



# THE DIRT

AUGUST 29, 2016

NORTH DAKOTA MASTER GARDENER PROGRAM NEWSLETTER

VOL. 2, NO. 1

## NDSU Extension Master Gardeners Vote to Comply with National Standards

By Esther E. McGinnis, [esther.mcginnis@ndsu.edu](mailto:esther.mcginnis@ndsu.edu)

In 2014, the Extension Master Gardener National Committee (EMGNC) adopted minimum standards for all state programs in the United States.

To ensure consistency and competency across state programs, the EMGNC requires certified Master Gardeners to complete 20 hours of volunteer service and 10 hours of continuing education for annual recertification.

Currently, certified Master Gardeners in North Dakota are only required to complete 12 hours of volunteer service and eight hours of continuing education for annual recertification.

At the Master Gardener business meeting at the Gardeners Gone Wild Conference, Master Gardeners voted to bring themselves into compliance with national standards on the following schedule:

- For 2016, annual recertification requirements of 12 hours of volunteer service and eight hours of continuing education will not be changed.
  - For 2017, certified Master Gardeners will be required to complete 16 hours of volunteer service and 10 hours of continuing education.
  - In 2018, certified Master Gardeners will comply with the national standards of 20 hours of volunteer service and 10 hours of continuing education.
- Requirements for Master Gardener interns to become certified will remain unchanged.
- By adopting the national standards, this ensures that the NDSU Extension Master Gardener Program will remain in good standing and enable reciprocity with other state programs.

NDSU EXTENSION SERVICE

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## Fall Gardening

By Lila Hlebichuk, [lilahl@yahoo.com](mailto:lilahl@yahoo.com)

The seed catalogs start arriving in December and January and plans are made to have the best garden ever. There are old favorites and new varieties to try and it seems like spring will never get here.

Then life throws a curveball and it is end of July or early August and the garden consists of two tomato plants, one potted geranium on the front porch and some perennials in dire need of deadheading.

All is not lost this season.

Plants needing a full growing season such as melons and peppers are not realistic for the late garden. There are however, many vegetables that can be planted successfully from seed and warm soils can aid in

germination.

The cooler weather and even a light frost can improve the flavor of some of the vegetables. Some vegetables can survive temperatures as low as 20 degrees F.

An added bonus is that seed packets are on sale this time of year. Occasionally transplants can still be found in garden centers.

In order to calculate the planting date for fall harvest, add the days to maturity, the harvest duration (in days) plus 14 days for slower growth. Then find the average first frost date for your area and count backward from this date using this sum.

Tom Kalb, NDSU Extension horticulture specialist for western North Dakota, recently



announced the 2016 North Dakota Home Garden Cultivar Trials include fall garden trials of spinach, radish and turnips. You can check if seed is still available at the NDSU Home Garden Variety Trials website.

Information collected from Johnny's Selected Seeds show many varieties to consider, including the following vegetables, herbs and flowers, and reminds us "be sure to take into consideration that plants grow more slowly as day length shortens in fall, adding about 14 days to the estimated days to maturity listed for each variety."

- Roxanne Radish (21 days to maturity)
- Emperor Spinach (37 days to maturity)
- Arugula (40 days to maturity, less for baby size)
- Scarlet Queen Turnip (43 days to maturity)
- Merlin Beets (48 days to maturity)
- Minuet Chinese Cabbage (48 days to maturity)
- Blue Wind Broccoli (49 days to maturity)
- Bambi Little Mini Head Lettuce (50 days to maturity)
- Red Russian Kale (50 days to maturity, less for baby size)
- Guardsman Bunching Onion (50 days to maturity)
- Calypso Cilantro (50 days to maturity)

- Bronze Fennel (50 days to maturity)
- Princess Mix Calendula (50 days to maturity)
- Sunny Smile Miniature Sunflower (50 days to maturity)
- Mokum carrot (54 days to maturity, less for baby size)
- Bright Lights Swiss Chard (55 days to maturity, less for baby size)
- Jewel Mix Nasturtium (55 days to maturity)
- Green Forest Romaine (56 days to maturity)
- Ruby Sky Red Leaf Lettuce (58 days to maturity)
- Cheddar Cauliflower (58 days to maturity)
- Queen Sofia Marigold (60 days to maturity)
- Johnny Jump Up Viola (60 days to maturity)
- Red Express Cabbage (63 days to maturity)

The University of Wisconsin Extension website explains how the growing season can be extended with floating row covers, cold frames and hoop houses. In a pinch, plastic gallon bottles, coffee cans with top and bottom removed and tomato cages surrounded by plastic can cover and protect plants from an early frost.

