RAGBRAI, Milkweed and Monarchs!

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The Monarch Butterfly is in Trouble

The monarch butterfly is one of the most recognizable species of wildlife in all of America. They undertake one of the world's most remarkable and fascinating migrations, traveling thousands of miles over many generations from Mexico, across the United States, to Canada in the spring and then back down to Mexico in the fall.

Every November, millions of monarch butterflies arrive at the Oyamel fir forests in central Mexico, where they migrate to survive through the winter. In recent years, the number of butterflies migrating to Mexico has been dropping sharply. Scientists estimate that the population of Monarch butterflies have dropped by 90% over the last 30 years.

Why are the Monarch’s Disappearing?

North American monarch butterflies are in serious trouble. The U.S. Fish and Wildlife Service has launched the “Save the Monarch” campaign on a national level recruiting regional help in a concerted effort to restore critical monarch habitat. Iowa is in the heart of the monarch migration route and a critical breeding ground for monarch butterflies. The milkweed plant is key because it’s the only plant that the Monarch butterfly lays her eggs on, and the larvae/caterpillars will only eat milkweed leaves as they mature. Once the adult butterfly has emerged from the chrysalis, it will then eat nectar from a variety of plants. The milkweed habitat is disappearing along the migration route threatening the survival of the Monarch. The Fish and Wildlife Service has stated that the Monarch butterfly could completely disappear in our lifetime if we don’t take action.

Why is the Milkweed Disappearing?

The most catastrophic thing from the point of view of the monarch butterfly has been the extensive use of herbicides in agriculture where the monarchs do most of their breeding. Before the use of herbicides, the monarch's host plant - milkweed was growing all over the place on the agricultural fields and the edges of fields and the sides of roads. There are 108 species of milkweed in the United States and scientists believe the whole monarch migration evolved in relation to this milkweed flora.

The other thing herbicides do is kill sources of nectar. This is important: When monarchs come back [to the United States] they lay their eggs on milkweed, the caterpillars hatch out in four or five days and develop over a period of two or three weeks, then form the chrysalis, then a week later it hatches into an adult. These adults initially have about 20 milligrams of fat in their body that’s carried over from larval development. But the butterflies that migrate back [to Mexico] have about 125 mg of fat. All that additional fat is obtained from drinking nectar from wildflowers. So the wildflowers are really important for the Monarchs too.
What can we do to help?

Iowa gardeners can help to re-establish habitats for monarchs and other pollinators by planting milkweed and nectar plants in our backyards. Farmers can help by leaving a strip along the edges of fields and along the roadways where milkweed and native wildflowers can grow. Once the Monarch has emerged from its chrysalis, it is attracted to the nectar of other plants; favorites include Liatris, Asters, Marigolds, Coneflower, Black-eyed Susans, Goldenrod and Salvia. Lists of butterfly plants are widely available online, and in books and articles.

You can help the monarch butterflies by reserving a small portion of a back corner of your yard for a monarch butterfly conservation area. You can plant milkweed for the monarch butterflies, and perhaps a nice butterfly bush and other nectar plants to attract the monarch butterflies to your conservation corner. Before you know it you will be hosting new generations of beautiful monarch butterflies every few months.

So what does all of this have to do with RAGBRAI?

Last summer I read about the group called Monarchs of Eastern Iowa that distributed thousands of milkweed seedballs to the RAGBRAI (Register’s Annual Great Bicycle Ride Across Iowa) riders to throw along the roadways during the ride across Iowa. Since RAGBRAI is beginning in Glenwood, IA this year, we decided we wanted to be a part of this milkweed seedball distribution to help restore habitat for the monarchs. Over the winter, the Mills County Master Gardeners teamed with two groups called Milkweed Matters and Monarchs of Eastern Iowa to help scatter milkweed seedballs across the state during RAGBRAI 2016.

Milkweed Matters is a small group that has a RAGBRAI team that rides and helps educate other riders about the plight of the Monarch and distributes seedballs along the route. They are also coordinating education booths along the ride, and this year they plan to distribute 35,000 seedballs at 7 Iowa towns along the route!

To learn more about Milkweed Matters visit:

https://milkweedmatters.org/
https://www.facebook.com/milkweedmatters/

We contacted Milkweed Matters and we are now part of the statewide effort to make 35,000 milkweed seedballs to distribute to the riders along the route. Our goal is to make 5,000 milkweed seedballs for distribution in Glenwood on July 23. There will be a Monarch education table in Glenwood during RAGBRAI on July 23 where the milkweed seedballs will be distributed and education materials will be available.

What is a Milkweed seedball and is there an opportunity to help?

Milkweed seedballs are made by mixing clay, soil, water and milkweed seed to form small round balls about the size of a dime. The clay helps the seedball keep its shape and once dried they can easily be handled and distributed. The riders throw the balls along the roadides and in designated areas. We have teamed with Mills County Conservation to designate about a dozen “planting sites” in Mills County along the route that will be marked with signs. When the conditions are right the milkweed seedballs will sprout and grow (probably next spring).

