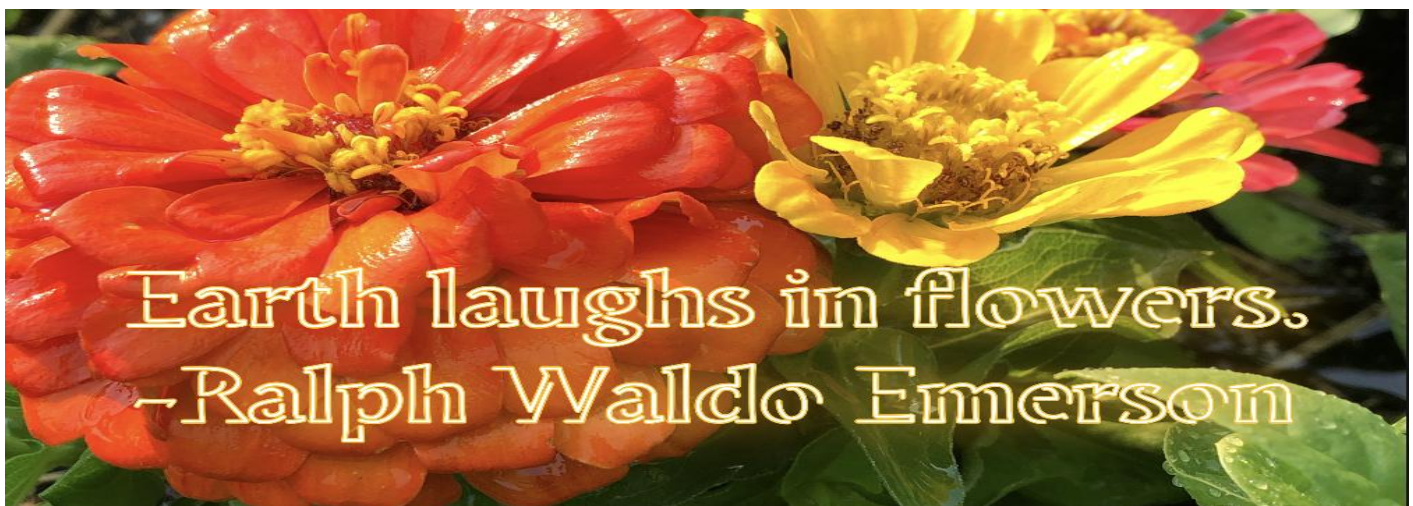




Written by Minnehaha County Master Gardeners. All photos by authors, unless otherwise credited



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Month Events



JUL | 7

Garden Tours:

You are invited to tour several beautiful and unique garden sites in Southern Sioux Falls. Garden sites include a tranquil peaceful yard in the Old Orchard area, an inviting church Prayer Garden, and a working small farm with an aquaponics growing system. This is a self-guided tour, and you can start at any location.

However, participants are encouraged to carpool from two locations with larger parking lots: Southern Hills Community Garden (adjacent to Southern Hills United Methodist Church) 3400 E. 49th St., or Spirit of Joy Lutheran Church Prayer Garden and Community Garden, 2208 W. LaQuinta St. (South of 69th & Western). At the small farm site on Southeastern, please wear closed-toed shoes for walking among the friendly free-range chickens. Participants are encouraged to bring their water bottles; no refreshments will be served.

Tickets are \$10. Registration is available online at <https://2021-mcmg-garden-tour.eventbrite.com>. Payment is by credit card only. In case of rain on Wed. July 7, Rain Date is Thurs. July 8. Notification of postponement will be posted on MCMG Facebook page. NO REFUNDS will be given. Proceeds of ticket sales go to scholarships and educational activities of the Minnehaha County Master Gardeners.

Tickets will be available the day of the event at Lewis Drug, 26th and Sycamore, from noon to 4pm, check or cash only.

JUL | Be sure to visit the Minnehaha County Master Gardener [Facebook page](#) and [Website](#) for gardening tips and resources.

Contact: www.helplinecenter.org or contact the Helpline Center at 211

In the Herb Garden

By Priscilla Jurkovich, Master Gardener

The herb section will highlight an herb that can be grown in the South Dakota region.