Dr. Esther McGinnis presented at NDSU Spring Fever how to grow micro greens all year inside the house. Additionally, there are several videos on YouTube on how to "sprout"



sunflower seeds in soil for a nutritious and deliciously nutty flavored green.

In North Dakota there are many options for fresh vegetables and greens late into fall and even throughout the winter.

The following links include more information on growing garden vegetables in the fall.

- <http://www.hortmag.com/weekly-tips/frost-tolerant-garden-vegetables>
- <https://www.ag.ndsu.edu/homegardenvarietytrials/>
- [http://www.johnnyseeds.com/t-summer\\_plant\\_fall\\_harvest.aspx](http://www.johnnyseeds.com/t-summer_plant_fall_harvest.aspx)
- <http://hort.uwex.edu/articles/extending-garden-season/>
- <https://www.ag.ndsu.edu/springfever/Microgreens.pdf>
- <https://www.youtube.com/watch?v=6OUfK0Lh110>



## Bountiful Garden? Preserve it for Later Enjoyment

By Julie Garden-Robinson

If your garden is producing more vegetables than you can use now, you probably are thinking about canning some to eat later.

You'd like to try one of your great-grandmother's recipes. However, canning techniques used in your great-grandmother's day may not be safe today.

Try this quiz to test your knowledge of food preservation:

- 1. True/False:** Vegetables, meats and most mixtures of foods must be canned in a pressure canner, not a boiling water-bath canner.
- 2. True/False:** Paraffin wax is not recommended as a way to seal jams and jellies.
- 3. True/False:** When canning salsa or tomatoes to be processed in a water-bath canner, you must add lemon juice or another acidic ingredient to ensure proper acidity.

**4. True/False:** Botulism, a potentially fatal type of foodborne illness, could result from eating low-acid foods (such as vegetables) that have been canned improperly.

**5. True/False:** For best quality, use home-canned foods within a year.

**How did you do?** All the answers are "true."

If you are using a recipe that came from an old church cookbook, the box that held a vintage canner or even many websites, you might be putting your family and friends at risk. Improper canning can lead to the growth of bacteria and development of toxins. As knowledge has increased about food preservation, resources have been updated for safety and quality.

### Free Resources Available

The NDSU Extension Service has a

wide variety of free, up-to-date online food preservation resources for gardeners and others interested in preserving food. You can learn to make a variety of canned salsa recipes, sauerkraut, pickles, jellies from native fruits and low-acid vegetables such as beans and corn. Extension also has resources about drying or freezing a wide range of fruits and vegetables.

Visit the NDSU Extension Service website ([www.ag.ndsu.edu/food/food-preservation](http://www.ag.ndsu.edu/food/food-preservation)) for free, research-tested food preservation resources from the U.S. Department of Agriculture and universities. Click on the category on the left side (computer/tablet) or in the top drop-down menu (smartphone) for your topic of interest.

**Julie Garden-Robinson is the NDSU Extension Food and Nutrition Specialist and a Master Gardener.**

# Saved for Another Season

By Rachel Brag, rbinndak@gmail.com

**M**any northern gardeners become “thermometer watchers” as fall arrives.

We find it difficult to let our blooming beauties face their demise.

Barb Laschkewitsch, research specialist and trial garden coordinator at NDSU, said saving a few favorites can be fairly simple and does not necessarily mean you need a sunny south window or greenhouse to successfully accomplish the task.

In addition, replacing the same flowers/vines year after year is costly so overwintering them will help stretch the gardening budget.

The following methods are almost maintenance free until the days start to lengthen next spring.

Zonal geraniums (*Pelargonium x hortorum*) are popular flowers seen in containers and gardens across North Dakota. They are considered a perennial, but in our cold climate are treated as an annual. There are a couple low maintenance methods to keep your geranium plants until the weather warms up that require very little effort. (Fig. A)

Laschkewitsch said she gives her potted geraniums a “good haircut” to 6 inches and places them in a cool room with a north window and ignores them for the majority of the winter, except for watering when the soil is dry.

Come March, she will place them in a brighter room, feed with a weak fertilizer and pinch back if they have gotten leggy over winter. A cool room is important because a warm area will result in a tall and spindly plant. They are hardened off and planted outside when the weather allows.

Overwintering bare root geraniums is extremely easy and success is almost guaranteed if you have the right storage conditions.