We have been working with a number of groups in the community including 4H clubs, garden clubs, schools, scout troops and church youth groups to educate about the monarch and make milkweed seedballs for RAGBRAI. We have a number of milkweed seedball workshops scheduled in June and we will have an education table in the Horticulture building at the Mills County Fair on July 9. We are looking for individuals or groups that would like volunteer to work the booth during RAGBRAI on July 23rd and 24th to help distribute the milkweed seedballs. Please contact Nancy Crews at the Mills County extension office if you would like to get involved. ncrews@iastate.edu, 712-527-3316.

Plethora of Peonies

By Cindy Haynes
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Peonies have been cherished by gardeners for centuries. They were such prized possessions that early settlers took small plants with them as they traveled west in their covered wagons. While most peony species are not native to the US, they have become the unofficial flower...
Types of Peonies

There are several different peony species and hybrids that are ideally suited for Midwest landscapes. Planting more than one peony type in the landscape can extend the bloom time so you can admire the beautiful blooms for a longer period in spring. Regardless of which type of peony chosen, you can’t go wrong in selecting, planting, and enjoying peonies.

Fernleaf peonies (*Paeonia tenuifolia*) are noted for their dissected, threadlike leaves – giving the plant a fine textured appearance in the landscape. Their bold, dark red to burgundy flowers contrast nicely with the fine foliage on 2-foot tall plants. Fernleaf peonies are early bloomers, blooming before the tree and common peonies. They are one of the more expensive peonies to purchase since they are slow growing. Fernleaf peonies are regarded as cherished heirlooms by many home gardeners. Plant are often passed from one generation to the next and they frequently occupy a prominent spot in the landscape.

Tree peonies (*Paeonia suffruticosa*) have woody stems like trees and shrubs. Therefore their stems do not die back to the ground each year. They are considered small shrubs in the landscape reaching 3 to 5 feet tall in the Midwest. Their flowers are the largest of the different types of peonies. Flowers can be 8 inches across and are available in single, semi-double, and double flower forms. Tree peonies also have one of the widest range of flower colors, including: white, pink, red, lavender, peach, yellow and pale green. The leaves are also more deeply lobed than herbaceous peonies. They typically start blooming before common peonies.

Common peonies (*Paeonia latiflora*) are the most widely grown type of peony. They are herbaceous plants because their leaves and stems die to the ground each fall and reappear the following spring. Many cultivars or varieties are available with an assortment of flower types, colors, and bloom times. Flower colors include: pink, peach, red, lavender, and white. Flower forms can be single, semi-double, double, Japanese or anemone, and crown or bomb types. Flowers usually appear in mid to late May (early, mid, and late season cultivars available) and last for one to two weeks depending on weather. Flowers are often heavy especially after a rain, therefore, they may require staking to keep them upright. These are vigorous growers, reaching 2-3 feet tall, and generally the least expensive type of peony sold.

Intersectional or Itoh hybrids are the result of crosses between common and tree peonies. Plants have large, colorful flowers and foliage that resemble tree peonies, but they typically die back to the ground each winter like the common peonies. Plants are normally 2-3 feet tall. Blooming begins as common peonies are ending. Flower colors range from pink, purple, lavender, burgundy, peach, white, and yellow.

Woodland peonies (*Paeonia japonica* and *Paeonia obovata*) are the first peonies to bloom. These species are frequently planted in part shade under deciduous trees. They bloom early enough in the spring so they receive plenty of direct sunlight before the trees completely leaf out. These peonies typically have single, white or pale pink flowers. These species are also noted for their attractive seed pods in late summer and early fall.

"The earth laughs in flowers."

Ralph Waldo Emerson
Upcoming Horticulture Events of Interest:

**Glenwood Lake Park Farmers Market**

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

**Silver City Farmers Market**

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

**Malvern Farmers Market**

Fridays through 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

**Summer Garden Walk**

Date: Sunday June 26, 10:00 AM – 4:00 PM
Location: General Dodge House, 605 3rd Street, Council Bluffs, IA 51503

This favorite summer activity returns again to delight the gardener in all of us. Stroll through several private area gardeners from 10am to 4pm. Continental breakfast at the Dodge House to start the day.

**Mills County Fair**

Date: Saturday, July 9
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

Mulch for Weed Control and Soil Health

By Colleen Vanderlinden
Organic Gardening Expert

Mulch provides several benefits to the garden. Luckily, adding mulch is one of the easiest gardening tasks you can undertake. The question isn't whether you should use it or not (the answer to that is a resounding Yes!) The question is, which type of mulch should you choose, and how should you apply it?

**Benefits of Mulch**

Mulch is a great weed suppressant. A nice, thick layer of mulch inhibits weeds in two important ways. First, by thoroughly covering the soil and depriving weed seeds of the light they need to germinate, mulch prevents them from gaining a foothold in the first place. Secondly, bare dirt is the perfect place for weed seeds to land and germinate. By covering all of your bare soil with mulch, most weeds will never be able to come into contact with the soil. Mulch helps retain soil moisture.

