



Cover Artwork by Pam Conklin

A word about Minnehaha County Master Gardeners: We are volunteers trained through the South Dakota State University Extension [Master Gardener Program](#). The Minnehaha Master Gardeners mission is to provide current, research-based, consumer horticulture information and education to the citizens of South Dakota through Master Gardener projects and services. For more information on becoming a master gardener, visit [SDSU Extension Master gardener volunteer program](#). Be sure to stay in touch with all of Minnehaha County Master Gardeners' news: [follow us on FaceBook](#), [visit our website](#), or [email us](#).

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Highlighting Master Gardeners

By Pam Conklin, Master Gardener

Meet Arlene Brandt-Jenson! She has been part of the volunteer Master Gardener program for 10 years. She took the 9 week-long course while living in Watertown, taking off one day a week from her job as District Conservationist for Natural Resources Conservation Service (a USDA agency). Since then, Arlene has served in many roles as an Extension Master Gardener volunteer. As State President she became acquainted with members in many SDSU Extension Master Gardener clubs located throughout South Dakota. One of the most rewarding roles for Arlene, thus far, has been serving as the Membership Chair in the Minnehaha chapter, developing friendships with new members, mentoring and helping them get involved. For Arlene, meeting new people and having opportunities to learn about various horticultural topics, and having so many resources at her finger-tips are some of the key benefits to being a member of Master Gardeners.



Arlene teaching youth (release forms were in place for use of this photo)

Arlene has been involved in many roles and projects. Her passion is with pollinators and pollinator gardens. As a Master Gardener, she headed a project at Leif Ericson Day Camp creating a pollinator garden. Her favorite part of the project was talking with kids ages 8 - 9 about the importance of pollinators, what they are, why they're important, and why they need our help. She will continue this education with adults in a new prairie restoration project she is involved in at her church, converting an acre of turf into native prairie. Arlene stresses the importance of suitable habitat for pollinators whenever she can, explaining that not all flowering plants are equal. Many perennials and annuals have been cultivated to look beautiful in our gardens and planters, but don't really offer the nutrient-rich nectar needed to sustain pollinators, such as pom-pom cornflowers. Much of Arlene's approach to pollinator gardens is to educate others. Creating habitats that benefit pollinators starts with knowing how insects and plants work together, and that the most beneficial habitats include nectar-rich plants and larval host plants for different species of butterflies, moths, and bees.

When Arlene is not tending her personal community garden plot, or raised beds, or creating pollinator gardens, she is advocating for positive changes in the community, such as working with a group to urge the Sioux Falls City Council to adopt the [Sustainability and Climate Action Plan](#).

If you would like to learn more about becoming a Master Gardener, please visit the SDSU Extension webpage about [Becoming a Master Gardener Volunteer](#).

In the Herb Garden: Nasturtium

By Priscilla Jurkovich, Master Gardener

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



Nasturtium have two varieties: **trailing or climbing types** (*Tropaeolum majus*) and **bush types** (*T. minus*). Nasturtium is an annual herb in South Dakota's zone 4 or perennial herb in zones 8-10. Nasturtium is from the Brassicaceae (cabbage) family. Nasturtium seeds can be started 4-6 weeks before last frost or direct seed when the soil is at least 50°F. For faster germination, soak the seeds overnight or nick the seed to manipulate the seed coat. Nasturtiums do well in poorer soils but like full sun or partial shade.

Health Benefits: Nasturtium flowers, seeds and leaves are commonly made into tinctures or teas. The zesty, peppery flavor can be added to savory dishes and salads. The green leaves and flowers are rich in antioxidants and other nutrients and have natural antibacterial and anti-inflammatory effects that help people fight off respiratory infections, coughs and colds.

Did You Know... You can save seeds from your garden?

By Debi Ulrey-Crosby, Master Gardener

Planning Your Garden with Seed Saving in Mind



Spring is finally here so it's time to plan your garden. If you want to save seed from this year's garden to plant next year, you need to select the appropriate plants from which to save seed, know when it's time to harvest the seeds and how to store them. Seed saving is an art and a science. You can make it as easy, or as time consuming as you choose. But there are some important things to know:

KNOW THE FLOWER TYPE - this determines the methods used for harvesting and saving seed.

Monoecious - "single house" – self-pollinate, male flowers and female flowers on one plant: corn, cucumbers, squash, beans, common pea, lettuce, lilies, roses, lilacs, carnations, sunflower, lavender.

Dioecious– "double house" – cannot self-pollinate, male flowers and female flowers are on different plants: spinach, ginkgo tree, asparagus, apples (some are monoecious) named "Male or female cultivar" at garden centers.