Prickly Lettuce (*Lactuca serriola*) has a brownish red stem with “prickles” or a row of spines on the back of the leaf. Prickly lettuce is from the Asteraceae or sunflower family, such as dandelion, aster, daisy, etc. The Asteraceae family is known for hundreds of seeds in the flower head. Prickly lettuce is an annual that is on many state noxious weed lists. It has pale yellow flowers, which bloom from July to September. The plant likes dry, disrupted soil. Prickly lettuce grows 1 to 5 feet in height and contains a milky latex. The leaves are dark green in color and become serrated and progressively smaller near the top of the plant. The lower leaves are lobed. Other names for Prickly lettuce are wild opium, opium lettuce, horse thistle, or compass plant.

Health Benefits: While you can eat the bitter young leaves raw or cooked, many seek this plant for mild sedative and analgesic properties similar to opium. The whole plant can be used as medicine. The milky sap, called lactucarium, flows through the stem of the plant and dries after contact with air. Although the plant has opium qualities, it is not addictive and does not cause the negative side effects of opium. Other uses have been for coughs, urinary tract infections, anxiety, gas, insomnia, ADHD, warts and more! Harvesting the plant right after the flowering period by cutting the stalk is best. If the milky sap doesn’t flow freely, it is not ready.



Barnyard grass (*Echinochloa crus-galli*)

by Pam Conklin, Master Gardener



Barnyard grass is an annual weed that spreads by seed. You'll often find it growing along fence lines reaching up to 3 feet tall, or in bare and thinning areas of the lawn. If it is mowed, barnyard grass will often grow in a low, spreading mat. Not to be confused with crabgrass, Barnyard grass has a distinct purple to red color at the base of its blades. The seed heads are also very distinct with up to 8 segments full of seeds. It is easy to pull due to its extremely shallow root system. Barnyard grass is carried in by birds, the bottom of shoes, and even found in grass seed mix. The best natural defense against Barnyard grass is pulling it when you see it, especially before it has a chance to go to seed. Don't forget to apply organic corn gluten meal beginning at 2 weeks before the last frost date (average last frost in the Sioux Falls area is May 9), and reapply every 4 - 6 weeks per package recommendations.

Swiss Chard

by Deb Howard, Master Gardener



Each year I dedicate garden space to the colorful, versatile chard (*Beta vulgaris* subsp. *vulgaris*). Also commonly referred to as Swiss chard. It is a member of the beet family, but is grown for its leaves and colorful stalks, both of which can be eaten. Flavor-wise, chard's leaves are often compared to spinach. Harvested young, the leaves can be eaten raw in salads, while more mature leaves are often sauteed, along with the stems, or added to soups and other cooked dishes.

Nutritionally, the good news for those of us who could never get on the kale bandwagon is that chard has more fiber, protein, calcium and iron per serving than kale. And chard is also a significant source of vitamins A, C, and K, magnesium and potassium. All that is to say that consuming chard may decrease a person's risk for diabetes, cancer and heart disease, while also promoting a healthy complexion, increased energy, and overall lower weight.

There are many varieties of chard, some with yellow, white, orange, red, or green stalks, and leaves that range from green and bronze to purple. In most varieties, the stalk color contrasts with the leaf color and continues up through the leaf in the form of thick veins. Because of these brilliant color combinations, chard is even used as an ornamental plant in containers and landscaping.

Plant chard seeds a week or two before the last frost. Because chard is a cut and come again crop, if grown in favorable conditions it is possible to harvest several times throughout the summer, starting as early as late spring. Harvesting it often will actually encourage new leaf formation. Although considered a cool season crop, with sufficient spacing and water and some periods of shade, chard will continue to do well even in the heat of a South Dakota summer. Interestingly, chard is not day-length sensitive, which means it is less likely to bolt, or prematurely set seed than other leafy greens. Succession planting will also ensure that you have a continuous crop of chard throughout the summer, and offers an opportunity to plant different varieties.

Because they innately seem to know what's better for them than humans often do, wildlife may find their way to your nutritious chard crop, so plan accordingly. Deer love chard, so if you live in an area with heavy deer traffic, tall fencing may be in order. Goldfinches are also big fans of chard. They will eat so many holes in the leaves that you may find nothing left for yourself. (It is suspected that they are drawn to the high calcium content in the leaves. Goldfinches are vegetarians and are often called "salad birds.") Of course, having a yard full of beautiful little yellow birds is generally a good thing, so I consider it worth the sacrifice - this is a good time to put succession planting into practice!

