



info@minnehahamastergardeners.org



Where flowers bloom so does hope. - Lady Bird Johnson

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August Events:

No events will be hosted by Extension Master Gardeners in August.



Echinacea & Calendula officinalis

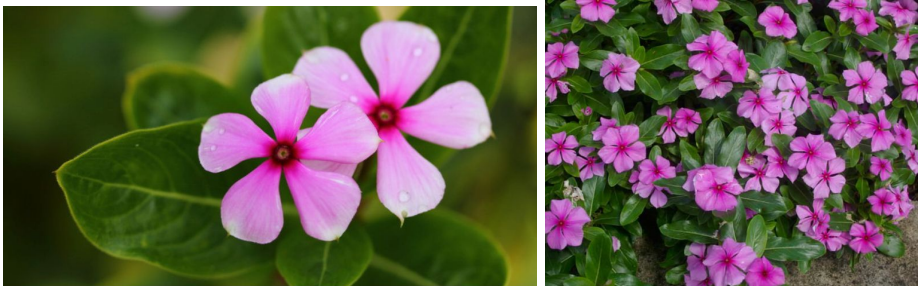
In the Herb Garden

By Priscilla Jurkovich, Master Gardener

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

Rose Periwinkle (*Catharanthus roseus*) is a flowering herb in the Apocynaceae (milkweed) family. It is a delicate annual plant in zone 4 (perennial in native Madagascar zone 9-11). Needs darkness to germinate and takes 10-21 days. After germination requires direct light. Rose Periwinkle grows between 8 and 18 inches in height, tolerates any type of soil but does not like overwatering. Light full sun to part sun in soil well-drained is preferred. The five petal, starry flowers with glossy leaves are great to attract butterflies. Deer and rabbit resistant.

Rose Periwinkle flowers have an anthocyanidin pigment (red coloring) called Rosendin and Vincristine. Vincristine was the first chemotherapy drug used for leukemia. The root, stems, leaves and seeds of the periwinkle plant have anti-cancer alkaloids (vinblastine) and are also helpful to treat diabetes, high blood pressure, poor circulation, mumps, malaria and hepatitis. Rose Periwinkle has poisonous qualities, but also medicinal benefits. Use with caution.



Foxtail Lilies (*Eremurus elwesii*) (A.K.A desert candles or king's spears)

By Roine Klassen, Master Gardener

These tall flowers, native to drier regions of the central Asia and eastern Europe region, feature strap-shaped leaves and hundreds of small, individual flowers along its stalks that may reach 8-10 feet, though smaller varieties of hybrids will grow to 3-5 feet. They prefer a sunny and dry location; their roots die off in wet soggy soil. Consider amending the soil with additional organic material to raise the level by several inches to promote drainage. With taller varieties, consider wind protection. Foliage helps to gather sunlight, create food through photosynthesis and strengthen the bulb for the

next season. By mid-summer the leaves will yellow and die back as the plant goes dormant. If foliage is removed at that time, consider marking the spot to avoid disturbing the roots. Foxtail lily tubers are dormant root pieces rather than bulbs. They are brittle so handle carefully at planting. Soak for 3-4 hours before planting. Put the pointed end up about 2-3 inches deep about 2 feet apart. Check the instructions that come with the roots. Plant in a location where they will not be disturbed; one source says they bloom 10-15 years without dividing. These flower stalks make an excellent cut flower specimen. The late spring bottlebrush-shaped flowers come in warm shades of yellow, orange, pink and coral; the flowers open from the bottom of the spike to the top. There is some disagreement in the sources I found about zones, some say 4-8 while others say 5-8. Likely they will do best if they are protected during the winter and also have covering in the early spring when new foliage is emerging. Watch for slugs in the spring. Foxtails are listed as deer resistant though loved by butterflies



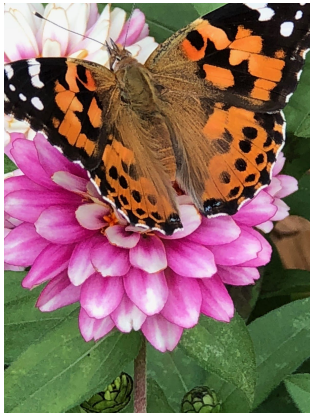
Planting for Pollinators!