KNOW THE PLANT TYPE

Open pollinated - easiest to save and most recommended – produces true-to-type.

Hybrid - (labeled 'F1', 'F2', etc. 'hybrid') Hybridization is a process in which the pollen of two different species, or varieties are crossed by human intervention through pollination. The objective is to get the best traits of two different varieties and combine them to come up with a better variety. Any seed produced by the first plant coming from a hybrid seed is genetically unstable, therefore, it's not usually advised to be saved and planted for use in the following years.

Heirloom - seeds that are open pollinated and have some significant history about them (recommended, easiest seeds to save). Seeds passed down through generations.

GMO - (genetically modified organism) - seed that has been modified on a molecular level.

KNOW THE LIFE CYCLE

Annual - plant completes germination, reproduction, and death in one growing season - some dill, parsley, sunflowers, broccoli, lettuce, arugula, beans, peas.

Biennial - plant requires vernalization (cold period). Completes its life cycle in two growing seasons. Season 1 is vegetative growth and undergoes vernalization. Season 2 flowers, seeds, and dies. - some onions, shallots, leeks, celery, carrots, parsley, sprouting broccoli, kale, cabbage, collards.

Perennial - plants that live many years, surviving and flowering for many years - fruit trees, asparagus.

Note: knowing if your plants are annuals or biennials will help you to determine when to plant, when/how to vernalize, and when to expect to collect seed.

KNOW HOW YOUR PLANT IS POLLINATED

Species - if you know the scientific name of your plants you will be able to determine which species of plants will cross-pollinate. Plants of the same species will cross-pollinate.

Strong self-pollinators – perfect flowers that pollinate themselves and typically don't cross-pollinate – lentils, peas, runner beans, soybeans.

Potential Outcrossers – perfect flowers that self-pollinate but susceptible to cross pollination by insects - tomatoes, eggplant, peppers, okra.

Outcrossers by Insects – imperfect flowers that rely on insects to pollinate flowers – onions, leeks, shallots, carrots, parsley, dill, fennel, broccoli, arugula, cabbage, kale.

Outcrossers by Wind- asparagus, beets, spinach, swiss chard, corn.

KNOW HOW TO ISOLATE YOUR PLANTS

Containment - isolated in cages of permeable material, such as mosquito netting, floating row cover.

Blossom bagging - using the same materials as above to cover individual flowers or flowering branches.

Distance – enough distance between varieties to prevent cross-pollination - distance depends on species (can vary from 10 feet to miles apart).

Flowering time - plant successive crops/plants to have seed maturity at different times.

KNOW WHEN SEEDS ARE MATURE AND WHAT THEY LOOK LIKE

Type of seed - affects when the seed should be harvested and how it's processed for seed saving.

- seed is mature at market stage when the fruit is traditionally harvested for eating.

Ex: melon, squash, gourd, watermelon, tomato, peppers, tomatillos.

- seed is immature at market stage and needs to continue ripening on the plant.

Ex: cucumbers which will change from green to brown when the seed is mature; eggplant will change from purple to yellow/orange or from green to red when the seed is mature.

Dry seeds - dry completely on plants - corn, beans, peas, spinach, lettuce, sunflowers.

Wet seeds - seed is surrounded by a fleshy fruit when the seed is mature and may need additional processing/drying time - melons, squash, tomatoes, cucumbers.

KNOW HOW TO STORE SEEDS

2-6 years, or longer with ideal conditions: 3-9% humidity to maintain low seed moisture, cool/cold and dark environment.

Short term storage - paper envelopes, mesh, or cloth bags, wrapped in double/triple layers of aluminum foil - keep seeds cool, dry, in the dark.

Long term storage - cold storage (closed jar to prevent moisture) in cool basements, refrigerator, or freezer.

Note: When bringing seeds out of cold storage for use, let the container come to room temp before opening the jar to prevent condensation inside the jar. Condensation on the outside of the jar is ok. Seeds may need rehydration prior to germination.

Resources:

1. <https://extension.sdstate.edu/saving-seed-will-seed-produce-plants-similar-plant-it-was-collected>
 2. <https://extension.umn.edu/planting-and-growing-guides/saving-vegetable-seeds>
 3. <https://www.seedsavers.org/garden-planning-for-seed-saving>
 4. [The Seed Garden: The Art & Practice of Seed Saving](#) by Lee Buttala and Shanny Siegel
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Learning by Making Mistakes: plant propagation

By Colleen Collier, Master Gardener

Here's a little story I'd like to share with you about my stem cutting propagation lesson. Summer of 2018; my friend and I had made our weekly 2+ hour, 140+ mile, one way trip to Huron for our SDSU Extension Master Gardener hands-on training. Our instructor this day was Dr. David Graper, we were covering Plant Propagation. I was a little excited myself, because at the beginning of the course Dr. Graper had propagated several *Ficus elastica* and today we were going to learn how to master propagation.

