

Plant Wise

IOWA STATE UNIVERSITY
Extension and Outreach

Mills County Extension
415 Main St., Suite 2, P.O. Box 430
Malvern, IA 51551
712-624-8616
<http://www.extension.iastate.edu/mills>

Prepared by Nancy Crews, Mills County Horticulture Assistant

September 2014

EMERALD ASH BORER CONFIRMED IN STORY COUNTY

DES MOINES – August 25, 2014. Iowa now has thirteen infested counties after beetles found in Story City

Two Emerald Ash Borer (EAB) larvae collected by a homeowner from a residential tree in Story City and have been positively identified as EAB by a federal identifier. Story County is the thirteenth confirmed infestation in the state.



A statewide quarantine restricting the movement of hardwood firewood, ash logs, wood chips and ash tree nursery stock out of Iowa into non-quarantined areas of other states was issued on Feb. 4, 2014 and remains in place.

"We continue to monitor EAB closely and the Story City infestation is the 9th confirmed infestation in Iowa during 2014. The Iowa EAB Team again reminds Iowans to not move firewood as that is the quickest way to start an infestation in a new location," said State Entomologist Robin Pruisner of the Iowa Department of Agriculture and Land Stewardship.

The City of Story City has inventoried the street trees in the community and working with the Story City Tree Board will continue to monitor, assess, and address ash trees. Story City will have information available for private property owners at www.cityofstorycity.org after September 1st.



The Iowa EAB Team provides EAB diagnostic assistance to landowners and includes officials from Iowa Department of Agriculture and Land Stewardship (IDALS), Iowa State University Extension and Outreach, the Iowa Department of Natural Resources (DNR), USDA Animal Plant Health Inspection Service and the USDA Forest Service.

The Iowa EAB Team strongly cautions Iowans not to transport firewood across county or state lines, since the movement of firewood throughout Iowa or to other states increases the risk of spreading EAB infestations. Most EAB infestations in the United States have been started by people unknowingly transporting infested firewood, nursery plants or sawmill logs. Besides being transported by vehicle, the adult beetle can also fly short distances of approximately two to five miles.

With the exception of trunk injection, the window has closed for using other preventive methods against emerald ash borer this year. Trunk injections can be done by certified pesticide applicators until September 1, 2014. Other control measures (soil injection, soil drench, and basal trunk sprays) will need to wait until mid-April to mid-May 2015. This gives people the opportunity to have landscape and tree service companies to bid on work, and for the landowner to review these bids before next spring.

Please contact Iowa EAB Team members to have suspicious looking trees checked in counties not currently known to be infested. The State of Iowa will continue to track the movement of EAB on a county-by-county basis. Before a county can be officially recognized as infested, proof of a reproducing population is needed and an EAB must be collected and verified by USDA entomologists.

To learn more about EAB and other pests that are threatening Iowa's tree population, please visit www.IowaTreePests.com. Please contact any of the

following members of the Iowa EAB Team for further information:

- Robin Pruisner, IDALS State Entomologist, 515-725-1470, Robin.Pruisner@iowaAgriculture.gov
- Paul Tauke, DNR State Forester, 515-242-6898, Paul.Tauke@dnr.iowa.gov
- Tivon Feeley, DNR Forest Health Coordinator, 515-281-4915, Tivon.feeley@dnr.iowa.gov
- Emma Hanigan, DNR Urban Forest Coordinator, 515-281-5600, emma.hanigan@dnr.iowa.gov
- Mike Kintner, IDALS, 515-725-1470, Mike.Kintner@iowaAgriculture.gov
- Jesse Randall, ISU Extension Forester, 515-294-1168, Randallj@iastate.edu
- Mark Shour, ISU Extension Entomologist, 515-294-5963, mshour@iastate.edu
- Laura Jesse, ISU Extension Entomologist, ISU Plant and Insect Diagnostic Clinic, 515-294-0581, ljesse@iastate.edu
- Donald Lewis, ISU Extension Entomologist, 515-294-1101, drlewis@iastate.edu
- Jeff Iles, ISU Extension Horticulturist, 515-294-3718, iles@iastate.edu
- John Moran, Story City Parks & Recreation Superintendent, 515-733-2121

September Plant - Prairie Gentian

By Nicole Stoner
University of NE, Lincoln
Extension

In fall, we usually find browns, reds, oranges, and yellows in the landscape. It is nice to find a plant for fall flowering that is actually purple or blue rather than the traditional hues common to September and October. The Prairie Gentian is one of those.