Dig up the geranium and carefully shake all the soil off the root. Remove any forming blossoms and existing flowers. Place in a brown paper sack, staple sack shut and store in cold but not freezing area (an insulated but unheated garage or root cellar is ideal) at temperatures between 45 and 55 degrees.

The plant will die back and most of the leaves will fall off. Come late March to mid April when you open the bags you will be greeted by a plant that has green remaining only on the main stems. (Fig. B) Cut back to 4-6 inches and soak roots in lukewarm water for several hours. (Fig. C)

Dip wet root in vermiculite and pot up. (Fig. D) You will be surprised as small green shoots emerge from dried shriveled up stems. Keep in bright light or under grow lights until weather has warmed up enough to set out. (Fig. E - Plant 1-1/2 months from restart.)

**(Authors note: From experience, the geraniums return fuller and bushier each year.)**

A less common but stunning beauty that won't even survive below 40-45 degrees is the tropical mandevilla plant. (Fig. F) Mandevillas are dramatic vining plants with glossy leaves and magnificent trumpet shaped flowers. Unless you have a sunny location that receives 6-8 hours of bright sunlight, mandevillas will drop most if not all their leaves.

Spare yourself the frustration of cleaning up after them and let them go dormant. Give the plant a hard trim back to 8-10 inches. Thoroughly wash and check the plant for any bugs. Store in a cool dark basement, garage or crawl space that maintains a temperature around 45-50 degrees.

Occasionally water but keep the soil on the dry side. The soil should be moist down to several inches. This keeps the roots alive but the plant is not actively growing. In early spring the plant will form shoots. Repot in fresh soil and give the plant good drink for a fresh start.

Take it to a location that receives bright filtered sunlight. Pinch shoots periodically to form a bushy vine and apply a weak dose of water-soluble fertilizer. Reintroduce to the outdoors when temperatures allow.



Figure A



Figure B



Figure C



Figure D



Figure E

Other tropicals that can be treated in the same manner and allowed to go dormant are lantana, banana, brugmansia and hibiscus.

Canna lilies are a South African native that make a stunning impact in your garden. (Fig. G)

They come into bloom in late summer and are outstanding cut flowers. We don't live in zones 7-10 so the rhizomes must be dug up and overwintered.

Laschkewitsch recommends the following method for overwintering canna lilies: After the first killing frost, cut back leaves to 6 inches. Dig a foot or so away from the stem of the canna so the rhizome is not damaged. Loosen the soil around the crown and gently lift the stem out of the ground. Allow the tubers to air dry for several days and remove as much soil as possible. Treat with a fungicide to prevent disease.

Store them in a paper bag filled with barely moist peat moss that is kept in a cool (40-50 degree) dark location. Check monthly for disease, rot and shriveling. Mist with water to keep them from drying out during storage. In March, repot, fertilize and reintroduce to light before putting outdoors.

Ornamental sweet potato vines (*Ipomoea batatas*) are frost-tender vines with colorful foliage that climbs or trails. (Fig. H)

The plants grow from a fleshy underground bulb called a tuber. Sweet potato vines are hardy only in zones 9 through 11 so in northern climates they are grown as annuals.

When overwintering sweet potato vines indoors, you can dig up the tubers and replant in the spring. If you have planted seed potatoes, the same method is used for sweet potato vine tubers. However, you have to be able to overwinter the tubers so they are in good enough condition to grow in the spring.

In fall, allow them to be nipped by frost. Cut the plants to 6 inches and dig the tubers from the ground. Be careful not to damage the tubers when digging or they will not store well. Gently clean the tubers to remove most of the soil and let them air dry for several days.

Store sweet potato vine tubers in a dry, insulating medium. Sand, peat moss or vermiculite work well. Avoid rubbing, washing or scraping the skin. Damaged skin allows rot to develop and can ruin the tubers. Store in a ventilated container and make sure there is enough of the packing medium so each one is covered and not touching. Store the tubers in a cool, dark area for the winter.

Spring is the time to plant sweet potato vines. After removing the tubers from storage, cut them into sections and plant them directly in the soil. Each section should have an "eye" on it. The eye is an indentation from which a new shoot will grow. When planting sweet potato vines from tubers, make sure the eye is facing up. After covering each section with 1 inch of soil, keep the area damp and watch for new shoots over the next couple of weeks.