At the front of the room sat a table with plants, pots, potting soil, razor blades, and rooting hormone. The excitement throughout the class was awesome! We would propagate stem cuttings in soil from the different plants Dr. Graper provided. We used clean, sharp razor blades to make the stem cuttings, dip the cut end into the rooting hormone, and stick the cutting into dampened soil. We then covered them by putting the pot and all into a large baggy that was to serve as a greenhouse to lock in heat and moisture. Now, it was up to us to take them home, nurture them and increase our house plant count. I chose a speckled Hoya, English ivy, and variegated Philodendron. I even learned their scientific names: *Speckled Hoya pubicalyx*, *Hedera helix*, *Philodendron erubescens*. I was thinking to myself, I can do this. These are easy plants to propagate and care for. Besides, I was being trained to become a Master Gardener.

A couple of months had passed. Our training was done, and my status changed from master gardener *Trainee* to *Intern*. I began wondering, how am I going to remember everything I had just learned, let alone volunteer to help others learn? Then, I had a sad day; R.I.P. *Hedera helix*. Cause of death? Unknown. Another month had passed and another sad day; R.I.P. *Philodendron erubescens*. Cause of death? Unknown. I began to wonder, am I really a master gardener? I looked at that four-month-old, single leaf,

cut from the *Speckled Hoya pubicalyx*. It looked so tiny in the original 6 inch pot, so I transplanted it to a 2 inch pot. Happily, it had several healthy, white roots, so cutting was doing what it was supposed to be doing.

Fast forward to summer of 2019 (1 year old), a healthy single leaf, root bound, transplanted to a 3-inch pot.

Summer of 2020 (2 years old), a healthy single leaf, lifted it out of the pot not root bound I shall leaf (excuse the pun) it alone, and thought that this has got to be one of the slowest growing plants I have ever had.

Summer of 2021 (3 years old), a healthy single leaf, root bound, changed the potting soil, and shall leaf (pun intended) it in this 3 inch pot, maybe another leaf, or stem will finally grow.

It's the winter of 2022 (3.5 years old), a healthy single leaf, super root bound, transplanted it into a recycled 18 oz. jelly jar. I must really be a master gardener, because I've kept this leaf alive for 3.5 years, but still no additional growth. It's time to do some research on this very, very slow growing plant.



Hoya highlights: Evergreen perennial climber, fast growing, dark green, lanceolate succulent leaves with grayish specks, and purplish-gray stems that grow 8'-10' height/length Hoyas love bright, indirect sunlight. They have a reputation of being fickle. (oh oh!): changes in environment can cause plants to go into partial dormancy, halting growth for weeks or months. They crave humidity - 70% if you can. And they prefer to be root bound.

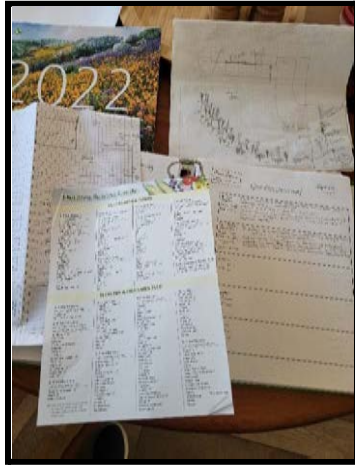
I revisited my plant propagation notes and discovered that when taking a stem cutting from the mother plant, you must have at least one leaf and one node on the stem. If you do not have a node, all you will get is a leaf with roots and nothing more (oops). Despite my mistake, I shall continue to nurture my healthy single leaf because I am a master gardener.

Lesson learned: *Don't* forget the node, or you may become a little annoyed.

