

# Plant Wise

IOWA STATE UNIVERSITY  
University Extension

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## All About Irises

By Richard Jauron  
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Iowa State University

Available in nearly every color, bearded iris is a beautiful spring flower. Gardeners with questions about irises and other garden plants may contact horticulturists with Iowa State University Extension and Outreach at Hortline, [hortline@iastate.edu](mailto:hortline@iastate.edu) or 515-294-3108.



### My bearded irises are no longer blooming well. Why?

The bearded irises may need to be divided. Bearded irises should be divided every three to five years, as the plants quickly become overcrowded and don't bloom well. July or August is the best time to dig, divide and transplant bearded irises.

Lack of sunlight could be another possibility. Bearded irises bloom best in full sun (plants need at least six hours of direct sun per day for best flowering). Plants in partial shade may not bloom well and should be transplanted to a sunny site.

### When and how do you divide bearded irises?

While bearded irises are easy-to-grow perennials, they need to be divided every three to five years. If not divided, plants become overcrowded and flower production decreases. Crowded plants are also more prone to disease problems. In Iowa, July or August is the best time to dig, divide and transplant bearded irises.

Bearded irises grow from thick, underground stems called rhizomes. Carefully dig up the iris clumps with a spade. Cut back the leaves to one-third their original

height. Wash the soil from the rhizomes and roots with a steady stream of water. Then cut the rhizomes apart with a sharp knife. Each division should have a fan of leaves, a healthy rhizome and several large roots. Discard all diseased or insect damaged rhizomes.

Bearded irises perform best in fertile, well-drained soils and full sun. In clay soils, incorporate compost, sphagnum peat moss or well-rotted barnyard manure into the soil prior to planting. When planting bearded irises, dig a hole large enough to accommodate the rhizome and roots. Build a mound in the center of the hole. Place a rhizome on top of the mound and spread the roots in the surrounding trench. Then cover with soil. When planted, the rhizome should be just below the soil surface. Finally, water each plant thoroughly.

To obtain a good flower display, plant at least three rhizomes of one variety in a group. Space the rhizomes 12 to 24 inches apart.

### How can I control the iris borer?

The iris borer is a serious pest of bearded irises. The mature stage of the iris borer is a grayish moth. Female moths lay eggs on iris foliage and other nearby plants in late summer/early fall. The eggs hatch the following spring. The small larvae (caterpillars) bore their way into the iris foliage and feed on leaf tissue. Over time, the larvae tunnel down through the leaves and into the rhizomes. The caterpillars continue to feed inside the rhizomes and eventually destroy much of it. When fully grown, the larvae move into the soil and pupate. Adults (moths) emerge in late summer.

Bacterial soft rot often invades rhizomes damaged by iris borers. Rhizomes infected with bacterial soft rot become soft and foul-smelling.

Iris borers can be controlled by sanitation and the timely application of insecticides. Remove and destroy dead iris foliage in late fall or early spring. This will eliminate many of the iris borer eggs. An insecticide should be applied in spring when the new shoots are 4 to 6 inches tall. An application of an insecticide at this time should destroy

small iris borer larvae before they have the opportunity to bore into the iris foliage. Products that contain carbaryl, permethrin, acephate or spinosad should be effective. As always, carefully read and follow label directions when using pesticides.

## How to Attract Butterflies to Your Garden

By National Wildlife Federation

Brightly colored butterflies can be a welcome addition to your garden, not only because of their beauty, but also because of their usefulness in pollinating flowers.



Attracting butterflies involves incorporating plants that serve the needs of all life stages of the butterfly. The insects need places to lay eggs, food plants for their larvae (caterpillars), places to form chrysalides and nectar sources for adults.

### Butterfly Garden Necessities

- **Plant native flowering plants** - Because many butterflies and [native flowering plants](#) have co-evolved over time and depend on each other for survival and reproduction, it is particularly important to install native flowering plants local to your geographic area. Native plants provide butterflies with the nectar or foliage they need as adults and caterpillars. The Lady Bird Johnson Wildflower Center has lists of [recommended native plants by region and state](#).
- **Plant type and color is important** - Adult butterflies are attracted to red, yellow, orange, pink and purple blossoms that are flat-topped or clustered and have short flower tubes.
- **Plant good nectar sources in the sun** - Your key butterfly nectar source plants should receive full sun from mid-morning to mid-afternoon. Butterfly adults generally feed only in the sun. If sun is limited in your landscape, try adding butterfly nectar sources to the vegetable garden.
- **Plant for continuous bloom** - Butterflies need nectar throughout the adult phase of their life span. Try to plant so that when one plant stops blooming, another begins.
- **Say no to insecticides** - Insecticides such as malathion, Sevin, and diazinon are marketed to kill insects. Don't use these materials in or near the butterfly garden or better, anywhere on your property. Even "benign" insecticides, such as

*Bacillus thuringiensis*, are lethal to butterflies (while caterpillars).