Prairie Gentian, *Gentiana puberulenta*, may be called Downy Gentian. This perennial plant grows 1 to 1 ½ feet tall. The leaves are smooth, pointed, and opposite, about 2 inches long and about 1 inch wide. The flowers are about 1½ inches across and are held in a cluster at the top of the plant. The tube-shaped flowers are typically purple or blue with 5 petals each. These flowers are found in the late summer to fall or August through October. This plant is usually one of the later flowering plants in a prairie setting and will usually withstand some of the earlier hard frosts in that area.

Prairie Gentian, as the name implies, is most commonly found throughout prairies and other dry locations. This plant does best in very dry soils. In fact, according to

Michigan State University Extension, “this species likely requires natural disturbances associated with prairie habitat such as prescribed fire or brush removal to prevent woody plant succession.” Because this plant prefers disturbed areas and since we have led our management practices to do less burning as it is a hazard to structures, people, and wildlife, Prairie Gentian is listed as a ‘Threatened’ or ‘Endangered’ plant in Indiana, Kentucky, Maryland, Michigan, Ohio, and Tennessee. It can be found for purchase through seed catalogs or online by searching “purchasing Downy Gentian.”

Not only is Prairie Gentian a blue flower in the fall amongst all of the other browns, yellows, and oranges, but it is also a good pollinator plant. This benefits bee colonies that need to build their pollen resources in preparation for winter. The Gentian Research Network with Rutgers University has said that the roots and leaves of some species of Gentian, mainly Yellow Gentian, can be used for digestive health, snakebites and other poison antidote, wound washing, improvement of appetite, and intestinal worms. This is not the case with the Prairie Gentian that we may find in our Nebraska landscapes.

Prairie Gentian is a wonderful perennial plant for prairies and neglected sites. It adds a splash of blue or purple to an otherwise fall colored environment. It is endangered and threatened in some areas of the U.S. so we should do what we can to help it flourish in Nebraska. Are you looking for a new plant to add more color to your prairie? Consider the Prairie or Downy Gentian.

Making the Most of Your Apple Harvesting Experience

By Richard Jauron, Greg Wallace
Department of Horticulture
Iowa State University

As the weather cools and summer gives way to fall, a favorite fall pastime emerges: apple harvesting. Fall is the perfect time to harvest and enjoy apples. Here are some tips from Iowa State University Extension and Outreach horticulturists on the best way to enjoy apples this fall. To have additional questions answered, contact the ISU Hortline at 515-294-3108 or hortline@iastate.edu.



When should I harvest apples?

The harvest period for apples varies from one cultivar to another. For example, Jonathan apples are normally harvested in mid-September. The harvest season for

Red Delicious apples is normally late September. However, the harvest time may vary by one or more weeks from year to year due to weather conditions during the growing season. Gardeners should base the harvest time on the maturity of the apples rather than a calendar date. Good indicators of apple maturity are taste, texture and color.

Mature apples are firm, crisp, juicy and well-colored, and have developed the characteristic flavor of the cultivar. Color alone is not a reliable indicator of maturity. Red Delicious apples, for example, often turn red before the fruit is mature. Fruit harvested too early are astringent, sour, starchy and poorly flavored. Apples harvested too late are soft and mushy.

When harvesting apples, pick and handle the fruit carefully to prevent unnecessary damage. Sort through the apples during harvest. Remove and promptly use bruised or cut apples. Also, remove apples that exhibit insect and disease problems. Separate the apples by size. Use the largest apples first as they don't store as well as the smaller fruit.

What are the proper storage conditions for apples?

Temperature and relative humidity during storage are critical for maximum storage life. Optimum storage conditions for apples are a temperature near 32 degrees Fahrenheit and a relative humidity between 90 and 95 percent. Apple cultivars, such as Red Delicious, stored under optimum conditions may be stored up to three to five months. Apples stored at 50 F will spoil two to three times faster than those stored at 32 F. If the humidity during storage is low, apples will dehydrate and shrivel.