When restarting your plants indoors, they will do better if started under fluorescent tubes versus natural light as they will be more bushy and compact. It is recommended by the University of Nebraska-Lincoln Extension to use a mixture of cool-white and warm-white bulbs and to place the lights no more than 12 inches above the plants. Putting the lights on a timer so they get 12-16 hours of light a day will make your indoor plants grow well and life easier for you.

If you do keep your plants by a sunny window, they will need frequent turning to keep them from growing lopsided. Laschkewitsch recommends pinching back the growing tips on your newly started plants as this forces the plant to branch and become full.

In the middle of winter when the ground is covered with snow, it is nice to know you have saved some plants for starting when the weather begins to warm up. The methods suggested in this article work best if you have a cool dark location for storage, which is probably easier to come by than a warm sunny spot in the middle of January.

It is quite easy to save your favorite plants for another season.

## Resources:

Barb Laschkewitsch, Agricultural Research Specialist, NDSU  
University of Nebraska-Lincoln Extension, Lancaster County  
Penn State Cooperative Extension, Adams County  
Sandra Mason, Horticulture Extension Educator, University of Illinois



Figure F



Figure G



Figure H



# Weeds may be the bane of gardeners

By Laura Kourajian, lkourajian@yahoo.com



Common plantain.

**W**eeds may be the bane of gardeners, but they can also be very confusing.

Joe Pye Weed (*Eutrochium spp.*), for instance, isn't a weed at all, but a flowering perennial loved by bees and butterflies. And common plantain (*Plantago major*) is a weed that grows well in North Dakota, where we can't grow the plantain that's related to the banana family and available in our local grocery store.

Then there's Creeping Jenny. It's a common name for field bindweed (*Convolvulus arvensis*), but also the name for a ground cover plant (*Lysimachia nummularia*) with small, round bright green leaves grown and sold in greenhouses, and otherwise known as moneywort.

So apparently, what's in a name doesn't apply to weeds.

Is it safe to say one gardener's weed is another gardener's flower?

Consider the oxeye daisy (*Leucanthemum vulgare*), once a staple in the flower beds running alongside 1950s ramblers. Now, it's listed in the field identification guide, "North Dakota Troublesome Invasive Plants."

How did it fall from grace?

"I would call that a garden thug," said Esther McGinnis, NDSU Extension Horticulturist. "You introduce it into your garden because it has this beautiful flower, and then it goes in and bullies all the rest of your plants. It has this invasive characteristic, and it's a bully."

Why are violas, edible plants which self-seed and come up hither and yon year after year, considered flowers and sold in greenhouses while the dandelion, also a self-seeding edible flowering plant, is loathed by most homeowners?

"The line between a weed and a flower is very fluid," McGinnis said. "The ability of a plant to reseed, spread by rhizomes and become established in the wild pushes a plant to the weed side of the line. Flower attractiveness and public opinion may push a plant to the other side."

Some weeds, like baby's breath (*Gypsophila paniculata*) are flowers in the home flower bed or bridal bouquet, but weeds when their seeds travel to fields where farmers are trying to grow

cash crops, or to ditches, where they eventually become bothersome tumble weeds. In fact, it is listed as a noxious weed in many counties in North Dakota, McGinnis noted.

So what's a gardener to do? They must decide for themselves what they like and what they don't like with plants that straddle the weed/flower fence, and methodically and strategically get rid of those they classify as weeds.

Fall is the best time to go after those perennial weeds. Like squirrels and other varmints busy stashing nuts and other supplies for the oncoming winter, weeds are busy moving carbohydrates to their roots.

"Perennial plants are actively translocating photosynthates (carbohydrates) to the root system in the fall in preparation for winter," McGinnis said. "If you spray them with herbicide, these plants will absorb the herbicide and take it down to the root system. This can result in systemic kill of that perennial weed."

While Master Gardeners love to learn the names of flowers and shrubs and things they intend to grow, the lowly weed typically doesn't get that kind of attention. Still, sometimes it's fun to know the names of common weeds we pull from our gardens or douse in herbicides year after year.

**Dandelions:** Probably the most well-known, grows from a taproot. Seeds blow in the wind and settle, well, almost everywhere. Easily controlled with a broadleaf weed killer.

**Common Purslane:** Looks like a succulent, and should never be pulled and left in the garden. It can develop adventitious roots, meaning it can sprout roots from the stems if they are left in a pile in the garden. Best control is pulling it out, including the whole root system, and disposing of it. It is edible, but might not be palatable to some people.

**Common Mallow:** It's in the same family as hibiscus, though its flowers are quite tiny and inconspicuous. Best control is pulling it out, and disposing.