- **Feed butterfly caterpillars** - If you don't "grow" caterpillars, there will be no adults. Bringing [caterpillar foods](#) into your garden can greatly increase your chances of attracting unusual and uncommon butterflies, while giving you yet another reason to plant an increasing variety of native plants. In many cases, caterpillars of a species feed on only a very limited variety of plants. Most butterfly caterpillars never cause the leaf damage we associate with some moth caterpillars such as bagworms, tent caterpillars, or gypsy moths.
- **Provide a place for butterflies to rest** - Butterflies need sun for orientation and to warm their wings for flight. Place flat stones in your garden to provide space for butterflies to rest and bask in the sun.
- **Give them a place for puddling** - Butterflies often congregate on wet sand and mud to partake in "puddling," drinking water and extracting minerals from damp puddles. Place coarse sand in a shallow pan and then insert the pan in the soil of your habitat. Make sure to keep the sand moist.

### Common Butterflies - Plants Their Caterpillars Eat

- **Acmon Blue** - buckwheat, lupines, milkvetch
- **American Painted Lady** - cudweed, everlast
- **Baird's Swallowtail** - dragon sagebrush
- **Black Swallowtail** - parsley, dill, fennel, common rue
- **Coral Hairstreak** - wild black cherry, American and chickasaw plum, black chokeberry
- **Dun Skipper** - sedges, grasses including purpletop
- **Eastern Tiger Swallowtail** - wild black cherry, ash, tulip tree, willow, sweetbay, basswood
- **Giant Swallowtail** - prickly ash, citrus, common rue, hoptree, gas plant, torchwood
- **Gray Comma** - gooseberry, azalea, elm
- **Great Purple Hairstreak** - mistletoe
- **Gulf Fritillary** - maypops, other passion vines
- **Henry's Elfin** - redbud, dahoon and yaupon hollies, maple-leaved viburnum, blueberries
- **Monarch** - milkweeds
- **Painted Lady (Cosmopolite)** - thistles, mallows, nievitas, yellow fiddleneck
- **Pygmy Blue** - saltbush, lamb's quarters, pigweed
- **Red Admiral/White Admiral** - wild cherries, black oaks, aspens, yellow and black birch
- **Silver-Spotted Skipper** - locusts, wisteria, other legumes
- **Spicebush Swallowtail** - sassafras, spicebush
- **Sulphurs** - clover, peas, vetch, alfalfa, asters
- **Variiegated Fritillary** - passion flower, maypop, violets, stonecrop, purslane
- **Viceroy** - willows, cottonwood, aspen

- **Western Tailed Blue** - vetches, milkvetches
- **Western Tiger Swallowtail** - willow, plum, alder, sycamore, hoptree, ash
- **Woodland Skipper** - grasses
- **Zebra Swallowtail** - pawpaw

To get a list of butterflies in your state or county, visit [www.butterfliesandmoths.org/checklist](http://www.butterfliesandmoths.org/checklist)

## Upcoming Horticulture Events of Interest:

### **Glenwood Lake Park Farmers Market**

Wednesdays, June 4 - Sept. 4, 4:00 – 7:00 PM  
Located at Glenwood Lake Park

Mills County Master Gardeners will have a table to help solve your garden problems.

### **Silver City Farmers Market**

Saturdays starting June 7 – Labor Day, 8:00 – 11:00 AM  
Located in the Silver City Park

Mills County Master Gardeners on hand to answer all your gardening questions!

### **Malvern Farmers Market**

Fridays starting June 6 – Labor Day, 6:00 – 8:00 PM  
Located on Main Street in Heritage Park

New location and live entertainment every week. Check out the Facebook page:

<https://www.facebook.com/#!/MalvernMarket>

### **Controlling Pests in the Garden - Seminar**

Date: Monday, June 30, 6:30 – 8:00 PM  
Location: Glenwood's Giving Garden,  
24955 Ingrum Avenue, Glenwood

Kathleen Cue, Sarpy/Douglas County Horticulture Assistant, will present the program that will begin at 7:00 PM. Arrive by 6:30 for a refreshing summer snack!