Small quantities of apples may be placed in perforated plastic bags and stored in the refrigerator. Perforated plastic bags maintain a high relative humidity, while they prevent the accumulation of excess moisture inside the bags.

Large quantities of apples can be stored in a second refrigerator, cellar, unheated outbuilding or garage. Place the apples in perforated plastic bags or plastic-lined boxes/crates. Apples should be moved from unheated outbuildings and garages prior to extremely cold weather as storage temperatures will likely drop well below freezing. Apples will freeze when temperatures drop below 30 F. Frozen apples deteriorate rapidly once thawed.

What are the black blotches or spots on my apples?

The problem is likely sooty blotch and flyspeck. Sooty blotch and flyspeck is a fungal complex that colonizes the waxy cuticle of the apple. Sooty blotch appears as dark brown to black, 1/2 inch or larger smudges on the surface of the apple. Flyspeck produces clusters of

shiny, round, black dots. Individual dots are about the size of a pinhead. Environmental conditions that favor sooty blotch/flyspeck development are moderate temperatures and extended wet periods in late summer/early fall.

Sooty blotch and flyspeck live on the surface of the apple. Damage is mainly cosmetic. The apples are safe to eat. They're just not very attractive. Sooty blotch and flyspeck can be removed with vigorous rubbing.

Cultural practices and fungicides can help control sooty blotch and flyspeck. Proper pruning of apples trees and thinning of fruit promote drying and reduce the severity of sooty blotch and flyspeck. Fungicides also may be necessary.

September Animal - Armadillo

By Dennis Ferraro
University of NE, Lincoln Extension

The nine-banded armadillo (*Dasypus novemcinctus*) is the most wide spread of all armadillos and is moving northward into Nebraska. In the summer of 2014, at least eight armadillos were recorded in Nebraska. One was found near Lincoln in Lancaster County, and two were found as far north as Ord and Norfolk, Nebraska.



Considered a small to mid-size mammal, armadillos resemble turtles yet are a true mammal. The armadillo is covered by a thick leathery armor formed by bony skin scales like the horns of cattle and Bison. An armadillo has an average length of 24 -32 inches with the tail, and hairy paws with very long claws. A larger armadillo can weigh up to 15 lbs. Armadillos inhabit a wide range of ecosystems and adapt well. They seem to prefer areas of open landscape with looser soils. They need warmer, moist climates; therefore with climate change, cultivated soils, and irrigation, Nebraska may become a great home for these animals.

Armadillos move and feed at night or very early in the dawn of the day. They are insectivores, feeding on ants, termites, grubs, and other soil insects. Their long sharp claws allow them to be prolific diggers. They can easily dig for food or make a protective burrow. Predators include the coyotes, bobcats, mountain lions, and even large raptors. Automobiles are the biggest cause of mortality today.

Most armadillo damage occurs as a result of their rooting in lawns, golf courses, vegetable gardens, and flower beds. Characteristic signs of armadillo activity are shallow holes 1 to 3 inches deep and 3 to 5 inches wide, which are dug in search of food. They also uproot flowers and other ornamental plants. Some damage has been caused by their burrowing under foundations, driveways, and other structures. Some people complain that armadillos keep them awake at night by rubbing their shells against their houses or other structures. There is evidence that armadillos may be responsible for the loss of domestic poultry eggs. This loss can be prevented through proper housing or fencing of nesting birds.

Disease is a factor associated with this species. Armadillos can be infected by the bacterium *Mycobacterium leprae*, the causative agent of leprosy. The role that armadillos have in human infection, however, has not yet been determined. They may pose a risk for humans.

Upcoming Horticulture Events of Interest:

All About Herbs

Date: Saturday, September 27
Time: 10:00 AM – 11:00 AM
Location: Benson Plant Rescue, 7224 Maple Street, Omaha, NE

Learn basic information about growing, cooking and preserving herbs. This class will include free samples! To sign up call Cindy: 402-444-7804

Autumn and Japanese Ambience Festival

Date: Saturday and Sunday, October 4 and 5
Time: 9:00 AM – 5:00 PM
Location: Lauritzen Gardens, Bancroft Street, Omaha

Take in the crisp fall air, enjoy the bold and brilliant shades of yellow, orange, red and brown in trees and shrubs and participate in a multitude of autumn-themed activities, ranging from hayrack rides to an antique tractor display.