**Common Plantain:** It's edible and the leaves can be used for poultices, and it does particularly well in soils that have been compacted or disturbed. Best control is broadleaf weed killer, and correcting soil compaction.



Violas are typically not considered weeds, but have similar characteristics.



Common purslane.



Mallow growing amidst an intentional flower in a flower bed.

**Field bindweed:** Commonly called Creeping Jenny, it is a member of the morning glory family. It sports funnel-shaped white or pink flowers, and its twining stems can grow up to 6 feet, while its roots can extend 20-30 feet laterally and as deep as 30 feet. Its seeds can remain viable for 50 years. The best control is broadleaf weed killer or glyphosate. Pulling it out will only set it back, not kill it.

**Oxalis, also known as Wood Sorrel:** This weed looks a little like clover, but sports tiny little flowers and spreads via seed. Spraying with vinegar will knock it back and weaken it until you have a chance to pull it out. Vinegar will be a surface toxin, killing the leaf but not the root. If it comes up in your lawn, try a broadleaf weed killer, McGinnis recommended.

**Violets:** This weed sports clusters of

heart-shaped leaves and looks, well, almost intentional, with its tiny violet-colored flowers. If you can't appreciate them in your lawn, the Ortho Weed B Gone Chickweed, Clover and Oxalis Killer may be the ticket.

When using herbicides, please read and follow the labeled instructions.



*Violets will bloom with tiny purple flowers.*



*Oxalis or Wood Sorrel, growing among Creeping Jenny (moneywort).*

## Gardeners Gone Wild!

By Esther E. McGinnis, [esther.mcginis@ndsu.edu](mailto:esther.mcginis@ndsu.edu)

**G**ardeners gone wild was the theme for the joint NDSU Extension Master Gardener/North Dakota State Horticultural Society Conference.

No, Master Gardeners were not cavorting on the beach with a cocktail in hand. Instead, the conference held in Grand Forks on July 28-30 featured a series of talks on preserving the natural environment by using native plants and conserving pollinator habitat.

Heather Holm, a nationally known leader in pollinator protection, gave the keynote address. Holm illuminated the hidden life of native bees, many of which live solitary lives in underground nests or in plant stems. She made the case for integrating native perennial plants into the garden to provide much needed nectar and pollen.

In a breakout session, she highlighted native trees and shrubs that nourish a broad variety of native bees. After her talks, Holm signed copies of her popular book, "Pollinators of Native Plants."

The conference also featured more traditional talks on landscape design, herbs, shade gardening and hydrangeas.

One of the most popular talks was NDSU Associate Professor Greta Gramig's talk on weed control in organic vegetable gardens.

While the conference was educational, Master Gardeners seized the opportunity to socialize and have fun. The opening social, held at All Seasons Garden Center, was an elegant affair.

The Grand Forks Horticulture Society organized this popular event. Gardeners combined dinner, getting to know one

another, and plant shopping. All Seasons Garden Center was recently featured in Garden Center magazine as one of thirteen upcoming garden centers to watch.

On the last day of the conference, the Grand Forks Horticulture Society designed a tour of five gardens to delight the senses. From a large traditional shade garden that was 40 years in the making to a small Japanese garden, each garden had its own unique personality.

The conference ended with one last walk on the wild side. Participants traveled to Oakville Prairie to walk on land that has never seen the plow. This virgin prairie with its 236 plant species is maintained by the University of North Dakota.

Many thanks to our conference committee of Janell Martin, Marlene Maxon, Terrie Mann and to the Grand Forks Horticulture Society for being such gracious hosts.



*Horticulture therapy workshop participants propagated plants to take home.*



*Guided tour of Oakville Prairie.*



*Conference participants shopped the vendors during breaks.*



*Master Gardeners from around the state enjoyed getting to know one another at the Friday night banquet.*

**For more photos of the Gardeners Gone Wild conference, pictures have been uploaded to: [www.flickr.com/photos/ndmastergardener](http://www.flickr.com/photos/ndmastergardener).**

# Move It or Lose It! Recap of Volunteer Day at Chahinkapa Zoo

By Bethany Foyt, [bethany@thepartnerchannel.com](mailto:bethany@thepartnerchannel.com)

**M**ove It or Lose It" volunteer day at the Chahinkapa Zoo in Wahpeton took place June 1 with eight volunteers in attendance.

