After the recent storms I have noticed some limbs fallen to the ground. On a few of the branches I see a dark brown gummy-like substance. What is this and is it causing the limbs to fall from my trees?

**Answer:** There are a number of Basidiomycetes fungi that are referred to as 'jelly fungi'. This is a type of mushroom and the gelatinous material is the fruiting body. They come in an array of colors, ranging from brown to yellow, orange and red. They grow on wood that is already dead. The limbs on your tree died for other reasons. It is fairly common to see these fungi after a period of cool, wet weather in the spring and fall. As for the health of the trees on your property, it is advisable to contact a certified arborist for an onsite evaluation.



Photo by Joseph O'Brien, USDA Forest Service, Bugwood.org

**Question:** Last summer I called to speak to a horticulture consultant about a problem I was having with my Burford hollies. I noticed that the leaves were turning light green and there was a black coating on them. I was instructed to send digital photos of the leaves, via the HGIC website. The shrubs were then diagnosed with having cottony camellia scale and I was instructed to spray with horticultural oil during the dormant season. I am assuming I should be spraying them now. Can you explain to me what I should be doing to help control this insect?

**Answer:** Cottony camellia scale is a soft scale that feeds on plant sap and produces honeydew. Sooty mold is a fungus that grows on top of the honeydew, turning the foliage black. Treat shrubs only if there was a heavy infestation, the sooty mold was objectionable and there were no beneficial insects present to naturally help control the population. Horticultural oil is recommended. Spraying in the dormant season will help to control the overwintering nymphs that hide on the bark or the undersides of leaves.



There are some caveats regarding spraying with a dormant oil. As the name implies, the plant should be sprayed while it is dormant but temperatures need to remain above 40° F for 24-48 hours to allow the oil to dry sufficiently. In Maryland the time frame for spraying is usually in November or late February into March. Unless we have an unusual warm up it is too cold to spray in December, January or early February. Check the shrubs periodically during the growing season and spray with horticultural oil or insecticidal soap if necessary.

# MONTHLY TIPS FROM HGIC

## DECEMBER

### Lawn

- This is a good time to have your [soil tested](#). It is too late to broadcast lawn seed and fertilizer. Lime can still be applied according to soil test recommendations as long as the ground is not frozen.
- Keep fallen leaves off turf areas. Mow with a mulching mower or ‘mulch’ the leaves by mowing over the lawn several times. These mulched leaves can be left in place if they don’t exceed 1 inch in depth.
- Be careful when using deicing products on sidewalks and driveways to keep them from getting onto the lawn. Most types of deicing products will damage lawns. ([FS 707](#))

### Woody Ornamentals

- Evergreens such as hollies, boxwoods, and pines can also be moderately pruned this month. The trimmings can be used for holiday decorating.
- Mulch should be applied only 2-3 inches deep around ornamental plants and kept away from shrub and tree trunks. Deep mulch makes a favorable habitat for voles. If the mulch is next to woody plant trunks, the voles will feed on and damage bark and wood ([photo](#)).
- Newly planted trees and shrubs need water throughout the winter if it is dry. This is especially important for evergreen plants like rhododendrons and azaleas that become “winter-burned” from a combination of frozen soil and a lack of available moisture in the root zone. ([Read more](#))

### Ornamental Plants

- If you plan on purchasing and then planting a live Christmas tree, you may want to dig the hole ahead of time when the ground is not frozen. For more tips, read [HG 46](#), “Selecting and Caring for a Live Christmas Tree”. If you are purchasing a cut Christmas tree, read [HG 45](#), “Selecting and Caring for a Cut Christmas Tree”.
- For care of Poinsettias, see our publication [HG 30](#).
- If you did not cover your pond to prevent leaves from falling in, spend some time now to remove

those leaves. The decomposing leaves will produce gases that when trapped under the ice will kill fish. Cover the pond with screen after it’s been cleaned.

