



Written by Minnehaha County Master Gardeners



In This Issue of *From the Ground UP*

April Events:	2
In the Herb Garden	3
Peas, Please	3
Castor Bean, <i>Ricinus communis</i>	5
DID YOU KNOW...	7

April Events:

Thur 22 | Earth Day

Fri 30 - Sat May 1 | Arbor Day Planting - Sioux Falls Parks & Recreation seeking volunteers to help plant 355 trees in 2 days!

Contact: www.helplinecenter.org/tree 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.

Astragalus (*Astragalus membranaceus*) is an energy herb in the Fabaceae (legume/bean) family that includes soybeans, peas, peanuts, etc. It is a perennial plant in South Dakota zone 4. Astragalus grows between 24 and 36 inches in height. It thrives in sunny areas with well-drained, slightly alkaline, sandy soil. The stems are hairy. The leaves alternate and have between 12 and 24 pairs of leaflets. The small pea-like flowers come from the axils of the leaves and flower from midsummer through fall. Planting from seed may require preparing the seed by scraping off the outer membrane of the seed to encourage germination.

Health Benefits: The root is the medicine and should be at least 3-4 years old to use as medicine. Astragalus root has been used for medicine because of its immune-boosting, anti-aging, anti-viral and anti-inflammatory effects. Astragalus produces resveratrol which sends a message to cells to stop manufacturing viruses. Astragalus root has been useful when our body has a cytokine storm and tries to fight viruses by overproducing an immune response as seen with some coronavirus symptoms. Foods with Vitamin C, D, garlic, and astragalus suppress the production of cytokines TNF-a and IL-6 and fight against the virus.



Peas, Please

by Pam Conklin, Master Gardener

My mom always said, “Eat your peas.” I was always happy to oblige. Peas are packed with nutrients. According to [WebMd](#), they are a “vitamin powerhouse.” To me they are sugary, sweet and fun to eat!



Pea, *Pisum sativum*, is a common cool-season home garden crop. Peas are a legume. There are 3 types of peas - shelling, snap, and snow (see photos & descriptions, below) and an abundance of varieties to choose from. Plant

types can be vining/climbing that may grow to 5 Ft., or more, or shorter “bush” types that get to be 2 - 3 Ft. Climbing varieties tend to have a longer harvest time, while the bush varieties will set its fruit all at once and then be done.



Shelling peas, also known as sweet peas, garden peas, or English peas, are eaten by removing the seed from the pod. Pods of shelling peas can have as little as 1 or 2, or as many as 12 peas per pod. The pod is discarded. They can be eaten raw, or cooked. For peak flavor, harvest before the pods begin to discolor.



Snap peas, or sugar snap peas are between shelling and snow peas. The entire pod is eaten raw or cooked. Look for varieties that are stringless, or be sure to remove the string at the seam before eating. Harvest snap peas when the pods are round and swollen.



Snow peas, often called Chinese pea pods, because they are common in Chinese cuisine have a flat seed pod. They also have a string that should be removed before eating raw, or cooked. Snow peas usually have a milder taste.

Growing requirements:

Soil - peas grow best in slightly alkaline soils, a pH between 6 and 7.5, which happens to be what most of us have in this area of South Dakota. Soil type is no challenge for peas. The main requirement for success is to assure your soil has good drainage.

Light and Temperature - peas need only 4 - 5 hours of sunlight to flower. They also need cooler temperatures to produce flowers and set pods. According to the [Farmer's Almanac](#) we should be planting peas from March 28 - April 18. Planting as soon as the ground thaws, is ideal. Peas may be slow to germinate when ground temperatures are below 45 F. The plants will stop developing once air temperatures climb into the 80's. Young seedlings can survive light frost, but be prepared to cover plants that have set flowers, as the flowers may be damaged by frost.