Determined to make way for construction of the zoo's various displays, these volunteers moved hostas, replaced shrubs, and moved pollinator-friendly perennials to another area of the park.

During their lunch break, they even got to meet "Barkley," an orphaned baby kangaroo. Volunteers got to witness this cute animal hopping around the indoor Nature Center, and this activity was reported as a highlight of the day.

Joan Zettel, horticulturist at Chahinkapa Park and Zoo, headed up the volunteer day and plans to hold this event every spring.

"Our zoo has a wide diversity of plants and trees," she shared. "Some of my favorites are the hardy hibiscus, the bamboo, and the ginkgo tree."

She invited all readers to stop in and check them out.

"If you need a fun family activity, come visit Chahinkapa Zoo in Wahpeton," she said. "The flowers are almost as wonderful as the animals."

If you want to participate in next year's volunteer day, please reach out to Zettel at [momzettel@hotmail.com](mailto:momzettel@hotmail.com).



Eight volunteers participated in the Chahinkapa Zoo volunteer day



Barkley, the orphan kangaroo, lived in a fabric pouch.

## *We Shall Not Sleep, Though Poppies Grow*

**T**wo of the things museum and history professionals think about are what kinds of events from our collective past to recognize and commemorate, and how those can be accomplished in meaningful ways.

It is our job as history professionals to sift through the immense amount of newspapers, diaries, photographs, artifacts, and other research materials, hoping to tease out the relevant stories that help contemporary people connect with all of the people who came before us.

We will try to meet one of those challenges head-on as we look for ways to commemorate the 100th anniversary of the United States joining the efforts of European allies, including the British Empire and France, in World War I.



Guest Columnist: Danielle Stuckle

When the United States officially joined the war effort on April 6, 1917, European powers had already been embroiled in the war for nearly three years. By November 1918, as a tenuous peace was being reached, millions of soldiers and civilians had died in the war.

Early in the conflict people were already



A soldier stands in a field of poppies in French Morocco.

struggling to understand the unprecedented loss of life.

In 1915, a Canadian military doctor, Major John McCrae, penned the famous poem "In Flanders Fields." [1]

The common cornfield poppy mentioned in the poem, *Papaver rhoeas* (not to be confused with the opium poppy, *Papaver somniferum*), grows so well it is considered a weed in many places. The familiar annual, with four red petals surrounding a black base, remains a striking symbol and continues to grow abundantly all over the Flanders Fields battlefield and cemetery memorials.

Poppies have become well known in many countries, including the United States, for honoring the servicemen killed during and after World War I.



Governor George Shafer buying the first poppy from Ms. Henry Hanson, May 25, 1929.

The visual of the red poppy mentioned in McCrae's poem resonated with an American teacher, Moina Michael, and inspired her to also promote using the flower as a symbol of remembrance.

The Veterans of Foreign Wars and American Legion Auxiliary both began distributing poppies in the 1920s. Both organizations continue to this day to give complimentary crepe paper poppies made by disabled veterans in exchange for donations.

Poppies remain an integral part of numerous commemoration events, programs and exhibits occurring throughout Great Britain as remembrance efforts get underway there.

The State Historical Society of North Dakota is also looking for creative and meaningful ways to use poppies as part of commemoration events in North Dakota. An easy and affordable way for communities and individuals all over the state to participate in this commemoration would be to plant poppies in community gardens.

Several varieties of poppies are easy to grow throughout North Dakota, from the traditional cornfield poppy of Flanders Fields to the showier oriental poppy. Contact your local garden club to ask what plans they might have to plant poppy gardens in the next couple of years to commemorate this significant world-changing event

**Danielle Stuckle is the Educational Programs and Outreach coordinator for the State Historical Society of North Dakota. This blog was originally published on July 18, 2016, on the society's website, and is republished here with permission. Danielle is a Master Gardener Intern.**



# Experience with Native Plants

By Rena Mehlhoff, [rena.mehlhoff@gmail.com](mailto:rena.mehlhoff@gmail.com)

## ***I'm thankful for Dutch elm disease.***

Yes, you read that correctly.

I'm thankful for a disease that has killed thousands of trees in our state. Before I become the object of your scorn, let me explain.

The boulevard in front of my house used to contain four beautiful elm trees. These trees provided ample shade in the front yard, allowing me to experiment in various varieties of hostas.

Empress Wu had a prime location surveying her loyal hosta subjects.

Then, along came the dreaded Dutch elm disease. The death of elm trees could be seen throughout the neighborhood. My trees were healthy. My trees were strong. I was delusional to think they would not be affected.