### Fruit

- Protect fig trees from freezing temperatures with leaves, straw, or tarps. Any exposed wood is vulnerable to winter damage.
- Pick up and discard all dropped fruits and nuts as they often contain damaging insects that will continue their life cycle underneath your trees. Remove all un-harvested fruits hanging from plants, including the fruit stems. Use a mulching mower to shred and pick up leaves from beneath fruit trees.
- Fruit trees can be sprayed after leaf drop with a dormant oil where scales, aphids and mites have been a problem. Spray all wood thoroughly on a windless day when the temperature is expected to remain above 40 degrees F for 24 hours.

### Vegetables and Herbs

- Carrots, parsnips and turnips can be over-wintered by covering the bed with a deep straw or leaf mulch. Harvest these root crops through the winter as needed.
- Keep garden beds covered with shredded leaves to minimize the risk of soil erosion and nutrient run-off.
- Dried herbs should be stored in a cool, dark location away from the stove. Herb plants inside the house should be kept in full, direct sunlight or given 14 hours of fluorescent lighting each day. Keep plants away from drafts and heat registers.

### Soil, Fertilizer, Mulch and Compost

- Bare soil, especially on slopes is prone to erosion and should be covered with mulch, [groundcovers](#) or turf.
- Use sand to improve traction on walkways and magnesium chloride products to melt ice.

### Seasonal and Indoor Plants

- Be careful not to over-water houseplants. Growing media soil should be allowed to dry out between watering.

## JANUARY

- Unless your indoor plants are growing under optimum, high light conditions do not fertilize them during the winter months.
- Keep holiday plants away from dry and/or drafty locations. Increase humidity around plants by placing them on a tray lined with pebbles, shallowly filled with water. Make sure the water does not enter the drainage holes.
- Monitor houseplants for mealy bug, spider mites, aphids, whitefly and thrips. If spider mites are a problem consider spraying with a houseplant insecticide. Periodically rinse off plants with water to keep dust from accumulating and mites from becoming a problem. (HG 60)

### Indoor and Outdoor Pests

- Ticks can remain active as long as daytime temperatures are above freezing. Keep grass and weeds mowed and move bird feeders to the edges of your yard to minimize tick problems. Check yourself and loved ones closely for ticks after hiking or camping.
- Pantry pests, like Indian meal moths, cigarette beetles, and sawtooth grain beetles may be found around windows trying to get out of your home. No chemical controls are recommended for pantry pests. Discard infested products and vacuum and clean the area around the infestation with soapy water. Pests can be swept up or vacuumed. (HG 67)
- Avoid storing pesticides over the winter in sheds and garages. Cold temperatures can cause these materials to become ineffective

### Wildlife

- Leave the flower heads of perennials, like tickseed, purple coneflower and black-eyed Susans, to provide nutritious seeds for birds this winter. Perennials and ornamental grasses can also provide needed cover for over-wintering birds.
- Where voles are a problem try using snap traps baited with apples.
- Store bird seed in metal cans with tight fitting lids to keep squirrels and mice at bay. These critters can chew through plastic lids.



### Lawn

- Even though it is winter you can still do some weed control in your lawn by hand pulling winter annual weeds to keep them from going to seed this spring. Some common annual weeds include chickweed, henbit, and dead nettle.
- Avoid excessive walking on your grass when it is frozen to avoid damaging the crowns of your grass plants.

### Woody Ornamentals

- Remove and destroy bagworm bags ([photo](#)) from affected trees- principally on evergreens. The bags contain hundreds of eggs that will hatch out and feed next spring.
- Protect winter-burn prone evergreens such as boxwoods and hollies from winter winds by surrounding them with burlap or cardboard or constructing small, solid windbreaks located 18 inches from the plant on the windward side.
- Try to prevent snow and ice from building up on gutters and eaves above shrubs. Gently sweep snow loads off of shrubs to prevent breakage.

### Ornamental Plants

- Plant leftover bulbs in the garden as long as the soil can be worked. Follow package instructions for planting depth and spacing. (For more information, [see Home and Garden News, Winter 2010, page 4.](#))
- This is a good time to prune out damaged leaves and inspect winter creeper and Japanese euonymus foliage for scale problems. Scale insects can be controlled with a dormant oil spray. Be sure that temperatures are expected to remain above freezing for a 24 hour period after spraying.