Water - fortunately, peas grow when spring rains are abundant, so watering may not be needed. If your soil is sandy, or we are experiencing a dry spring, be sure to water to about a depth of 1 inch. Allow soil to dry between waterings. Also, it's a good practice to water early in the day, and avoid getting the leaves wet.

Support - vining varieties need a trellis, while bush varieties can be allowed to mound without support.

Harvesting - in general, peas are ready to harvest about 3 weeks after flowering. It's recommended that you sample a pod each day as soon as they have begun to swell and fill out to determine peak

flavor and time to harvest. The peas will be slightly bigger than the seed you planted. Let them go too long on the vine, they will become starchy and bitter. Once picked, plan to eat, or preserve them within 3 days to enjoy peak flavor.

Insects & Diseases:

Peas may be affected by a variety of root pathogens. Practice good garden hygiene. Buy resistant varieties, rotate crops each season, and don't over water.

Cutworm and aphids seem to be the big contenders resulting in insect damage. If you don't fence in your garden, rabbits may also enjoy your pea plants, eating the shoots down to the ground.

The University of Minnesota Extension has a great DIY plant [diagnosis & treatment](#) site that tackles the most common issues gardeners encounter. It's simple and easy to use. Of course, local Master Gardeners are here to answer any of your garden and plant questions. Get answers using any of the following venues: email questions to mcmgnewsletter@gmail.com, or SDSU Extension Garden Line at sdsu.gardenseast@sdsu.edu. Now, pass the peas, please!

Castor Bean, *Ricinus communis*

By Deb Howard, Master Gardener

If you're looking to experience the tropics this year but aren't comfortable traveling just yet, consider bringing the tropics to you - make space in your yard for Castor Bean plants! The impressive Castor Bean, *Ricinus communis* is an evergreen herbaceous or semi-woody large shrub or small tree that is a perennial in frost free areas (and even considered a weed), but does well in colder climates as a warm season annual, where it will die off when the temperature drops below freezing. Castor Bean plants are members of the spurge family, related to the poinsettia.



The plant will grow quickly from seed, easily reaching an average height of 6-10 feet within a single summer. Even more impressive than the height of the plants, however, are the beautiful, glossy, palmate leaves that can grow as large as 3 feet in width, providing both abundant shade and a good privacy screen. Depending upon the variety, the star-shaped leaves may be green, maroon, purplish-bronze, reddish-purple, purplish-black, or even dark metallic.

While the plants will flower, the seed pods are much showier than the flower blossoms. The small flowers form dense panicles that can be one to two feet in length. The bean pods that form are burr-like, large, soft, spiny capsules. The pods will split when mature, revealing the seeds, which look very much like a well-fed tick, and from which the Latin genus name refers (the word *ricinus* is Latin for “tick”).

The word “bean” in the plant name refers to these seeds, which have had numerous medicinal and industrial uses throughout history. Over half the weight of each seed consists of a thick, yellowish oil. This oil has long been used for medicinal purposes – mainly as a laxative. Industrially, it is still used today in high-performance motor oils, soap, inks, plastics, paints, varnishes and water-resistant coatings.



While castor bean oil is nontoxic, the raw seeds are harmful. In fact, the entire plant is considered poisonous, containing three toxic substances including ricin, a favored poison of political assassins. Because children, in particular, find the colorful seeds tempting, it is important to keep the seeds out of reach of children. Typical symptoms upon consuming the raw seeds are diarrhea, vomiting, and abdominal pain.

Castor plants like full sun and humid conditions, so they are perfect for South Dakota summers. For the best results, plant in loamy, moist, but not soaking wet, soil. Soak seeds overnight to aid with germination. Once the soil can be worked and the threat of frost has passed, castor bean seeds can be sown directly into the garden. Due to its large size, allow enough room for this fast-growing plant to expand, grab a refreshing drink, pull up a lawn chair and enjoy the tropics!

DID YOU KNOW...

