

# Plant Wise

IOWA STATE UNIVERSITY  
University Extension

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## Emerald Ash Borer Discovered in Wisconsin: Is Iowa Next?

By Donald R. Lewis  
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In early April the emerald ash borer was discovered near Victory, Wis., just across the Mississippi River from the Iowa-Minnesota border. The emerald ash borer (EAB) is a small, invasive beetle that has destroyed tens of millions of ash trees in states to the east. With the discovery of an EAB infestation within sight of Iowa there is a great deal of concern about what this means for ash trees in Iowa.

First, to emphasize the positive, EAB infestations have NOT been found in Iowa. Ongoing surveys by regulatory agencies have not been able to find any infestations. This includes tree inspections along the Mississippi River in Allamakee County across the river from Victory, Wis., as recently as April 2009.

EAB was first discovered in North America in 2002 near Detroit, Mich., after being accidentally introduced in wooden cargo crates apparently from Asia. Researchers have determined, though, that the beetle had resided there for 10 or more years before it was finally discovered. Other infestations have been found in Windsor, Ontario, Ohio, northern Indiana, northern Illinois, Maryland, western Pennsylvania, West Virginia, Wisconsin, Missouri and Virginia. Authorities conclude that most of the spread has been done by people transporting firewood, logs, lumber and nursery stock.

EAB destroys the ash tree by cutting the plumbing of the tree. Larvae burrow in the tree just under the bark and eat the active transport tissues, effectively girdling the tree. Infested ash trees usually die within two to four years of initial attack.

Dying ash trees attacked by EAB produce a distinct but not foolproof series of symptoms. At first the branches in the top of the tree will die, followed by shoots growing from the trunk and major branches. Adult beetles create one-eighth inch, D-shaped exit holes in the bark where they emerge from the tree. The bark of attacked trees comes loose, revealing winding, S-shaped tunnels on the surface of the wood. Again, these signs are useful diagnostic tools but they are not foolproof as other pests and maladies cause these same symptoms.

For the past several years Iowa State University Extension has been watching and learning from the experiences of infested states and offering updates and trainings about this serious pest to the public, tree care companies and arborists. All along we have been braced for the eventuality that EAB would find its way into the state. As our counterparts in other states have said, it's not IF the emerald ash borer invades your state, it's WHEN.

The impact of EAB has been devastating in other states and will be here as well. The cost of removing and replacing destroyed trees will be financially taxing, and the loss will cause a severe environmental impact as well. There are an estimated 88 million ash trees in Iowa, many of them in cities and neighborhoods. Loss of these ash trees may very well increase heating, cooling and watering costs for residential areas. Iowa estimates the cost from EAB will exceed \$7.5 billion to remove dead trees and another \$5 billion to replant.

ISU Extension has been working on control recommendations to help home owners and landowners decide if and how to attempt treatment that may protect valuable ash trees from this pest. I should emphasize that insecticide treatments for ash trees are NOT recommended in Iowa at this time.

When the EAB is near you (a relative term but currently interpreted as a confirmed infestation within 15 miles of your property) it will be time to decide which ash trees are going to be treated with insecticide in an attempt to prevent attack.

Treating is not 100 percent effective and even treated trees will be removed if your tree is in a regulated area.

In addition to ongoing general education to the public about EAB, ISU Extension will continue to provide updates on the distribution and management options for this new pest as information becomes available from the partnering agencies (the Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, USDA-APHIS and USDA Forest Service).

We also are beginning a series of specialized trainings in southeast Minnesota and northeast Iowa in cooperation with the University of Minnesota and University of Wisconsin and their corresponding state agencies. The special program is called "First Detector Training," a type of first responder program authorized and funded by the National Plant Diagnostic Network for dealing with invasive species. People trained as "First Detectors" will have special responsibilities in the effort to identify EAB activity as distinctive from other causes of tree decline and death.

Officials are continuing to develop response plans for the "three corners" area where EAB has been found. The first step will be to quarantine movement of hardwood firewood, ash nursery stock, ash timber or any other article that could spread EAB out of the infested area in Wisconsin. Minnesota has announced a state emergency quarantine of Houston County, across the river from the infestation, even though they have not yet confirmed an EAB infestation in the state.

The most important action for Iowans right now is to not bring firewood in from out of state. Also stay informed. ISU Extension along with other state and federal agencies has assembled information on many websites where you can learn more about the EAB distribution, infestation symptoms and control measures. A good place to start is with the national emerald ash borer website. [www.emeraldashborer.info](http://www.emeraldashborer.info). And as always, please contact your local county extension office for more information.