### **Mills County Fair**

**Date:** Saturday, July 19  
Open Class Floriculture & Agriculture  
Entries received at the Mills County Fairgrounds  
8:00 AM – 12:00 Noon

### **Enter your Flowers and Vegetables!**

Open Class fair books are available at area banks, libraries, the Extension Office in Malvern and online at:

<http://www.extension.iastate.edu/mills/sites/www.extension.iastate.edu/files/mills/fair/2014%20Open%20Class%20Fairbook.pdf>

### **Summer Garden Webinars – “All About Trees”**

Date: July 15, August 14 and September 4

Time: 6:30 – 8:30 PM

Location: Mills County Extension office, 415 Main Street, Malvern

Cost: Free!

- July 15 – Mark Vitosh, Iowa DNR Forester - "Iowa's Unknown Treasure" Trees in urban and rural landscapes.
- August 14 – Dr. Donald Lewis and Mark Shour - "Tree Pests" Emerald Ash Borer and the impact on Iowa landscapes.
- September 4 – Jeff Iles – “Ash Alternatives” Ideas for other species for home landscapes.

## Periodical Cicadas will Soon Blanket Central Iowa Woodlands

Press Release  
Iowa State University

AMES, Iowa – An Iowa State University entomologist is encouraging central Iowans to enjoy their front-row seats as countless periodical cicadas emerge from the ground to blanket wooded areas, an event that occurs once every 17 years. “People should be ready to get out to see and hear this to the maximum extent possible,” said Donald Lewis, a professor of entomology at Iowa State University. Lewis said the first reports of cicada sightings trickled in from southern Iowa on Thursday, and hot weather in the forecast means that cicada activity likely will pick up steam quickly, he said. Up to 1.5 million cicadas can crowd into a single acre of woodland and up to 40,000 in a single tree, a spectacle made even more impressive by the distinctive buzzing sound the insects create.



Most of the bugs will appear in the southeastern half of Iowa and into Missouri and parts of western Illinois. They'll stick around for about six weeks – long enough for the adult cicadas to mate, lay eggs and die. When the eggs hatch, the offspring burrow into the ground where they feed on the sap from tree roots. Seventeen years later, the nymph cicadas will emerge as adults and start the whole process over again. The insects that will emerge this summer are the offspring of cicadas that

emerged in 1997. Lewis said the unique lifecycle of the cicadas is most likely an adaptation to outsmart potential predators. "The cicadas wait a long time to reappear, and, when they do, they are synchronized to appear in mass numbers all at once," he said. "That beats any predator that would want to make a livelihood of eating periodical cicadas." Lewis urged Iowans to take the opportunity to observe one of nature's wildest displays.

Aside from the incessant buzzing – produced by two shell-like drums located along the sides of the abdomen of male cicadas – the insects are harmless, he said. "They do not damage crops or gardens," Lewis said. "They don't bite. They can't sting. They don't attack your house or your possessions." Lewis warned that the carcasses left behind after the cicadas die can leave an unpleasant stench, and some people feel overwhelmed by the sheer number of cicadas that emerge. Beyond that, it's a party Iowans shouldn't miss, Lewis said. And anyone who skips this year will have to wait until 2031 for another chance.

## Companion Planting

By Cornell University  
Department of  
Horticulture



Most people think of plants as very passive organisms. They grow almost unperceptively, and only once a year do they flower or produce edible products. However, plants are very active in ways that are not so obvious to the casual observer. For example, plants change the chemistry of the soil, and influence the types of microorganisms that grow there. They actively compete with other plants for space. Some will poison their neighbor's offspring to maintain a competitive advantage, while others change the environment in ways that benefit other species. Plants wage a constant battle with insects, relying heavily on chemical warfare.

Naturalists have known about these properties of plants for thousands of years. For example, about 2,000 years ago the Roman agriculturalist, Varro, declared "Large walnut trees close by, make the border of the farm sterile." Chemicals in oak leaves retard the development of insects that feed on them. Some insecticides are derived from plants; examples include rotenone, sabadilla and ryania. But not all effects of plants are deleterious on other organisms. Alfalfa and clover enrich the soil with nitrogen that they capture from the air. Certain trees move groundwater to the soil surface where shallow-rooted plants can grow even under droughty conditions.