Nebraska Statewide Arboretum Plant Sale

Date: Friday, October 10, 17, 24 and 31
Time: 12:00 – 5:00 PM
Location: University of Nebraska Lincoln, East Campus, Statewide Arboretum Greenhouse, Lincoln

Trees, perennials and grasses for sale. For more information visit <http://arboretum.unl.edu/plant-sales>

Propagating Annuals From Cuttings

By Cindy Haynes
 Department of Horticulture, ISU



By now many of our annual plants in the garden are gorgeous to overgrowing! It will be hard to watch these prized

flowers die after the first frost. Fortunately, some annuals can be propagated from cuttings and brought indoors during the winter. This is a great way to extend their beauty inside and reduce the cost of annual flowers for next spring.

Annuals such as sweet potato vine, coleus, geranium, impatiens, begonia, and plectranthus are easy to root from cuttings. Below is a brief outline of the process.

1. Remove a 2 to 4 inch stem tip with a clean, sharp knife.
2. Gently remove the leaves from the lower half of the cut stem or cutting.
3. Dip the cut end into a rooting hormone, if available. Many garden centers will sell rooting hormones. Rooting hormone is not required for all cuttings.
4. Carefully, insert the cut end into a container filled with moist perlite (available at garden centers). Several cuttings can be placed in a 6-inch container.
5. Water lightly.
6. Cover the container with a clear plastic bag to create a tent over the cutting or cuttings. Secure the plastic with a rubber band around the base of the container.
7. Place covered containers in a location receiving indirect light for several weeks. Some condensation should form inside the plastic.
8. Check the perlite regularly to ensure that it stays moist. Water lightly if needed. Remove any leaves or cuttings that are discolored or moldy.

Most cuttings form roots in 4 to 6 weeks. Gently tug on the stem tips to see if they are rooted. If there is some resistance during the "tug test", the cuttings may have formed fine roots. When the roots are at least 1 inch long, they are ready for transplanting into individual containers. After transplanting move rooted cuttings into well-lit locations for optimal growing.



Transplanting/Dividing Peonies

By Richard Jauron
Department of
Horticulture, ISU



Peonies can be left undisturbed in the garden for many years. Occasionally, however, it becomes necessary to move plants. Peonies shaded by large trees or shrubs should be moved to a sunny site to improve flowering. The redesign of a perennial bed or border may require moving the peonies. Large, vigorous plants can be dug and divided for propagation purposes.

September is the best time to transplant peonies. Begin by cutting off the peony stems near ground level. Then carefully dig around and under each plant. Try to retain as much of the root system as possible.

Division of large peony clumps requires a few additional steps. After digging up the plant, gently shake the clump to remove loose soil from the root system. Using a sharp knife, divide the clump into sections. Each division should have at least 3 to 5 buds (eyes) and a good root system. Divisions with fewer than 3 buds will likely require several years to produce a good flower display.

Peonies perform best in full sun and well-drained soils. When selecting a planting site, choose a location that receives at least 6 hours of direct sun each day. Avoid shady areas near large trees and shrubs. Poorly drained soils can often be improved by working in large amounts of compost or sphagnum peat moss.

When planting a peony, dig a hole large enough to comfortably accommodate its entire root system. Position the peony plant in the hole so the buds are 1 to 2 inches below the soil surface. (Peonies often fail to bloom satisfactorily if the buds are more than 2 inches deep.) Fill the hole with soil, firming the soil around the plant as you backfill. Then water thoroughly. Space peonies 3 to 4 feet apart.

In fall (mid- to late November), apply a 4- to 6-inch-layer of mulch over the newly planted peonies. Excellent mulching materials include clean, weed-free straw and pine needles. Mulching prevents repeated freezing and thawing of the soil during the winter months that could heave plants out of the ground. Remove the mulch in early spring before growth begins.

Ask the ISU Extension Gardening Expert

Is late summer/early fall a good time to plant a tree?

Mid-August through September is an excellent time to plant pine, spruce and other evergreens. (Evergreens planted in late October or November may not have adequate time to become established before the onset of winter and could be subject to desiccation, injury and death.) Deciduous trees and shrubs can be planted from August through early November.