Maintaining a consistent level of moisture in your soil is a big part of growing healthy plants. A plant that has a constant level of adequate moisture is less likely to become stressed, which means that it will be better able to resist insects and diseases. In tandem with keeping the soil moist, mulch also keeps the soil cooler in hot weather, which will prolong the amount of time it takes for many plants to bolt or go dormant. Some plants bloom best in cooler conditions, and mulch will aid in keeping these plants blooming longer.

**Mulch feeds the soil.**

Organic mulches (as opposed to inorganic ones like glass, plastic, or rubber) will break down over time, adding nutrients and organic matter to your soil. The worms and microbes in the soil will break down organic mulches over time, which will result in healthier soil life.

**Popular Types of Mulch**

The following mulches are all organic in nature, so they will nourish your soil while suppressing weeds and maintaining soil moisture.

Each type has its strengths and weaknesses, and will work better in some situations than in others.

Shredded or chipped bark doesn't break down as readily, which means that it won't provide as much nutrition to your soil, but also doesn't need to be replenished as often. Some popular woods for mulch are cedar, pine, and cypress. Bark mulches work well in many settings, but are especially useful around trees and shrubs and on pathways.

Chopped leaves are plentiful and free if you have enough trees. They can be shredded by running them a couple of times with a lawnmower or running them through a chipper/shredder. They work well on perennial beds, in vegetable gardens, and in mixed borders. They break down fairly quickly and provide plenty of nutrition to the soil.
Straw is a popular choice for vegetable gardens as well as informal paths. It has a very utilitarian look, so it probably wouldn't work in perennial borders or foundation plantings. It breaks down fairly quickly.

Grass clippings are another plentiful, free mulch. The only caveat here is to make sure that the grass hasn't been treated with chemicals—you don't want to introduce pesticides and herbicides into your organic gardens. They tend to break down very quickly, and, because they break down so fast, can actually heat up the soil rather than cooling it down. Grass clippings work well in vegetable gardens, informal mixed borders, or under a more attractive mulch, such as shredded bark or cocoa hulls.

Cocoa hulls are the most expensive of the popular mulches, but the look it provides for your garden is well worth it. Cocoa hulls have a dark brown, earth-like appearance, so you don't even notice the mulch. One of the main issues I've had with cocoa hull mulch is its tendency to develop mold in humid, wet weather. This mold doesn't harm your plants or soil, but it is unsightly.

Pine needles are another informal, and possibly free, mulch material. They look great in gardens of all kinds. However, they can be a bit acidic, so it's best to avoid using them near plants that don't tolerate acid soils very well.

Compost (including leaf mold) may be my favorite mulch material of all. Like cocoa hulls, it just fades into the plantings, so you don't even notice that it's there. Besides looking great, it provides plenty of nutrients to your soil and increases microbial activity. It will need to be replenished fairly often (at least once a year, though I usually top dress with compost in spring and fall) but if you have your own compost pile, you'll have a steady supply of black gold ready to use.

**How To Apply Mulch**

There is a right way and a wrong way to apply mulch. The biggest mistake people make when adding mulch is that they don't apply enough. To smother weeds and retain soil moisture, a two to three inch layer of mulch is necessary. Less than two inches of mulch will let enough light through to allow weed seeds to germinate.

In addition to applying the right amount of mulch, you also need to make sure that it isn't pushed up against your plants. Pull the mulch back from tree trunks, shrubs and the crowns of your annuals, perennials, and vegetables. Give your plants an inch or so of space. When mulch is applied up against a plant, it can hold moisture and cause the plant to rot.

Organic mulches, because they break down and improve your soil, need to be replenished from time to time. Plan on adding an additional inch of mulch to your gardens every year, either in spring or fall.

A layer of mulch can benefit every single area of your garden. Whether you have a ready-made supply, such as grass clippings or leaves, or whether you choose to order some in bulk or buy it in bags at your local garden center, the important thing is to make sure you use it. Your plants, and your soil, will appreciate it.

**Ask the ISU Extension Gardening Expert**

There are tiny holes in the foliage of my eggplants. What should I do?

Flea beetles are the most common pest of eggplant in the home garden. Adults are tiny, shiny, black beetles. They possess large hind legs that enable them to jump. Flea beetles eat small, round holes in the eggplant foliage, resulting in “shothole” damage. Minor flea beetle damage will have little effect on crop yields. If significant damage begins to appear, treat plants with an insecticide. As always, carefully read and follow label directions when using pesticides.

Do I need to deadhead my perennials?

Deadheading is the removal of spent flowers. The removal of spent flowers is an important gardening chore for many perennials.

The flowering period of perennials, such as coreopsis, garden phlox, Shasta daisy, and yarrow, can be prolonged by deadheading. Delphiniums often bloom a second time in late summer if the initial flower stalks are cut back after flowering. The removal of spent flowers on peonies and bearded irises promotes plant vigor by preventing the formation of seed pods. Deadheading also prevents the self-seeding of golden marguerite, yarrows and other potentially invasive perennials.

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.

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.

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.

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

Iowa State University Publications
RG 209 Organic Mulches
RG 601 Gardening for Butterflies
PM 0819 Planting a Home Vegetable Garden
PM1313 Growing Garden Peonies

Horticulture Publications on-line
https://www.extension.iastate.edu/store/ListCategories

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