### Fruit

- Fall bearing raspberries can be cut down to the ground and the spent fruiting canes of June bearers can also be removed now.
- Consider covering your strawberry patch with a piece of [floating row cover](#). This material can help prevent winter injury and promote early growth in the spring.

### Vegetables and Herbs

- Plan for spring seeding now. Check the germination rate of old, questionable seed by placing 20 seeds between moistened paper towels, roll up the

towel and place it in a plastic bag. Put the bag on top of the refrigerator or other warm location and check after 5-7 days to see what percentage has germinated. Discard seed lots with less than 75% germination.

### Seasonal and Indoor

- Did you receive an amaryllis for the holidays? Keep it in a bright sunny window. Move the plant outdoors after danger of frost has passed. The leaves will remain through much of the summer and then will die off. At that time the bulb will go through a rest period and may be brought back inside by early fall. (For more information, [see Home and Garden News, Winter 2010, page 7.](#))
- Fungus gnats are very small, harmless, black flies that hover around the growing media of house plants. They breed in and feed on moist media and can be controlled by allowing the media to dry out between watering. ([Read more](#))

### Soil, Fertilizer, Mulch and Compost

- Keep all ice melting materials away from landscape plants. Do not attempt to melt ice with granular garden fertilizers. They are very corrosive to concrete and metal, and contribute to waterway pollution. Look for deicing materials containing magnesium chloride. Other formulas containing sodium chloride, potassium chloride and calcium chloride are also suitable but can be corrosive and burn plants if not applied correctly. ([FS 707](#))
- If you have not mulched your garden, apply mulch now to perennial beds, trees and shrubs with fallen leaves. This will help to protect plant crowns and shallow root systems from severe cold weather. Typically our coldest weather is yet to come in February so there is still time to help your plants with mulch.

### Indoor and Outdoor Pests

- Don't store firewood inside your home. Only bring in enough to burn at one time. Bark and other wood boring beetles, ants and spiders may emerge inside the home.
- Occasionally in January and February cluster flies, which resemble large houseflies, appear around windows or lit lamps. They occupy attics or wall voids and become active on warm, sunny days. They are sluggish flyers and unlike the house fly they do not eat garbage. Using a fly swatter is all that is needed. Next fall prevent their entry by sealing up

all small holes and cracks around the outside of your home. ([HG 26](#))

### Wildlife

- As food becomes scarce during cold weather, skunks, fox, coyotes, opossum, raccoons and other wildlife will come closer to homes. Remove food sources like pet food and keep trash can lids tightly secured.
- Keep bird feeders and baths cleaned and replenished throughout the winter months.
- Where deer are feeding on garden and landscape plants, apply a repellent, such as "Deer-Away", "Hinder" or "Ro-Pel" to vulnerable plants. If deer pressure is heavy, try rotating repellents. Small deodorant soap bars and other types of repellents are used with some success. ([EB 354](#))

## FEBRUARY

### Lawns

- Late February through the end of March is the second best time (the optimum time is late August through mid October) to over-seed your lawn to make it thicker or to cover bare areas. The freezing and thawing of the soil this time of the year helps the seed to get good soil contact. ([HG 102](#))

### Woody Ornamentals

- Trees and shrubs can still be pruned now. See [HG 84](#) and [videos](#). You may notice excessive sap bleeding from pruning cuts on elm, maple, birch, dogwood, beech, walnut, magnolia, tulip poplar and redbud. This bleeding is harmless to the tree.
- Hemlocks infested with the woolly adelgid can be sprayed with dormant oil anytime between now and March 1. Make sure that temperatures are expected to remain above 40 degrees for the 24 hour period after spraying.
- Most winter burn occurs in February. Winter burn (desiccation) results from a combination of harsh wind or bright late winter sun and a frozen soil. Consider spraying an anti-desiccant material on vulnerable shrubs (hollies, boxwood, nandina and other broadleaf evergreens) to reduce damage. These materials coat the foliage, preventing moisture loss. Anti-desiccants should only be applied when temperatures are above freezing for 24 hours.