Many plants produce substances that are toxic to other plants. The study of this phenomenon is called "allelopathy." Varro's observation was explained by the

discovery of a substance called juglone - a natural herbicide produced by the roots of walnut trees. Many plants have allelopathic effects including sunflowers, cucumbers, oats, alfalfa, rye and tobacco. When these crops are planted prior to other crops, weed pressure is reduced.

Groups of plants which grow well together are called "companions." Perhaps the best historical example of companion planting is the "Three Sisters" in which corn, beans, and squash are planted together in a hill. Native Americans developed this system to provide food for a balanced diet from a single plot of land. Each of the crops is compatible with the others in some way. The tall corn stalks provide a support structure for the climbing beans. The beans do not compete strongly with the corn for nutrients since as legumes, they can supply their own nitrogen. Squash provides a dense ground cover that shades out many weeds which otherwise would compete with the corn and beans.



"Three Sisters" - Corn, Beans and Squash

## Reducing pest damage

Most plants produce defensive chemicals that help fend off insects and diseases. These chemicals may be insect poisons, feeding deterrents or have fungicidal properties. The roots of some French and African marigolds contain a substance which is toxic to certain types of nematodes. Nematodes are soil inhabiting microscopic roundworms that damage many species of plants. Certain nematodes can be eliminated from a site by growing a thick crop of marigolds for one season prior to planting the vegetable or fruit crop, or by interplanting marigolds between crop rows.

Destructive insects often locate their food by smell. Many plants, especially culinary herbs, produce strong scents which may confuse insect pests looking for a host to feed on. Garden vegetable plants such as garlic, onions, chives, and herbs such as catnip, horehound, wormwood, basil, tansy, and mints all produce scents which seem to repel insects or mask the scents which attract insects. A certain level of insect protection can be achieved by carefully interplanting some of these as companions to vegetables.

Many insect pests have specific food preferences while others feed on a wide assortment of hosts. Even those

species which feed on a wide variety of hosts, such as Japanese beetles, have preferences for certain plants. It is possible to plant a preferred host as a trap crop near the plant that is being protected. Once the insects have settled on the "trap" crop, they can be killed periodically by spraying, without having to treat the protected plants.

Many insects are helpful because they eat or parasitize harmful insects. Most species of wasps and spiders are beneficial as are ground beetles, praying mantids, lady bugs, pirate bugs, and several species of flies. It is possible to attract beneficial insects by planting flowers near the garden. Dill, parsley, carrot, coriander, angelica, and parsnip feature flat topped clusters of small flowers that have strong fragrances. They also seem to attract large numbers of beneficial insects, particularly predatory wasps and flies. This characteristic makes them good candidates for companion planting.

### Some Practical Steps

Avoid monoculture in terms of space and time. A one-hundred foot long row of broccoli presents a large target for a cabbage moth that is flying by, but the same number of cabbage plants scattered over several thousand square feet, and interplanted with other crops, is less obvious and attractive to the insect. Pests which routinely plague large, commercial plantings of crops may never be a problem in the diversified home garden.

Know thy friends and avoid killing them inadvertently. Learn to recognize beneficial insects as well as the pests, and note which plants are attractive to beneficial insects. Less than 1% of insects are garden pests.

Plant dill, marigolds, chives, onions, parsley, basil and other flowers throughout the garden. Allow parsley, carrot and celery to remain in the ground over the winter. They will produce flowers the second season and attract beneficial insects. Also, plant strong smelling herbs among vegetable crops.

Try some combinations that folklore says are effective companions. Chives could be planted at the base of roses to repel aphids, garlic could be planted at the base of peach trees to repel borers; basil planted among tomatoes may repel tomato hornworms; nasturtiums grown near squash may repel squash bugs; tomatoes planted among asparagus may repel asparagus beetles; and marigolds, mint, thyme, or chamomile may repel cabbage moths. Radishes make excellent trap crops for cucumber beetles among squash and cucumbers. Radishes also attract flea beetles when planted near cole crops. Garden borders planted with low growing thyme or lavender may deter slugs. Tansy and pennyroyal repel ants.

Observe your plantings carefully, and write down combinations that seem to work for pest control and

growth enhancement. Communicate your observations with others. Try to replicate your observations or have others try the same combinations. Testimonials that are shared by many observers often turn out to be valid. Scientists have not spent much time looking at these relationships among plants and their community; furthermore, the number of possible combinations is enormous. You can be the first one to discover a new set of compatible plants!