*When weeding, the best way to make sure you are removing a weed and not a valuable plant is to pull on it. If it comes out of the ground easily, it is a valuable plant.*

~Author Unknown

## Plan for Healthy Perennials

By Mark Gleason  
Plant Pathologist  
Iowa State University Extension



After a punishing winter, Iowans are eager to see blooming perennials this spring and summer. We're overdue for a colorful 2009 gardening season.

The one color we're not planning for is brown, since we've had more than enough of that one for the past six months. But diseases can intrude on these plans. How can we banish brown from herbaceous perennial gardens this year? Following a few simple practices will help.

The first principle is spring cleaning. Clearing your perennial beds of last year's leftovers -- leaves, stems, and flowers -- makes a neater look, but also discourages fungi that lurk in the dead material. By plucking out the debris, you are removing sources of new infections in 2009.

This sanitation strategy is especially helpful for diseases that attack the leaves, such as peony leaf blight and iris leaf spot. It also can pay off in controlling some nasty insect pests, such as iris borer. This bad boy drills holes from iris leaves down to the corms, and a soft rot bacterium follows behind. The result is smelly, slimy, dead plants. Removing last year's leaves from iris beds can stop this ugly scenario in its tracks, but you'll need to act now.

Now that you have bags or baskets full of last year's garden plants, what should you do with all that stuff? If you have a compost pile that is active enough to cook the fungi to death, composting is a wonderfully "green" strategy. But if your compost pile is a more typical one -- really just a debris pile that doesn't generate much heat -- it may be better to burn, bury or dispose of the leftovers.

Beyond sanitation, it's important to look before you buy. If plants at a big box store or garden center have suspicious brown spots (could be a fungal or bacterial disease), mottled or crinkled leaves (could be virus), or yellowing (could be a root rot), it's best to pass them by. Saving a few cents at a plant clearance sale may backfire if you import stubborn, hard-to-eradicate problems into your garden.

While we're on the subject of prudent purchasing, it makes good sense to buy disease-resistant plants. Some species and varieties have the ability to fend off diseases, or at least to tolerate them and keep looking attractive. It will take a bit of homework on your part, but resistant plants are worth searching for, since resistance

is usually the most cost-effective way to combat diseases.

The most common mistake of new gardeners is to crowd plants too closely. If the label in the pot says to plant 18 inches apart, 12 inches apart is not a better idea -- even if the spacing initially looks ample. Crowded plants compete for resources and die off slowly, encouraging many diseases.

Another useful tip concerns how to water. Plants take in water through their roots, so it makes sense to supply at ground level. Drip irrigation hoses in a garden will help to keep the foliage dry and thereby discourage diseases. But the biggest payoff is environmental, since drip irrigation conserves water during high-demand periods of the summer. The main trick with drip hoses is to get them in place in your perennial beds during the spring, before you have to fight your way through thickets of vegetation.

There are so many types of herbaceous perennials that it's hard to keep them straight, let alone fight off their diseases. A brand-new book can help: it's called *Diseases of Herbaceous Perennials*. The first one-stop reference on the subject for backyard gardeners and professional landscapers, it has 296 pages and more than 700 color images. The book helps you to recognize and prevent the most important diseases of practically all types of herbaceous perennials. It's available for \$79 at [www.apsnet.org](http://www.apsnet.org) under APS Press or the book's icon on the homepage

## Upcoming Horticulture Events of Interest:

### **Introduction to Home Canning Seminar**

Monday June 1, 7:00 PM – 8:30 PM

Location: Glenwood Resource Center,  
2<sup>nd</sup> Floor Conference Room

Visit [www.extension.iastate.edu/mills](http://www.extension.iastate.edu/mills) or call  
(712) 624-8616 for more information

(See page 6 for details on this seminar)

### **Loess Hills Prairie Seminar**

Friday, May 29 and Saturday, May 30

Location: West Monona High School, Onawa and  
Loess Hills Wildlife Management Area, near Onawa

Visit [www.nwaea.k12.ia.us/en/upcoming\\_events/loess\\_hills\\_seminar/](http://www.nwaea.k12.ia.us/en/upcoming_events/loess_hills_seminar/)

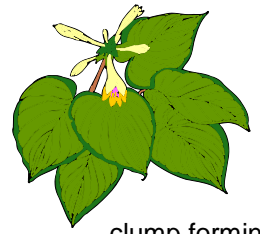
### **Mills County Master Gardener Plant/Bake Sale**

Saturday, May 9, 9:00 AM – 12:00 PM

Location: Glenwood State Bank parking lot  
Call (712) 624-8616 for more information.