Alas, I was wrong. My trees succumbed to the disease.

The loss was devastating and I was clueless on how to proceed.

The hostas had to be moved, but what to plant in their place?

An English style garden, perhaps?

Or maybe I should go contemporary, or formal?

There were 425 square feet to work with and I was overwhelmed with the options.

The solution finally appeared after my time working on The Dirt newsletter committee. After writing articles about a pollinator garden and the native western prairie fringed orchid, the light bulb came on. I would plant a native plant garden!

My existing garden contained your typical native plants: *Echinacea*, *Rudbeckia* and aster, but I had never dived into the native plant environment before and I was eager to learn.

## **What to grow.**

My next step was to determine which native plants to plant.

I'll admit: I'm a lazy gardener. Only the hardiest of plants survive in my garden. If a plant needs deadheading, extra water or constant fussing, it will die, guaranteed.

My criteria for plant selection were simple: Hardy, minimal aggressiveness and native to North Dakota (not just the general Midwest). The plants picked are the following:

- *Amorpha canescens* (Lead Plant)
- *Andropogon gerardii* (Big Bluestem)
- *Anemone cylindrica* (Thimbleweed)
- *Aquilegia canadensis* (Columbine)
- *Asclepias incarnata* (Rose Milkweed)
- *Astragalus crassicaarpus* (Ground Plum)
- *Campanula rotundifolia* (Harebell)
- *Dalea candida* (White Prairie Clover)
- *Dalea purpurea* (Purple Prairie Clover)
- *Echinacea angustifolia* (Narrow-leaved Coneflower)
- *Geranium maculatum* (Wild Geranium)
- *Liatris aspera* (Button Blazing Star)
- *Lilium philadelphicum* (Prairie Lily)
- *Lobelia siphilitica* (Great Blue Lobelia)
- *Monarda fistulosa* (Wild Bergamot)
- *Penstemon gracilis* (Slender Beardtongue)
- *Phlox pilosa* (Prairie Phlox)
- *Ratibida columnifera* (Long-headed Coneflower)
- *Rudbeckia hirta* (Black-eyed Susan)
- *Schizachyrium scoparium* (Little Bluestem)
- *Solidago ptarmicoides* (Upland White Goldenrod)
- *Solidago speciosa* (Showy Goldenrod)
- *Sorghastrum nutans* (Indian Grass)
- *Sphaeralcea coccinea* (Scarlet Globemallow)
- *Sporobolus heterolepis* (Prairie Dropseed)
- *Verbena stricta* - White form (White Hoary Vervain)
- *Verbena stricta* (Hoary Vervain)
- *Veronicastrum virginicum* (Culver's Root)

Not only am I a lazy gardener, I'm frugal as well.

After determining it would require around 100 plants to fill the square footage, it was evident seeds, instead of plants, would need to be purchased.

This may seem like an obvious choice for my fellow, more experienced, Master Gardeners, but I must confess my track record for seed starting is a chronicle of tragic deaths.

But I thought, I'm more mature and responsible since my last massacre of seedlings. I can do this – I'm a Master Gardener!

## Cold moist stratification

What the .... is this? Apparently my research was not as in-depth as it should have been.

After my seed order was placed with Prairie Moon Nursery from Minnesota and received in late February, I sat down to read the germination codes. A majority of the seeds ordered required cold moist stratification, which is a technique used to simulate the real-world conditions a seed would receive outdoors after the frozen winter gives way to a warm, wet spring. The range of stratification days ranged from 10, 30, 60 to 90 days.

## Panic set in.

I should have started this sooner!

Culver's root, white and purple prairie clover, scarlet globemallow, wild bergamot, white goldenrod, little and big bluestem, indian grass and prairie dropseed were planted March 5.

Within seven days, eight of the 10 varieties had sprouted. An advantage of living in an older home is the large radiators, which are perfect for warming the soil from the bottom. The radiators, along with purchased heat mats, helped greatly with my germination success.

There were some missteps along the way, such as accidentally watering from above, instead of allowing the delicate seedlings to soak water through the soil, as well as not having the lights close enough. But overall, I experienced success.

On March 11 and March 30, the 10-day and 30-day stratification seeds were planted, which included lead plant, ground plum, harebell, slender beardtongue, coneflower and black-eyed susan.

By mid-April, my confidence was building. Seedlings were surviving and thriving.