## Ask the ISU Extension Gardening Expert



### Why is my rhubarb flowering?

Flower development is natural for rhubarb and most other plants. Drought, extreme heat, and infertile soils may encourage flowering. Age is another factor. Old plants tend to flower more than younger ones.

Regardless of the reason, flower stalks should be promptly pulled and discarded. Plants will be less productive if allowed to flower and set seeds.

Flower formation can be discouraged with good cultural practices. Water rhubarb plants every 7 to 10 days during dry weather. Sprinkle  $\frac{1}{2}$  cup of an all-purpose garden fertilizer, such as 10-10-10, around each plant in early spring. Control weeds by shallow hoeing, hand pulling, or mulching.

### In regards to tomatoes, what is meant by the terms determinate and indeterminate?

Determinate and indeterminate refer to the tomato's growth habit. Determinate tomatoes are small, compact plants. They grow to a certain height, stop, then flower and set all their fruit within a short period of time. The harvest period for determinate tomatoes is generally short, making them good choices for canning. Indeterminate tomatoes continue to grow, flower, and set fruit until killed by the first frost in fall. Accordingly, the harvest from indeterminate varieties often extends over a 2 or 3 month period. Yields are generally heavier than determinate types, but are usually later to mature. Indeterminate tomatoes are large, sprawling plants which often perform best when grown in wire cages or trained on stakes.

### How late can I plant snap beans?

Snap beans are a warm-season vegetable and should be planted after the danger of frost is past. In central Iowa, it's usually safe to begin planting snap beans in

early May. If harvested frequently, plants should produce well for several weeks. The last practical date for planting snap beans is August 1.

### Should I fertilize the lawn in summer?

Do not fertilize Kentucky bluegrass and other cool-season grasses during the summer months (June, July and August). The best times to fertilize cool-season grasses in Iowa are spring, mid-September and late October/early November. When fertilizing the lawn, do not apply more than one pound of actual nitrogen per 1,000 square feet in one application.

## JUNE GARDENING TO DO LIST



- Finish harvesting rhubarb and asparagus this month to allow the plants to start storing reserves for next year's crop.
- Stake or cage indeterminate tomatoes to support vines and keep the fruit off the ground.
- Cover broccoli, cauliflower, cabbage, and brussels sprouts to prevent cabbage worms from reaching and feeding on the plants. Use cheesecloth or a lightweight row cover to form the barrier.
- Moisten and turn your compost pile on a regular basis.
- Don't remove clippings from the lawn unless grass is excessively tall or weedy. Clippings return some nutrients to the soil and do not add to thatch buildup.
- Continue to sow seeds of sweet corn and beans for an extended harvest.
- Harvest herbs for drying before they flower.
- Harvest radishes, lettuce, and spinach.
- Hand thin apple trees that are loaded with small fruits. After thinning, apples should be spaced 8 to 10 inches apart on the branches. Pears, plums and apricots should be spaced 6 to 8 inches apart.

- Continue deadheading plants to prolong bloom, prevent unwanted seedlings, and improve the overall appearance.
- Renovate June-bearing strawberries after the last harvest.
- Plant groundcovers in shady areas where grass doesn't grow.
- Apply mulch around trees, shrubs, and perennials to conserve moisture, control weeds, and prevent injury from mowing too close.
- Remove cool-season vegetables, before they start to bolt, or form seed stalks, during hot, dry weather.
- Keep newly planted trees and shrubs well watered.
- Plant groundcovers in shady areas where grass won't grow.
- Raise the height of your lawn mower blade.
- Give Dad a new garden tool for Father's Day!

### 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  
Horticulture Advice: Monday/Wednesday 12:00 – 4:30 p.m.  
[www.extension.iastate.edu/mills/yardgarden.htm](http://www.extension.iastate.edu/mills/yardgarden.htm)

### **Iowa State University Publications**

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| RG 105   | Guidelines to Seasonal Garden Chores (free)              |
| NCR 0025 | Lawn Weeds and Their Control (\$7.25)                    |
| RG 209   | Organic Mulches  |
| PM 1891  | Sweet Corn   |
| RG 601   | Gardening for Butterflies                                |
| PM 0819  | Planting a Home Vegetable Garden                         |
| PM 534   | Planting & Harvesting Times for Garden Vegetables (Free) |
| RG 206   | Questions about Composting (free)                        |
| RG 319   | When to Divide Perennials (free)                         |
| PM 2036  | Ticks and Tick-borne Diseases in Iowa"                   |

### Horticulture Publications on-line

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

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