## Hosta – the Ultimate Shade Plant

By Shirley Miller  
Master Gardener Intern  
Mills County



Ever had that problem spot in your yard that is just too shady to grow anything? Try Hosta plants! (Plantain Lily) They are clump forming perennials that love the shade. With over 2000 cultivars to choose from, their decorative foliage and summer blooms make an attractive addition to any yard.

Hosta cultivars come in all sizes, from “Thumb Nail”, which makes a clump of 4” X 1 1/2”, to the majestic “Sum and Substance” with a mature clump size of 60 X 36 inches. The foliage colors range from light to dark green, blue, gold or variegated with colors of white, gold, or green. Their textures can be smooth, shiny, seer-suckered, leathery, dull or waxy appearing. Leaf shapes vary from long and narrow, nearly round, or heart shaped. There is a cultivar for every preference of color, shape or size!

The first step in making a Hosta bed is to determine the location. Since Hosta plants do best in full to partial shade (2 to no more than 4 hours of sun) the shady side of your house, garage or the area in your yard that stays in the shade for the greatest part of the day, would be best. If there is not enough sunlight for your turf grass to grow, this would possibly be a good place to try Hostas.

Keep in mind the terrain. The soil should be fertile, moist and well drained. Some protection from the wind would be good. This could save some of the more tender and larger cultivars from having their foliage broken or torn by the wind. After you have picked out your spot, remember before you dig, call – IOWA ONE CALL (800-292-8989). Some utility lines are only a few inches below the surface of the soil.

Now you are ready for plants! Care should be taken to pick out the right size Hosta for your area, keeping in mind the mature plant size. Most catalogs and plant tags list this information. Pick Hostas that compliment one another in groupings. Set your plants, still in their pots, on the prepared bed and begin to arrange them. Place the larger maturing plants in the back or center of the bed with the smaller maturing ones near the fronts or borders. This way all the plants can be viewed to their best advantage. Don't overcrowd your bed! Follow recommended plant spacing listed on the tag. Your bed might look great when first planted, but in 3 or 4 years when the Hostas reach their mature size, it might look over-crowded, with clumps pushing into one another. This is probably the most overlooked detail when planting Hostas.

Now you are ready to dig. Place the plant so the crown is at ground level. The plants will benefit from a nice layer of mulch. It will help to keep the ground moist and add beauty to the bed.

Most Hostas bloom anywhere from mid June to early August. Flowers range in color from white to shades of lavender and violet, depending on the cultivar. When the Hostas are done blooming, the bloom stalks can easily be snipped off, to show off the beauty of the foliage and to give your bed that well-groomed look. Other shade loving perennials and annuals can be added for color all summer long.

Hostas are easy to grow and manage. They can be left for years without the need to be divided. But if you desire plants for another location or wish to share with friends, you can divide them. The best time for division is spring or late summer/early fall. Dig the clump up and pull the plants apart or use a spade to cut the clump into smaller sections. Whether or not to divide Hostas can simply be a matter of personal preference.

Enjoy your Hostas to the fullest. Work them into your garden schemes. With proper care and handling, they will give you years of enjoyment!

## Ask the ISU Extension Gardening Expert

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### What is meant by the term hardening?

Flower and vegetable plants purchased from greenhouses or garden centers should not be planted directly into the garden. The intense sun and strong winds may damage or kill the tender seedlings. Bedding plants should be "hardened" (acclimated to outdoor growing conditions) before transplanting them into the garden. Initially place the plants in a shady, protected site. Then gradually expose the plants to longer periods of direct sun.

Closely watch the plants during this period. If possible, check on them at least once or twice a day. Thoroughly water the seedlings when the soil surface becomes dry to the touch. Move the plants indoors if strong winds, a severe storm or an overnight frost threatens them. After several days of hardening, the flower and vegetable plants should be ready for planting.

### Can newspapers be used as a mulch in the vegetable garden?

Yes, shredded newspapers or whole sheets may be used as a mulch in the vegetable garden. Newspapers use organic inks so gardeners need not worry about lead contamination. When using newspaper sheets, place a layer of two to four sheets between plant rows in the

garden. Water the sheets so they stick to one another and to the soil surface, then place a layer of dry grass clippings, shredded leaves or straw over the newspaper.

### Several new shoots on my crabapple have turned brown and wilted. What is the problem?

Fire blight probably is responsible for the wilted shoots on your crabapple. Fire blight is caused by the bacterium *Erwinia amylovora*. Plants susceptible to fire blight include apple, crabapple, pear, hawthorn and cotoneaster.

Symptoms of fire blight appear in spring within a few weeks of bloom. Succulent, new shoots turn dark brown to black and wilt. The wilted shoots somewhat resemble the top of a shepherd's crook or candy cane. Small droplets of amber-colored bacterial ooze can often be seen on blighted shoots when the weather is warm and humid. Under favorable environmental conditions, shoot infections may continue to move down the branches and kill large portions of the tree.