Perennials, Annuals, Herbs and Trees

By Pam Conklin, Master Gardener

Why Plant for Pollinators

Populations of native pollinators, such as bumblebees, butterflies, bats, and hummingbirds are declining, some noticeably quicker than others. The decline of these pollinators is believed to be due to three major factors: exposure to pesticides, habitat degradation and loss, and climate change.



Painted Lady Butterfly on Zinnia



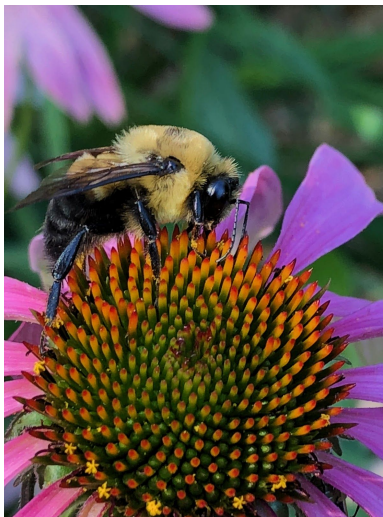
Monarch Butterfly on Milkweed



Black Swallowtail Butterfly with Dill Weed

Consequences of Decline

As native pollinator populations decline, many plant species and vital ecosystems become more vulnerable to extinction. Agricultural systems face the same demise, as commercially produced honey bees and bumblebees are experiencing rapid decline from mites and pathogens that cause colony collapse disorder (CCD).



Bumble Bee on Coneflower



Sweat Bee on Basal



Hover Fly on Cardinal Vine

We can Help

Restoration, conservation, and management are key components to addressing the loss of pollinators. Encourage landowners (farmers and homeowners) to adopt “pollinator-friendly” practices. Plant pollinator gardens, and if you don’t own land, consider flowers in containers.

Become informed. Professional Societies that you may visit for more information are: Ecological Society of America, Entomological Society of America, American Association of

Professional Apiculturists, Botanical Society of America, and nongovernmental organizations, North American Pollinator Protection Campaign, Xerces Society for Invertebrate Conservation. Locally, checkout South Dakota Pollinator Habitat Assistance, <https://habitat.sd.gov/resources/pollinator-habitat.aspx>, and SDSU Extension, <https://extension.sdstate.edu>, and local Master Gardeners.



Privet Hawk-moth on Zinnia



White-lined Sphinx Moth



Anna's Hummingbird

Basic Garden Design Considerations

Variety: To ensure the best nutritional health for pollinators, plant a variety of flowering plants that will provide them with different types of pollen and nectar sources. Choose plants with various bloom times for a continuous supply of food all season long, from early spring to late fall.

Native: Elect to plant some native flowers that are more suited to South Dakota climate and soils. Native plants will attract many more native pollinators to your garden. For annuals and other perennials, choose non-cultivated varieties that have a single ring of petals around the center flower parts.

Habitat: Provide nesting and an area where pollinators can retreat for protection and rest; as well as, providing a water source.

Hosting: Choose a few host plants, e.g., Common Milkweed and Dill Weed are plants that serve as food sources for the caterpillar stages of Monarch and Swallowtail butterflies, respectively.

Plant Requirements: When starting your pollinator garden consider the sun, soil, and moisture requirements of the plants, as well as any spacing requirements. This will assure plant health. Stick with plants in hardiness zones 1 - 4.

Just stop: Don't use insecticides, herbicides, or fungicides on your garden, or lawn. But, if you must use chemicals, use sparingly and only use the chemicals that are least harmful to bees.

