



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

Althaea officinalis is an annual, biennial or perennial aromatic herb from the Malvaceae family that includes cotton, okra and hibiscus. The leaves of the common mallow are alternate, on long petioles that are circular to kidney-shaped, and toothed. Short hairs are on the upper and lower leaf surfaces. The stems are flexible and can grow anywhere from 4 to 24 inches in length and often are on the ground. The fruits are round and have cheese-like wedges which give the common mallow its nickname, cheese plant. The flowers are either single or in clusters in the leaf axils blooming from June to late autumn. The flowers have 5 petals and are white, pinkish or lilac flowers.

All parts of mallow are edible and can be used for medicine and food. The leaves can be added to a salad, the fruit can be a substitute for capers and the flowers can be tossed into a salad. When cooked, the leaves create a mucus very similar to okra and can be used as a thickener to soups and stews. The flavor of the leaves is mild. Dried leaves can be used for tea and a common ingredient in a tea labeled “Throat Coat”. Mallow roots release thick mucus when boiled in water. The thick liquid that is created when boiled in water can be beaten to make a meringue-like substitute for egg whites (where we get “marshmallow”). Common mallow leaves are rich in vitamins A and C as well as calcium, magnesium, potassium, iron and selenium. Selenium is known for anti-cancer qualities. Mallow is an anti-inflammatory, diuretic, skin softener, laxative, soothing to mucous membranes and an expectorant.



What's Bugging You??

By Donna Haber, Master Gardener



Cicada killer wasps

In July and August, large soil mounds may appear in bare, well drained soils as well as lawns and garden beds. They appear as large ant hills, but the dime sized holes with up to 1/2 gallon of soil surrounding them are actually the in-ground nests or burrows of the cicada killer wasp.

Cicada killer wasps are very large—up to 1 1/2 to 2 inches in

length—and have long black bodies with 3 yellow striped bands on the abdomen. They appear quite frightening, but they are rarely aggressive to humans. Males emerge first from the ground nests and establish territories. Females mate once and then begin to prepare their in-ground nests. Only the females have stingers, which they use to sting and paralyze their cicada prey. After the sting, she takes it back to the burrow where she lays a single egg on the cicada and seals off the chamber. Within the next two weeks larva emerge, eat the cicada, then spin a cocoon to over-winter in the underground tunnel. The following year wasps come out from the tunnels.

Unlike hornets or yellow jackets, cicada killers are solitary wasps and don't live in colonies. However, female cicada killer wasps may build their nests in large numbers. Each female can build up to four burrows in her lifetime, and each of these burrows may be up to forty inches long and contain up to sixteen individual chambers.

Because they are harmless to humans, cicada killer wasps don't need to be controlled. However, if the number of nests is large and can't be tolerated, insecticidal dust labeled for control of ground nesting wasps can be applied directly to the nests. In garden bed situations landscape fabric applied over the nests followed by mulch will prevent the emergence of wasps next summer.

Herbaceous Perennial of the Month

By Roine Klaussen, Master Gardener

Jacob's Ladder (also called Greek valerian)

Polemoniaceae (phlox family)

This herbaceous perennial blooms in early summer. The fernlike foliage has pinnately compound leaves. It may require staking since plants may vary from 12-36 inches depending on the variety. The clusters of dark lavender tubular or bell-shaped flowers grow on stalks. The five petaled flowers are one inch wide. Since there are 25 known species some flowers may have white, pastel blue or blue purple with peachy orange centers. This plant prefers some shade in the afternoon though will tolerate full sun better is watered regularly and thoroughly. After flowering, cut the plant back hard to induce new foliage growth. However, if self-seeding is desired, allow the seeds to mature. Jacob's Ladder is considered non-aggressive and spreads by seed, division or separation. No insects or disease problems seem to affect this plant.

www.gardening.cornell.edu

www.Missouribotanicalgarden.org



Recommendations when mailing an item to the lab at SDSU for evaluation.

By Ronine Klaussen, Master Gardener

You might start by sending two FOCUSED pictures of the item, one up close and the second of the whole plant via email: sdsu.pdc@sdstate.edu

If you need to send a sample, please consider the following suggestions to enable a correct diagnosis.

- send samples early in the week
- loosely wrap parts in a dry paper towel to absorb any condensation; place in a plastic bag
- dead plants are rarely informative; send sections of healthy and dying plant
- soil is rarely needed, unless it is requested by the lab
- if sending soil and plant material, send each in a separate bag.
- if sending small insects, place in a vial of alcohol
- pack large insects in cotton
- DO NOT send live insects!

Sample submission forms are available on online: <http://www.sdstate.edu/ps/plant-clinic/index.cfm>

There is a \$15 basic sample fee.