Insect pests and diseases are not significant issues for chard, unless it is planted near crops that would attract pests that might stumble upon the chard in pursuit of a greater goal. For this reason, avoid planting chard near corn, potatoes, cucumbers, melons and pumpkins.



A leafy green with so much going for it, chard should be a welcome addition to any yard, whether it's in the traditional vegetable garden, containers or the landscape. Plant some and your health and the goldfinches will thank you!

Sources:

<https://gardenerspath.com/plants/vegetables/grow-swiss-chard/>

[https://www.medicalnewstoday.com/articles/284103#incorporating more swiss chard into the diet](https://www.medicalnewstoday.com/articles/284103#incorporating_more_swiss_chard_into_the_diet)

Companion Gardening: Using plants to benefit plants

by Pam Conklin, Master Gardener

*The anecdotes described in this section provide garden tips for preventative solutions through companion growing that have been tested by time and keen observation, but not necessarily by science. **Borage (*Borago officinalis*): A super companion***



One of my favorite plants around the garden is a hairy annual herb with star-shaped, bright blue flowers that blooms all season long. Both the leaves and flower are edible, but the reason I grow Borage is because it's a bee magnet, which makes it the perfect plant companion near squash or bordering the strawberry patch. Plus, the bees and wasps visiting the nearby Borage are natural predators to many insects that affect squash, tomatoes, strawberries, and cabbage. But, the benefits of Borage in the garden don't end with bees.

Borage enriches the soil with micro nutrients, especially potassium and calcium that are important to plant cell health and disease fighting qualities. Interplanted with squash and tomatoes, a boost in calcium and potassium from Borage can help prevent blossom-end rot during fruit development. This inspiring companion plant also repels tomato hornworms!

Growing 2 - 3 feet tall with broad oval leaves, Borage is a great choice as an organic mulch - ask any permaculture enthusiasts. Spread mature leaves over the ground to suppress weeds, and as the leaves breakdown they also feed the soil. Be sure to add the leaves and stems to your compost.

Borage is easy to grow, just throw a few seeds on the ground. No need to cover them. Once the seed germinates and the plant matures, it is somewhat drought tolerant. Because Borage is susceptible to powdery mildew, I grow it in full sun. A word of caution, Borage is a prolific self-seeder that's why I grow it around my garden perimeter, rather than interplanting it.

Resources:

<https://web.extension.illinois.edu/herbs/borage.cfm>

<https://www.washingtoncrossingpark.org/borage-borago-officinalis/>

Book: Carrots Love Tomatoes, by Louise Riotte



Photo courtesy of Soil Science Society of America

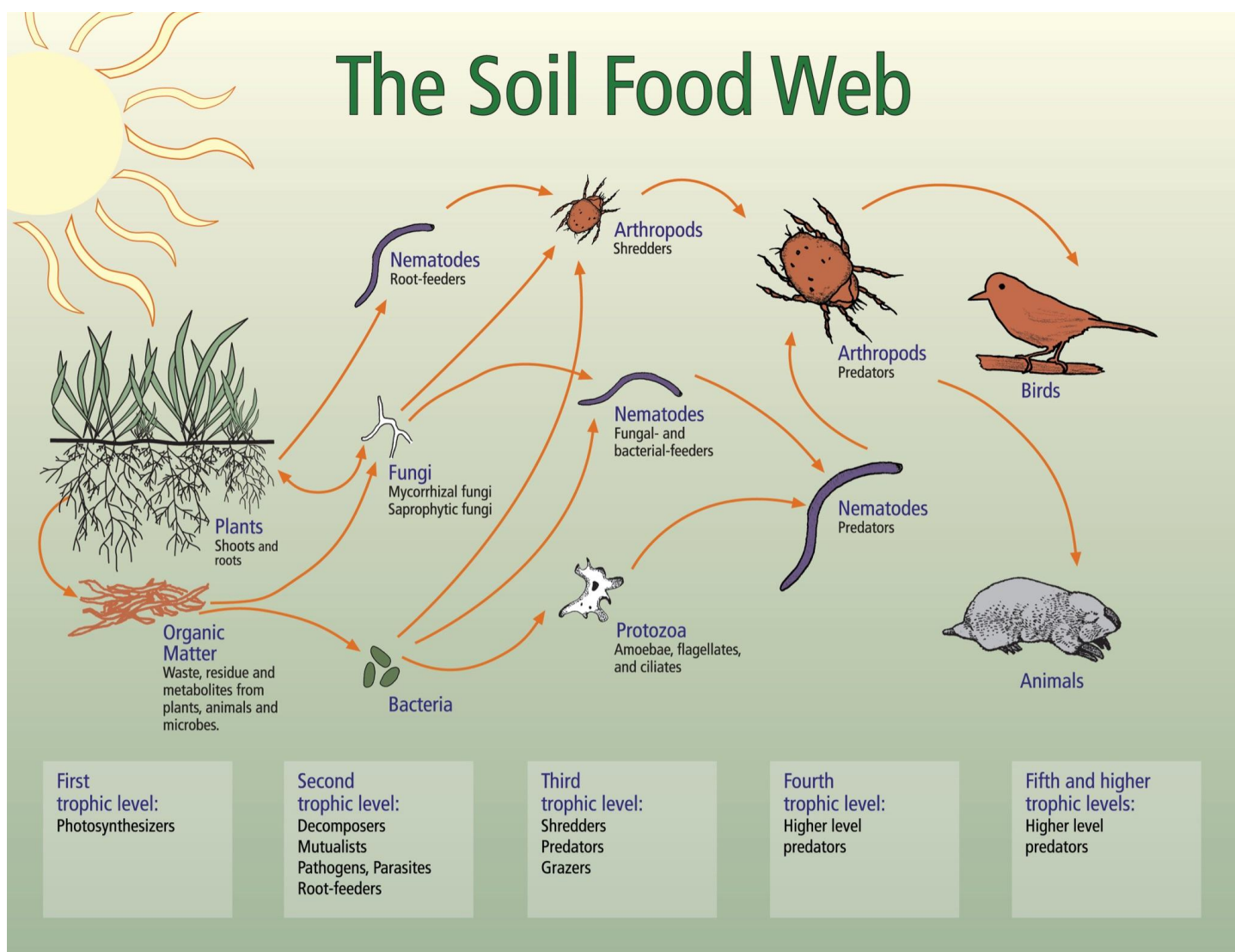
DID YOU KNOW...Your Soil is ALIVE!

By Debi Ulrey-Crosby, Master Gardener

Did you know that your soil is alive with activity that you can't see? Oh sure, there are living things in it that we see such as worms, beetles, and other small "critters," but your soil is also alive with microbes that help it do the amazing job of holding our earth together and feeding our plants, which feed animals that in turn feed us. One teaspoon of healthy soil may contain a billion bacteria, several yards of fungal hyphae, thousands of protozoa, and dozens of nematodes.

Two-hundred-fifty-thousand to 500,000 bacteria can fit inside the period at the end of this sentence. That's a lot of bacteria! If you look at healthy, active compost under a microscope, you'll find an amazing world of microorganisms such as bacteria and fungi working hard to digest organic matter, extracting carbon (C) to fuel their metabolisms and nitrogen (N) to generate their bodies as well as synthesize the enzymes needed for decomposition. The correct ratio of carbon to nitrogen of the decaying organic material in the compost pile is necessary to keep it from simply becoming a pile of rotting stuff. Compost is another amazing substance and something for another article so let's get back to the topic of soil.

This large world of microbes, mostly bacteria and fungi, form the base of what is known as the "soil food web." Fertile, living soil contains a web of life that creates structure, produces nutrients, and controls disease. Nearly all soil organisms need carbon-based energy to sustain life. This carbon comes mostly from plant exudates, waste products of microbial metabolism, or the dead bodies of other organisms. Below is a very simplified depiction of who eats whom and how every component is interdependent in the soil food web. It's extremely important that we, as custodians of the earth, keep our soils healthy by helping to maintain microbial diversity since we, too, are a part of the soil food web.



Source: NRCS-USDA

We can improve and keep our soils healthy by keeping the soil covered as much as possible. Bare soil is prone to excessive wind and water erosion and an invitation to opportunistic weeds. Disturbing your soil as little as possible helps to keep the micro-organism system intact. Every time you till your soil you disturb the micro-structure (micro-web), which in turn causes a disruption in the soil's ability to provide nutrients to the plants. Adding organic materials in the form of compost such as dried leaves or purchased compost will improve soil fertility and structure. This can be added to the top of the soil without tilling and allowing the natural decomposition to be done by earthworms, bacteria, etc., thus not disturbing the soil. Soil that is compacted prevents water and air from entering the soil and leads to unhealthy soil. Avoid walking constantly on the same path and driving heavy equipment on your soil as much as you can. Adding plant diversity helps with replenishing nutrients that one plant might use up while another plant adds that nutrient to the soil. Avoid using chemicals as much as possible. Chemicals can kill off the living organisms in the soil, and can kill the plants growing in the soil, which provide nutrients. Some chemicals can remain in the soil for a long time. The use of chemicals in plant and crop production is a contentious topic that will be left for you to decide what is right for you and your garden. Moisture control is another important consideration for maintaining healthy soil. Too much water and the soil can drown since oxygen can't permeate

into the soil structure. Too little moisture and the soil dries and cracks and is exposed to wind erosion and compaction.