Small spaces: Consider planting annuals and bulbs in containers. Another thought is to leave the dandelions and white clover to grow and bloom in your lawn. If neighbors complain, explain that native bees forage for these sources in early spring.

The following lists contain superior nectar and pollen producing plants that are suitable for South Dakota climate and soils.

South Dakota Native Perennials with bloom times							
	May	June	July	Aug	Sept	Oct	pollinators
Buffalo bean							B, BF
Prairie violet							B
Sweet William							B, BF
Foxglove beardtongue							B
Wild columbine							B, BF, H
Showy beardtongue							B
Textile onion							B, BF
Bee balm							B, BF, H
Butterfly weed							B, BF, H
Swamp milkweed							B, BF
Wild licorice							BF
Lead plant							B
Purple prairie clover							B
Hoary vervain							B, BF

Stiff sunflower							B, BF
Anise hyssop							B, BF, H
Black Samson							B, BF
Purple coneflower							B, BF
Aromatic aster							B
Dotted gayfeather							BF
Heath aster							B, BF
Smooth blue aster							B
B = bees, BF = butterflies, M = Moths, H = Hummingbirds, LB = Lady Bug Beetles							

Visit these sites for more information on native plant varieties:

<https://extension.sdstate.edu/sites/default/files/2019-08/P-M-03-2005-2018.pdf>

<http://www.plantnative.org>

Annuals, Herbs, Shrubs, and Trees

Annuals	Pollinators	Herbs	Pollinators
Alyssum	B, BF	Basil	B
Cardinal Plant/Vine	B, H	Borage	B
Cleome	B, BF, H	Chives	B, BF
Cosmos	B, BF	Dill	B, BF
Cornflower/Bachelor button	B, BF, LB	Lavender	B, BF, H
Heliotrope	B, BF	Oregano	B, BF
Lantana	B, BF, H	small Trees & Shrubs	Pollinators
Nasturtium	B	Apple & Crabapple	B
Nicotiana	B, H	Chokecherry	B

Pentas	B, BF	False Indigo	B
Salvia	B, H	Dogwood	B, BF
Scabiosa/pincushion flowers	B, BF	Hawthorn	B, BF
Sunflower	B, BF	Nannyberry	B, BF
Verbena	B, BF	Plum	B, BF, M
Zinnia	B, BF	Honeysuckle	B, M
Trees	Pollinators	Golden Currant	B, BF, M
Honey Locust	B	Honeyberry	B
Kentucky Coffee Tree	B, BF, H	Juneberry/Servicheberry	B, M
Linden	B, M	Ninebark	B, BF
Ohio Buckeye	B, H	Prairie Rose	B
B = bees, BF = butterflies, M = Moths, H = Hummingbirds, LB = Lady Bug Beetles			

Where to Buy Native Plants

Use your zip code to find Native Plant Nurseries near you, www.plantnative.org.
Look at South Dakota, North Dakota, and Minnesota for a larger variety of nurseries.

Your Questions Answered

Have a question or comment for Master Gardeners? Email us at mcmgnewsletter@gmail.com or post questions to our FaceBook page, [Minnehaha Master Gardeners](#). You may also email garden questions to SDSU Extension Garden Line at sdsu.gardenseast@sdsu.edu.

Q - Why are the bottoms of my tomatoes rotten?

A - Rot on the bottoms of tomatoes is called Blossom End Rot. Most commonly, blossom end rot will occur on the first few tomatoes that develop on the plant, but later developing tomatoes will be fine. This happens because the calcium needed for fruit development is not reaching the fruit, most likely because the calcium is being directed to leaf development, as the plants grow. Calcium is usually not an issue in SD soils, so adding calcium will not be helpful, unless you are growing tomatoes in containers, in which the potting soil may be deficient in calcium. The best treatment is to maintain constant soil moisture and avoid soils that are too dry.

For more information click, [Blossom End Rot on Tomatoes and Other Vegetables](#).