CONTACT INFORMATION:

SDSU Plant SPSB 153

Brookings, SD 57007

Phone (605) 688-5545

ATTRACTING & FEEDING HUMMINGBIRDS

By Cindy Jungman, Master Gardener

With the arrival of August, it seems that summer starts to wind down. It's a time to sit back and enjoy the bounties of our harvest and the mature beauty of the flowers in our gardens. August is also the time to prepare for the coming of our hummingbird visitors as they migrate south. If you are lucky enough to attract these little jewels, you will be thrilled to observe their antics.

Fall migration for hummingbirds can range from August into October, with peak numbers usually occurring in September. Hummingbirds are mostly limited to the eastern half of South Dakota, and they rarely spend the summer in South Dakota. It is more common to see them as they migrate through the area in September. The Ruby-throated hummingbird is the most predominant species to visit this area.



Hummingbirds migrate alone rather than in flocks. They fly low in search of food along the way. The Ruby-throated hummingbirds migrate to the southeastern United States, and then fly 600 miles across the Gulf of Mexico to their winter residence! Therefore, they need to bulk up their bodies during the trip south to prepare for the 20-25 hour flight across the Gulf.

The primary source of food for hummingbirds is nectar. While hummingbirds are attracted to the color red, they will eat from any color of nectar-producing flower. Flowers that hummingbirds are attracted to include cardinal flower, lantana, petunia, nicotiana, geranium, begonia, butterfly weed, salvia, snapdragon and bee balm, to name a few. Since this is August and planting is established, the important thing is to keep your flowers healthy and attractive to the hummingbirds. Deadheading spent blooms will encourage fresh blossoms.

While hummingbirds prefer natural nectar from flowers, they will eat readily at feeders. Feeders also become more popular as flowers begin to fade. It is better to put feeders out early rather than late so that the earliest migrants don't pass you by.

Most feeders will be red in color to attract the hummingbird's notice. Place your feeder in the open where birds can see it as they are flying past. Hanging your feeder among brightly colored flowers or containers is ideal. You can also hang some red ribbons etc. to catch their attention. Hummingbirds are very territorial and one bird can totally dominate a feeder. Consider putting up multiple feeders out of sight from each other to provide for more hummingbirds.

You may purchase hummingbird nectar, but it is very simple to make your own. It is not recommended to use red dye in the nectar. The basic recipe for making your own nectar is one part sugar and four parts water. Boil the solution for 1-2 minutes to dissolve the sugar. Cool and store in the refrigerator. Never use honey or artificial sweeteners. Fill your feeder only a few inches, as the birds will not be able to drink more than that before the nectar needs to be changed.

Hummingbird feeders need to be cleaned and the nectar changed every 3-4 days, and more often in hot weather. Mold in the water can be harmful to the birds. Never use harsh detergents. Rinse the feeder out with hot water each time you change the nectar.

Hummingbirds are creatures of habit. They have highly developed geographical memories and once they find your feeders they will continue to visit year after year. This is a good reason to work extra hard at attracting hummingbirds. Once you get them established, you will have the joy of welcoming these flying jewels back next year!



CLEMATIS

By Nancy Torkelson, Master Gardener

Clematis for sale in tiny pots are not ready to plant in the soil. Plants purchased in 1-gallon pots with a healthy root system are ready to plant. A young clematis placed in a big hole without sufficient root mass will have trouble establishing.



If possible choose a location with half day sun, or if in open ground, provide a sun-filtering place. Most clematis prefer sun on the top growth, and cool moist soil at their roots. Striped clematis (Nellie Moser) fade quickly in full sun. The blossoms are prettier when grown in partial shade. Dappled shade is ideal for striped cultivars with pale colors.

Choose a spot where the soil will not be disturbed by replanting. Clematis may send out feeder roots near the surface.

If you plant annuals at the base, choose self-seeders and **DO NOT** plant close to the base. Some gardeners use 10 gravel mulch (don't use bark) mounded around the base of the clematis.

Dunk the new clematis in a bucket of water for 10 minutes. This assures that the root ball enters the ground well watered and without dry pockets.

When you are ready to plant the clematis remove the stake in the pot with the clematis, and **PRUNE** the clematis back to 12 to 18 inches tall. If the clematis has flower buds, let it flower in the pot, and plant after the flowering has finished. **ALWAYS** prune the clematis when transplanting, or planting to avoid stress on the plant.

Dig a hole 18 inches deep for the clematis. Put some coarse material in the bottom of the hole (compost, gravel and some bone meal or other mild organic low-nitrogen fertilizer). Place the clematis in the hole so that 2 to 3 inches of the shoots are buried once the soil is replaced around the plant.

Clematis need companions: provide a shrub, tree, fence, or trellis for the clematis to climb on. Non climbing (herbaceous) clematis look better sprawling into a shrub (roses and hydrangeas are ideal). Keep the ground moist. Once active growth starts, fertilize with a mild flower food (4-6-2, or similar, with all numbers below 10). Clematis with yellowing foliage will appreciate a drink of Epsom Salt (magnesium sulfate), or a fertilizer with a magnesium sulfate in it. (try tomato formulas).