The Massachusetts Healthy Soil Action ecolandscaping.org

By taking care of the soil, it will provide you with food crops, plants to enjoy, and a healthy environment for Mother Earth, which provides us with so much more!

GO FORTH AND PLANT SOMETHING TODAY!

References:

Soil Science Society of America

Aktan Askin, *Microbes*

Mahdi-Al-Kaisi, Department of Agronomy, Iowa State University, IA. *What Is Soil Health and How Can We Improve It?*

The Massachusetts Healthy Soil Action ecolandscaping.org

Community Garden Update - Mid-June

By Deb Howard, Master Gardener

The deadline for planting in community garden plots is the end of May, so by now all the gardens have been subjected to a few weeks of hot, dry weather. It's been a great month to take advantage of the free water that is provided for the gardeners! With the heat comes the bugs and the weeds, so June is also the time we remind our gardeners of organic methods for controlling the critters and the beauty of working up a good sweat by 10am hoeing weeds!

June is also the time when each individual gardener's crop selection and creative garden and fence designs start to reveal themselves. Enjoy these images from the Leader's Park Community Garden.



Your Questions Answered

Have a question or comment for Master Gardeners? Email us at mcmgnewsletter@gmail.com, or info@minnehahamastergardeners.org, or call 605-782-3290 and leave us a message.

Q: I looked and didn't see any pests, so what is causing this damage to the leaves on my eggplants?



A: Flea beetles are the most likely cause of the damage to your eggplant. Flea beetles are small (they might look like black pepper) and jump when disturbed, so they aren't always easy to see.

Adult flea beetles become active in the early spring when they emerge from their overwintering location and the females start laying eggs. The flea beetle larvae will feed on the roots of plants, but it is the adult flea beetle that feeds on the leaves and stems and will cause the most damage, especially to eggplant started from seed or small transplants. They feed most on hot, sunny days,

which we had a lot of in May and early June. The small round holes left behind on the leaves will look like buckshot and are unique to flea beetles.

There are several things you can do to prevent damage from these pests. Start as early as the previous fall by removing any plant debris from the garden that may provide an overwintering site for the adults. In the spring, resist the temptation to plant transplants early. Waiting for consistently warm weather will help the transplants grow faster and quickly surpass the stage where they are most susceptible to damage by flea beetles. In addition, by planting later, you may miss the weeks of peak adult flea beetle activity.

Trap crops, such as radishes, can be planted prior to your eggplant. The flea beetles will be looking for the earliest and tallest plants, so by the time your eggplants show up, the pests will be happily feasting on sacrificial radish tops. Floating row covers may also be used to keep the flea beetles away, but they should be removed before eggplants develop blossoms and need to be visited by pollinators. Yellow sticky traps located around your plants will also snag many flea beetles. Organic diatomaceous earth, available at most garden centers, can be dusted on the leaves and around the base of your eggplants until they are strong enough to fend for themselves. If applied after watering the plants, diatomaceous earth will adhere to the leaves of the plant and protect them until it is washed off and needs to be reapplied. Of course, there are various organic and synthetic pesticides that will also take care of flea beetles, but always keep in mind that pesticides will just as readily remove the beneficial insects from your garden as the pests and are best used only as a last resort.

The good news for you eggplants is that flea beetles are most damaging in the spring. While they may continue to nibble on your eggplant leaves throughout the summer, plants are typically able to survive the assault by the time they've gotten to the 4-5 leaf stage. Keep this information handy, however, as flea beetles may abandon your eggplant, but are equally happy nibbling on a wide variety of other plants you may also have in your garden, including beans, cabbage, corn, eggplant, lettuce, peppers, potatoes, and tomatoes.

To all contributing Master Gardeners, for your time and knowledge, thank you!