## Herbaceous Ornamental Plants

- Avoid the temptation to start seeds too early. Check seed packets for detailed information on starting various types of flowers.
- Spring bulbs are slowly emerging this month. Exposed leaves may be burned a little by very cold temperatures, but the spring flower display will not be diminished.

## Fruit

- If you've had problems with aphids, mites and scale insects, spray trees thoroughly with a dormant oil spray before bud break, making sure that temperatures are expected to remain above 40 degrees F. for the 24 hour period after spraying. Follow label directions.
- Spray liquid lime sulfur on raspberry, blackberry, and blueberry plants prior to bud swell to prevent cane diseases. To help prevent leaf curl disease, apply to peach trees when buds begin to swell but before green tissue is visible. Apply to plum trees at bud swell to prevent plum pockets disease. Never spray dormant oil within 10 days of using a sulfur-containing spray.
- Fire blight damage on apples and pears should be pruned out now. This will lessen the chance of spreading this bacterial infection in the spring. Bordeaux mix can be applied to apple and pear trees prior to bud swell to reduce the incidence of fire blight.

## Vegetables and Herbs

- If starting seeds indoors, set up florescent grow lights, and gather needed materials: pots, trays, soil less mix. ([instructions and videos](#))
- Consider purchasing some floating row cover material to protect crops against insects and promote early growth. A floating row cover is a light weight spun fabric that permits light and water to enter, traps the soils natural heat and keep out pest insects. ([GE 004](#))
- Fresh tarragon, rosemary, and mint sprigs can be purchased in food markets and rooted indoors in a soil less mix to be grown under cool white fluorescent bulbs. The new plants can be set outdoors in pots or garden beds in May.

## Seasonal and Indoor Plants

- You may notice leaf yellowing and leaf drop on some of your houseplants. This is usually a result of low light conditions or over-watering. Most houseplants

should be watered only when the top of the growing medium begins to dry out. ([See page 14](#))

- Control mealy bugs, which appear as white fluffy masses on infested plants ([photo](#)), by swabbing them with rubbing alcohol or taking plants outside and spraying with a labeled horticultural oil. However, don't do this on a very cold day, or your plants will be damaged.
- Raising humidity levels around plants and reducing dust levels can control spider mites. Repeated washing of the leaves with water will help in reducing a spider mite problem.

## Indoor and Outdoor Plants

- Often in late February termite reproductives start swarming. A swarm seen indoors could mean that a colony is directly under the house and feeding on its lumber. ([EB 245](#))
- By this time in the winter ants may start appearing in the house. The largest is the carpenter ant which is attracted to water soaked wood found in bathrooms, kitchens and sometime attics. The smallest and most common household ant is the small black pavement ant. In most cases bait stations work well to control minor infestations. ([HG 7](#))
- Fruit flies can be a problem when fruits and vegetables are allowed to sit for long periods on kitchen counters. Use up your produce quickly and the flies will gradually die off.
- Many hibernating insects wake up during spells of mild weather in February. Elm leaf beetle, leaf-footed bugs, Asian ladybird beetles, boxelder bugs, cluster flies, stink bugs and other species may appear both outdoors and indoors in large numbers. Although a nuisance indoors they are all harmless and can be vacuumed or swept up. Prevent the entry of these invaders by sealing up all small holes and cracks around the outside of your home. No chemical controls are recommended.

## Wildlife

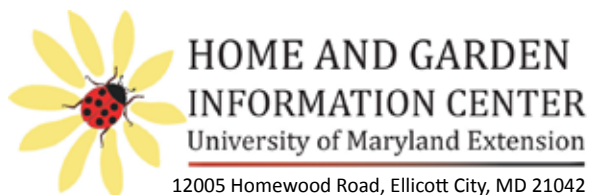
- The USDA, APHIS, Wildlife Services program has a cooperative agreement with the Maryland Department of Natural Resources, Wildlife and Heritage Division, to provide the residents of Maryland with information on how to deal with nuisance wild animals. Call 877-463-6497 for more information.
- This is the mating season for foxes. Late at night they make a noise that sounds like a person screaming.

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