The best way to avoid fire blight is to select crabapple, apple and pear varieties that are resistant to the disease. Also, avoid heavy pruning and fertilization that promote excessive shoot growth. Succulent, rapidly growing shoots are more susceptible to fire blight infections.

In spring and early summer, periodically inspect susceptible plants for symptoms of fire blight. Promptly remove infected shoots. Several precautions should be exercised when pruning in spring and summer. Never prune during wet weather. Make pruning cuts eight to 12 inches below diseased areas. Finally, disinfect pruning tools in a 10 percent bleach solution (one part household bleach to nine parts water) or 70 percent alcohol after each cut to prevent spreading the disease.

### My daffodils produce foliage in spring, but no longer bloom. Why?

If the daffodils aren't blooming, the plants weren't able to store enough food in the bulbs in the previous year. Daffodil foliage typically doesn't die back until four to six weeks after blooming. During this four to six-week period, the daffodil foliage is manufacturing food. Much of the food is transported down to the bulbs. In order to bloom, daffodils must store adequate levels of food in their bulbs.

Cutting off the foliage before it has died back naturally may prevent the plants from storing adequate food in the bulbs. Allow the daffodil foliage to die completely before removing it. Plants in partial shade in May and June may not be able to store enough food in the bulbs because of insufficient sunlight. Dig up daffodils growing in partial shade when the foliage has died back and plant the bulbs in a site that receives partial to full sun. If given good care and favorable growing conditions, weak daffodils can be encouraged to flower again.

# MAY GARDENING TO DO LIST



- After May 10, plant your tender perennials such as caladiums, cannas, crocosima, gladiolas, dahlias, and tuberous begonias.
- Plant tomatoes, peppers, cucumbers, eggplant, pumpkins, squash, and melons after May 10. Be ready to protect your seedlings if frost threatens.
- Move or remove unwanted perennial seedlings. Coneflowers, black-eyed susans, and other perennials that self-seed may provide more offspring than needed. Dig and share with friends or donate plants to nearby schools or community beautification projects.
- Harden off young plants to help them adjust to sun, wind, and variable temperatures. Several days before planting, cut back on water, move transplants outdoors to a protected location, and leave them out for a couple of hours. Each day, leave them out for a longer time. Bring them back in if frost is predicted.
- Don't remove foliage from tulips and other spring-flowering bulbs until the leaves turn completely brown. The leaves are creating food resources and translocating them to the bulbs for next year's flowers.
- Take a soil test if you have not done so or it has been 3 or more years. The Extension office has soil bags and instruction sheets. Current fee for the testing service is \$8.00 per sample. A soil test will tell you how much and what type of fertilizer you need.
- Prune spring-flowering shrubs such as lilac and forsythia, immediately after blooming.
- Remove blossoms from newly planted June-bearing strawberry plants to allow for better runner formation.
- Scout for eastern tent caterpillar on apple, crabapple, and wild plum to find tents and remove them in the evening when the caterpillars are present.
- Start a compost pile.

## PLANTS FOR SALE!

It's Time for the Annual  
**Mills County Master Gardeners  
Plant & Bake Sale!**

**Saturday, May 9**  
In the parking lot west of  
Glenwood State Bank  
**9:00 AM – Noon**



High quality, low cost plants including annuals, perennials, houseplants, vegetables, ornamental grasses and more!

\*Purchase raffle tickets for a beautiful quilt!

\*Bake sale items available just in time for all your Mother's Day company!

\*Master Gardeners on hand to answer all of your gardening questions!

**All proceeds applied to future Master Gardener horticulture programming in Mills County**

*Extension programs are available to all without regard to race, color, national origin, religion, sex, or disability.*

### Resources for Horticulture information

ISU's Hortline at (515) 294-3108

(Monday-Friday, 10 a.m.-noon, 1-4:30 p.m)

ISU/Mills County Extension: 712-624-8616

[www.extension.iastate.edu/mills/yardgarden.htm](http://www.extension.iastate.edu/mills/yardgarden.htm)

### **Iowa State University Publications**

PM 1788	Growing Fruit in Iowa (\$3.00)
PM 683	Composting Yard Waste (free)
RG 206	Questions About Composting (free)
SUL 1	Hosta Diseases and Pests (\$1.50)
PM 0819	Planting a Home Vegetable Garden (\$.50)
PM 534	Planting & Harvesting Times for Garden Vegetables (Free)
RG 323	Cannas for Home Landscapes (free)

### Horticulture Publications on-line

<https://www.extension.iastate.edu/store/ListCategories>