Water newly planted trees every day for three or four days and then gradually reduce the frequency of watering. When watering, slowly apply water to the rootball and the surrounding soil. A thorough watering every seven to 10 days (in dry weather) should be sufficient three to four weeks after planting. Continue watering until the ground freezes.

Can perennials be successfully planted in late summer/early fall?

Late summer/early fall is an excellent time to plant many perennials. It also is a good time to move or divide perennials, such as peony, daylily, garden phlox and Oriental poppy. Perennials planted in late summer or early fall should be mulched with several inches of straw, pine needles or other materials in late fall. Mulching helps prevent repeated freezing and thawing of the soil that may heave plants out of the ground. Drying of exposed plant crowns and roots can cause severe damage or death.

When is the best time to sow grass seed?

Mid-August to mid-September is the best time to seed new lawns and overseed existing lawns in Iowa. Late-summer seeding has several advantages over spring seeding. The seeds of cool-season grasses germinate quickly in the warm soil of late summer. The warm days and cool nights of early fall promote rapid turfgrass growth. The growing grass also has less competition from weeds as few weed seeds germinate in fall.

When is the best time to apply a broadleaf herbicide to the lawn?

Fall (late September to early November) is the best time to apply broadleaf herbicides in Iowa. In fall, perennial broadleaf weeds are transporting food (carbohydrates) from their foliage to their roots in preparation for winter. Broadleaf herbicides applied in fall will be absorbed by the broadleaf weed's foliage and transported to the roots along with the carbohydrates, resulting in the destruction



of the broadleaf weeds. Spring applications are generally less effective than fall applications.

When should I plant tulips and daffodils?

October is the ideal time to plant tulips, daffodils and other spring-flowering bulbs. Plant bulbs in groups or clusters to achieve maximum visual impact. Bulbs planted individually or in single rows are generally not as effective. Spring-flowering bulbs can be planted as late as December if the ground is not frozen.

When would be a good time to dig and divide lilies?

Early fall is an excellent time to dig and divide Asiatic, Oriental, and other garden lilies. Carefully dig up the clump and separate the bulbs. Replant the bulbs immediately. (If planting must be delayed, place the bulbs in a plastic bag containing lightly moistened peat moss and place the bag in the refrigerator.) Plant the large bulbs 4 to 6 inches deep. Small bulbs should be planted 1 to 2 inches deep. Lilies perform best in well-drained soils in full sun. The large bulbs may bloom the following summer. However, the small bulbs may not bloom for 1 or 2 years.

SEPTEMBER GARDENING TO DO LIST



- Take geranium, coleus, and other annual cuttings and root them indoors.
- Continue to water newly established trees, shrubs, and perennials.
- Harvest winter squash before hard frost. Skin of the squash should be tough with deep, solid color. Some cultivars will show an orange blush when mature.
- Check trees for bagworms and fall webworms. Hand prune and destroy.
- Prepare thin and dead areas of lawn for renovation. Mid-August to mid-September is the best time of the year to seed lawns.
- Control dandelions and other perennial weeds in established turf with a broadleaf herbicide.
- Stop deadheading roses after the final wave of flowers in late September. This allows rose hips to form and plants to start hardening off for winter.

- Place orders for fall planting of spring-flowering bulbs.
- Plant spring-flowering bulbs in mid-September. Planting too early can cause bulbs to sprout top growth before winter. However, allow at least four to six weeks before the ground freezes for good root formation.
- Remove dead leaves and debris from garden ponds and water features.
- Plant balled and burlapped deciduous trees.
- Check houseplants for insect pests before bringing indoors before the first frost.
- Harvest all full-sized tomatoes and peppers before frost.
- Make homemade salsa with garden fresh ingredients!

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

Iowa State University Publications

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| PM 2084 | Emerald Ash Borer Management Options |
| SUL21 | Common Problems of Ash Trees |
| PM 2079 | Flowering Plants for the Late Summer Garden |
| RG 319 | When to Divide Perennials |
| PM 1943 | Deciduous Shrubs |
| PM 731 | Harvesting and Storing Vegetables |
| PM 534 | Planting & Harvesting Times for Garden Vegetables (Free) |
| RG 320 | Growing and Over-wintering Garden Geraniums |
| RG 304 | Late Season Perennial Flowers |

Horticulture Publications on-line

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

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