By Debi Ulrey-Crosby, Master Gardener



Photo courtesy of Garden n Country

Did you know that you should NOT be too quick to mow your dandelion flowers in your yard in spring? Bees need nectar after just emerging from their long winter rest and if you have no other flowering trees (willow, birch, fruit trees) or early flowering plants, dandelions (*Taraxacum officinale*) become one of their first food sources. Honeybees “hibernate” in nests where they have stored honey from their summer’s work. Bumble bees (often just the queen) are different. They go into *diapause*. Similar to hibernation, diapause is a period of suspended development especially during unfavorable environmental conditions (i.e., winter). where bees no longer forage, feed, or reproduce. This means that come spring, the honeybees are nearly out of honey and bumble bees are waking up after having not eaten for months. Hibernation or diapause is physiologically stressful, so spring means they need to replenish themselves quickly to survive and breed for the next generations.

But wait – there are also reasons that you do NOT need to keep all your dandelions all summer. Didn’t you just say “don’t be too quick to mow my dandelions in spring” you might ask? I did indeed! However, there are also a few reasons that you don’t need to save your dandelions.

(Notice, I’m not advocating for spraying them with herbicide though!) Dandelions can be a source of nutrition for bees, but, in actuality, are a poor source of vital amino acids that they need, especially if they are the only food source. So, let your dandelions grow until more of your pollen producing trees and flowers are growing. Then, feel free to mow, but again, please don’t spray them with herbicide. That could actually end up harming the bees.

So, THIS is where YOU come in. If there aren’t many other nectar producing flowers, trees or plants blooming yet, please don’t mow your dandelions just yet. Many trees, especially fruit trees, develop flower blossoms but if we have a late frost (not unusual for us), those blossoms die. This is where the dandelions come in - they are able to survive the frosts. And while they might not be the best nutrition with all the right amino acids, they are better than nothing at all to hungry bees. We all know that bees, in general, are struggling to survive for a variety of reasons. We need bees to pollinate our flowers in the meadows and our yards, our food crops from almonds to fruits and vegetables. And let’s not forget the honey we so love! Bees are not the only pollinators, but that’s a topic for another newsletter.

So, let’s all PLEDGE to tell our neighbors that we are letting the dandelions grow (at least for a while) so that we can feed the bees. Put a small sign in your yard so that everyone who sees your dandelions will know you are providing nectar for the bees and pollinators for all the pollinating they

do for us. And once the threat of frost is over and more trees and flowers are blooming, then you can mow your dandelions, quilt free. Also, don't forget to plant a wide variety of pollinator friendly trees and plants.

P.S. And PLEASE, whatever you do, DON'T spray your dandelions with weed killer (herbicide). When the bees eat the nectar of sprayed flowers...they die. And that is a big problem for our food production.

Sources: Rusty Burlew, *Honeybeesuite.com*

Garden Myths by Robert Pavlis

Monarch Gardens, Benjamin Vogt, monarchgard.com

Attracting Bees and Beneficial Insects with Native Plants by Heather Holm

Natural, Organic Lawn Care

by Pam Conklin, Master Gardener

A beautifully groomed, weed-free lawn is as much a symbol of the American dream as is apple pie.



Ever since the colonization of North America, green lawns began to grow as an American obsession. They symbolized the influence and wealth of land owners. By the end of WWII, home ownership became accessible to the masses. The availability of synthetic weed killers, fertilizers, and the mechanization of lawn care made it even easier to achieve the perfect lawn. Soon after, lawns became a place to play, a place to enjoy. Caring for our lawns became an American pastime, with hours spent clipping, manicuring, feeding, and weeding. And today, beautiful lawns frame most homes.