The wild bergamot was the exception. This plant was spindly and was producing aerial roots. Solution: red Solo cups. I took the risk and decided to clip off the lower leaves and plant them deeper as one would do with tomato plants. I figured if they produced those aerial roots, they would root further up the stem.

The gamble paid off and the plants survived and become sturdier.

On April 29, the 60-day seeds were planted. This was the large batch of flowers with



Seeds that needed cold stratification were placed in a moist coffee filter, folded loosely, placed inside a resealable bag and stored on the top shelf of my refrigerator. The seeds/coffee filter were monitored weekly for moisture content.

geranium, columbine, purple and white hoary vervain, thimbleweed, blazing star, lobelia, prairie phlox, prairie lily, and showy goldendrod.

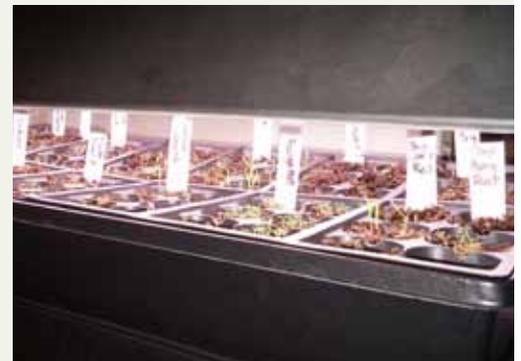
The final seed to be planted was the narrow-leaved coneflower, which needed 90 days of stratification. They were planted on May 28, a little late to be planting seeds indoors, they flourished and I ended up with 15 successful plants.

## Lessons:

- **Scarlet Globemallow:** The germination code for this plant was marked as a question mark, so my lack of success wasn't too shocking. Each stratification period was tried: 10, 30, 60 and even 90 days, with no success. One lonely seed sprouted with no pretreatment, but it quickly died.
- **Prairie Lily:** The seeds sprouted, but failed to thrive. The plants lived, but never grew beyond a certain height. Even after being transplanted outdoors, they remain the same small little plant.
- **Wild Geranium:** Only one seedling sprouted and thrived. A couple planting attempts were made, but I was never able to sprout additional plants.
- **Prairie Dropseed:** The seedling is very delicate and very slow to grow. For the longest time, they remained only a few delicate blades. After transplanting, they increased in size, but at a much slower pace compared to the other grasses.



Keeping soil warm with large home radiators.



Successful seedlings.



Aerial roots on wild bergamot plants.



Successful plants - feeling like an official gardener.



Surplus of red solo cups coming in handy with garden layout work.



Rudbeckia hirta were the first to bloom.



Blooming Verbena stricta.

- **Button Blazing Star:** The seedlings failed to thrive. Even after transplanting, they remain only a few leaves.
- **Lead Plant:** This wasn't a failure, but an oddity. The seedlings in the indoor growing environment did not tolerate the light and heat as much as the other seedlings. They were separated once the leaves showed signs of sun scorch. This was confusing to me since the plant is dubbed the "Devil's Shoestrings" because of its ability to survive prairie fires and intense drought. Once the plants were transferred outdoors, into full sun, they survived and thrived and show no signs of sun scorch.
- **Harebell:** They failed to thrive and eventually all died after transplanting outdoors. I believe this was due to the soil. Next time I will plant them in the recommended rocky soil.
- Because native plants often have deep extensive root systems, I would recommend using deep growing cells,

instead of the standard seed starting kits. Red Solo cups came to my rescue again when the roots of the Indian grass quickly overtook those small growing cells.

### Success

The original plan was to grow seven plants of each variety, for a total of 196 plants. Through the failures I mentioned, along with my inability to murder poor seedlings when thinning, I ended up with 188 successful plants.

### Future plans

The remaining seeds currently stored in my refrigerator will be planted in the fall and be allowed to experience nature's cold stratification.

The varieties that experienced failures will be tried again through fall planting and seeds starting indoors.

I know I said I was a lazy gardener and typically, lazy people give up, but after



Small button blazing star plant.

experiencing success with a majority of the varieties, I'm filled with determination to succeed with these 'diva' plants as well.

Scarlet Globemallow - you will grow!

This adventure has allowed me grow and mature as a gardener. It has given me the confidence to want to experiment with more seed-starting projects. It has also allowed me to appreciate and gain more knowledge on native plant options.

***Thank you, Dutch elm disease. If it weren't for you, I never would have had this experience.***



## Have a story idea?

Email Laura Kourajian at [lkourajian@yahoo.com](mailto:lkourajian@yahoo.com) or contact one of our writers directly.