PRUNING CLEMATIS

If the clematis is in a 1 gallon pot and has 2 to 3 stems coming from the crown, and is about 3 feet tall, cut it back by ½ of the plant. This reduces the demand on the root system, and as it is transplanted, initiates quicker new growth and more blooms to come.



After the first year, pruning is quite simple, if you keep in mind one principal: the best time to prune the clematis is when it has finished its first flush of blooms. **MANY CLEMATIS WILL REBLOOM.**

The earliest blooming clematis and their cultivars (*C. armandii*, *alpia*, *cirrhusa*, *macropetla*, *koreana*, *montana*) finish blooming in the late spring. If you want large plants **DO NOT** prune them every year. These plants flower on the previous year's growth. If you need to hard prune them, do so right after flowering. They will bloom right on time the next year.

Large flowering hybrids produce the largest flowers in the spring on last year's wood. If you hard prune these plants right after the first blooms, you are removing wood that may not bloom again, and you encourage new growth that will produce more flowers in late summer and fall. If you want the plant to stay larger, just deadhead the old flowers, or take off only a foot or two of stem length behind the spent flowers to maintain a tidier plant. It will bloom again in the season. After the repeat blooming in the fall, tidy up bushy and strong new shoots that will produce lots of flowers. These plants may be hard pruned once they go dormant in the fall.

This group includes the Jackmani, the Viticella group, the Herbaceous Perennial group, the Texensis group and such species as the Sweet Autumn Clematis (*Clematis terniflora*).

For all 3 groups, newly planted specimens should be reduced in size at planting to ease transplant shock. Light pruning can be done at any time.

Linda Beuler “You cannot kill a clematis by pruning it.”

HORTICULTURE FOR HEALTH AND HEALING FOR YOURSELF AND OTHERS

by Bill Torkelson ,Master Gardener- Minnehaha County

Gardens are important for healing, education, leisure. and teaching. Access to nature is related to how we reduce stress. Workers with a view of trees and flowers are more satisfied with their jobs than those who see buildings from their window.

In one study, 71% of people found a reduction in depression after going on an outdoor walk versus a 45% reduction by those who went on an indoor walk. Growing vegetable and flowers are great ways to educate our youth, and the benefits of horticulture.

Beating the aches and pains of gardening is important to all of us. Gardening involves an ACTIVE participation in the growing of plants, and tends to be LABOR- INTENSIVE. Our ability to garden can be limited by pain, joint limitations, endurance, balance and vision.

ADAPT-to change your behavior so that it is easier to garden. You need to ADAPT yourself-tools and your garden

PREPARE YOUR BODY –STRETCH-This will help you get your body ready so there is less muscle tension-Your work will be easier. LIFT WITH YOUR LEGS, NOT YOUR BACK

Get help when you need it. ASSESS the task. An ounce of prevention--- AVOID TWISTING and REACHING. USE GOOD BODY MECHANICS.

Safety in the Garden-check for hazards-wear sturdy shoes and long pants. Wear gloves-Listen to your body-sit when possible-Have the right tools-lightweight-designed to decrease stress on the joints-Add padding to your tools-Use lightweight hoses and tools. Bypass pruners-tarps, carts and wheelbarrows. Long handled tools to decrease bending-kneeling pads and benches.

Adapt your garden-vertical gardens-container gardens-raised beds- Design your garden-use low maintenance high impact plants. Use shrubs and small trees in place of perennials-ground cover. Plan ahead-Don't expect that things will stay the same.

Remember the old adage---“stuff happens” You may need to decrease the size of your garden- mulch to decrease weeds-use hardscapes-rock gardens

Approach gardening with a list- Master list-What do I want to accomplish? What do I need assistance with? Prioritize tasks-sections of garden- Spring, wake up the garden- Put it to bed in the fall.

Be creative-miniature gardens-bonsai

ACCEPT IMPERFECTION

Diet is important to prevent diseases-be sure to eat a rainbow of foods-eat what you can afford- 2/3 of your plate should be fruit and veggies. 1/3 protein—Learn to like it.

August 2017

		1	2	3	4	5
			Enter Horticulture Exhibits for the Fair	Fertilize strawberries after runners start...	Use 1#N per 100 ft. row	Visit the Sioux Empire Fair!
6	7	8	9	10	11	12
	Watch for squash vine borers, destroy infected vines	Track crabgrass, apply preventer in May	Keep up with the weeding!		Plant fall cruciferous crops and peas	
13	14	15	16	17	18	19
Last day for the Sioux Empire Fair!	Master Gardener Meeting: Potluck at Good Earth State Park 6:00	Divide and move crowded iris	Check your community garden bed.	Can tomatoes for winter	Enjoy eating, preserving and sharing every vegetable from your garden.	Visit a Farmer's Market
20	21	22	23	24	25	26
	Start watering trees to prevent winter kill		Till lawn areas in need of renovation	Clean screen on top of rain barrel to prevent clogging		
27	28	29	30	31		
	Plant lettuce, radishes, carrots, beets	Reseed lawn, rake in and firm, water daily until up				