There is more to the story of lawn care that many of us may not be aware of. The turfgrass species grown in the US are not native. They were imported from Europe and Northern Africa, including Kentucky Bluegrass. There is little habitat potential in lawns. And grass is by far the *most* watered plant grown in this country. With the development of herbicides and insecticides, our pursuit of the perfect lawn became much easier. On the flip side of convenience, we have dumped numerous tons of pesticides and synthetic fertilizers on the ground. These chemicals sterilize the soil and make their

way into our water systems. This has been our typical lawn care practice for decades, and in many neighborhoods, synthetic chemicals are still the first method of lawn care. Because of the convenience and dependency on synthetic chemicals it seems we have no choice but to keep doing it this way. How else can we continue to enjoy the lush, green, weed-free lawns that surround our homes and cover our golf courses, ball fields, and city parks with little effort?



Times change. Technology and awareness improve. We have better, more sustainable and humane alternatives available. The Missouri University Extension (MUE) published a great article on [Natural Lawn Care](#). When reviewing this article, please be mindful that Missouri's climate and soil composition are different from what we have in South Dakota. Below, I would like to highlight and expound on a few of the more critical points in the MUE article:

- Soils in Southeast SD tend to be more clay with a slightly alkaline pH. And, in general, the main nutrient amendment needed in our local soils is nitrogen.
- The MU article mentions grass species with regard to cutting heights. We mainly grow cool-season turfgrasses in South Dakota. I personally cut my lawn to about 3 or 4 inches throughout the entire season.
 - When mowing, pay attention to the 1/3 rule mentioned. This will help from cutting off too much of the blade, causing damage, thus creating a potential invitation for pests and disease.
- Water helps turfgrasses grow and stay green during drought, and the long, hot days of summer. Remember my statement that grass is the most watered plant in the US? Well, it is possible to overwater, or underwater, which can breakdown the plants natural defenses, leaving them vulnerable to pests. In southeast South Dakota, we've been lucky to experience more than sufficient rainfall in the past couple of years. But we have also been experiencing many more days of warmer temperatures. When summer hits we find our lawns need less frequent mowing, or may even turn brown, especially by mid July into August. This is okay, as long as you can stomach the mid-season dormancy of your lawn. Many people choose to water through these hot, dryer weeks. Doing so, along with setting your mower a little higher, will keep your cool-season turfgrasses growing.
 - The best time of day to water your lawn is morning.
 - Avoid watering on really windy days.
 - Caution, though: watering ordinances should be followed to avoid possible fines, and exorbitant water bills.

- Weed management will be one of the bigger hurdles. MUE offers a few solutions that may be helpful. Spot treating is ideal. This approach helps prevent overuse of chemicals. Whenever possible, weed by hand. You may find it a great way to get in touch with nature and your thoughts.
- Before you make a trip to the garden center, however, the first step should be identification. As far as lawn weeds, type and timing of treatment used is critical to your success. For example, spring application of corn gluten helps suppress seed germination of annual weeds (but it is not 100% effective, so hand weeding may be necessary). Because perennial weeds start pulling and storing necessary nutrients from the ground before they go dormant, applying herbicides in the fall provides more effective control.
- Below is a photo from SDSU Extension to help identify the most common annual and perennial weeds in South Dakota lawns. Please note: dandelions, wild violet, clover, and even creeping Charlie (if you can contain them) can be beneficial habitat for bees and other early spring insects, and the birds and bats that eat insects.
- With any chemical product, natural or synthetic, environmentally safe, or not, ***always* read and follow the label, and follow all precautions.**

Perennial weeds



Quackgrass



Smooth Bromegrass



Creeping bellflower



Ground ivy



Dandelion



Field bindweed



Wild violet



Canada thistle

Annual weeds



Crabgrass



Yellow foxtail



Prostrate knotweed



Chickweed



Prostrate spurge



Yellow woodsorrel
(oxalis)



Broadleaf plantain



Puncturevine

In the next issue of “From the Ground Up,” I will provide tips for calculating how long to run your sprinkler per week, as well as take a closer look at some of the natural fertilizers available, like Milorganite, Ringers, and corn gluten.

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](tel:605-782-3290) and leave us a message.

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