Getting a Jump on the Growing Season: in home seed starting

By Susan Scholtz, Master Gardener

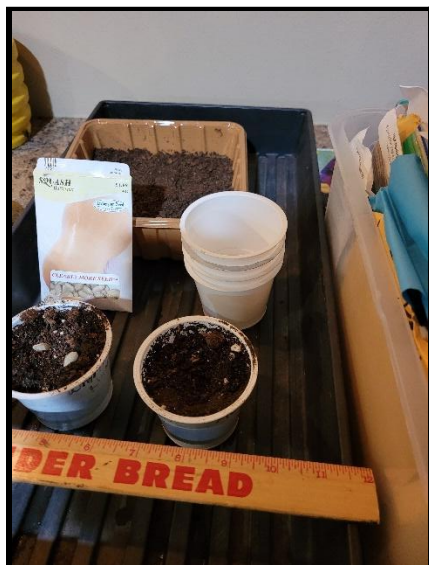
It would seem that Spring just might be on the horizon. As I sit writing this article, the temps are climbing up out of the gutter (again) and the 10-day forecast is teasing us with continued temps above freezing! So like any good gardener, I have my Seed box out and my Garden Journal open, ready to start!



Many of my vegetable, herb, and flower seeds can't be started as early as February, but don't despair! There are also many that can be started now. ANY jump we can get on our crazy weather patterns is good, and most seedlings catch up as soon as the weather conditions are ideal for what they want. I have started my tomatoes too early many times, so this year they are going to be staggered to find out what really works best. Some will not go in until now, so you should be fine, too.

I'm going to skip over the vegetable seeds that really do need an early start, just so you don't get frustrated. Below is a list of late starting seeds. The bonus is that most of these heat-loving plants are really quick to sprout, so you will get almost instant gratification. NOTE: These still need to be started indoors as they are heat-loving plants that also need a longer growing season and will struggle if put out while it is still cool.

- Cucumbers
- Winter Squashes (butternut, acorn, delicata, pumpkin)
- Watermelon
- Melons (Cantaloupe, honeydew)
- Sunflowers
- Zucchini and summer squash
- Zinnias
- Nasturtiums



Start in pots at least the size of about a half-cup container (I use Siggis skyr cups as that is what I have plenty of) but not much bigger. Seeds do not like to be in a container that's too big. Resign yourself to potting-on, as that is what needs to be done when starting seeds early.

I start seeds in a mixture of seed-starting (non) soil and regular organic potting soil. Seeds don't really need a lot of nutrients to start, but I want some there for them in case I am delayed in potting on (it happens a lot). Plant seeds at a depth about twice the circumference of the seed – note that if seeds are tiny they don't even

need to be covered. I do cover everything with even just a bit of vermiculite to help keep that surface of the soil damp and tiny seeds from drying out.

Yes, if you have a sunny south-facing window you can start seeds there, and starting this late you can probably get by with it rather than getting a grow light setup.

Remember to turn the plants every day so they get the sun from all directions – you will notice if you don't get this right that they start to lean towards the window and get really leggy.

These plants are under a grow light, but also in front of a window. Sunlight will pull them in spite of the grow light, so I also have to keep them moving around!



About the time that your plant has 4 leaves, and the outdoor temperatures are up in the 70°'s, you can already begin the hardening-off process. Since our lovely South Dakota weather can go from 60° to 90° in a flash, it is really important to harden them off over several days (ask me how I know this...).

When you are ready to transplant outdoors a couple of ideas to consider.... Not only can our high temperatures fry a young plant right after it is set out, but our wind can flatten it (and if the main stem is broken, some plants might not make it to recovery). An old fashioned trick of putting a board alongside a new transplant can both give it a bit of shade and some protection from the wind.

For those really dedicated gardeners, remember that 4-6 weeks before our final frost date you can still direct seed many cold hardy plants outdoors, if you have managed to get your planting beds ready! Most brassicas, lots of herbs, onions and spinach CAN be directly planted in the ground quite early and sometime in April usually works. They will start off more slowly than those started indoors in March, but they will catch up! I would also recommend a frost blanket at the ready or even low hoop covers because we all know that we can get temps down in the 20's or even lower anytime through April!

In addition to the few photos I have here, there is another Master Gardener with lovely how-to videos on YouTube that you might find very interesting and helpful. Look for Susan's in the Garden. She is a MG living close to Spokane, WA and deals with conditions similar to ours, even though she is in an assigned Zone 5 area. Great information, really good videos, and a beautiful home garden.

https://www.youtube.com/watch?v=cCf51pinA0Q&ab_channel=Susan%27sInTheGarden

https://www.youtube.com/watch?v=zUZ1hlvG7HE&ab_channel=Susan%27sInTheGarden

Local Master Gardener Hosted Events!



→ Seats may still be available! [Click here for details and to reserve your spot.](#)

→ Keep a watch out for our annual plant sale in early May!



All articles are researched and written by Minnehaha County Master Gardeners and Interns. Thank you to all, for sharing your knowledge!