

# THE DIRT



OCT. 20, 2015

NORTH DAKOTA MASTER GARDENER PROGRAM NEWSLETTER

VOL. 1, NO. 2

**NDSU** EXTENSION SERVICE

## *Prunus virginiana*

By Laura Kourajian, lkourajian@yahoo.com

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### SAVE THE DATE GARDENERS GONE WILD

2016 Joint ND Master Gardener State Conference and ND State Horticultural Society  
**93rd Annual Conference**  
July 28-30 - Grand Forks, ND

For more information, contact Janell Martin at ndshs@outlook.com or 218-230-1856 www.facebook.com/NDSHS or Esther McGinnis at esther.mcginis@ndsu.edu

**P** *runus virginiana*, the common chokecherry, has been growing in North Dakota since before there was a North Dakota.

The Schubert cultivar (*Prunus virginiana* 'Schubert'), a red-leaved chokecherry, is a more recent discovery.

As the legend goes, the tree was discovered by a gentleman whose last name was Schubert who worked for the Oscar Wills Nursery in Bismarck, at one time one of the largest nurseries in the northern plains.

Schubert discovered the tree, a chokecherry with deep red rather than the standard green leaves, growing along the west side of the Missouri River north of Mandan, according to Richard Ames, Mandan, who remembered hearing the story from Schubert's son, with whom Ames worked at Lincoln Oakes Nursery in Bismarck in the 1970s.

Schubert brought it back to the Wills Nursery and worked on propagation, growing it from seed and culling those that leafed out in the usual green, and selling those that sported red leaves.

"If you grow it from seed, about 40-50 percent of them will come back red-leaved," Ames said. That red leaf is "what makes the tree."

The history is sketchy, at best, and Schubert also likely selected and propagated a cultivar from a seed-grown tree with the best traits.

Schubert died before he was able to patent or trademark his new cultivar, the legend continued, and in the meantime an enterprising Canadian discovered and began propagating the same tree, eventually patenting it as the Canada Red Cherry tree, according to Ames.

If the tree is coming from a nursery specializing in ornamental trees, it is likely propagated asexually (through cuttings or tissue culture) so those

cultivars would carry uniformity and continuation of selected traits. If the tree is coming from a soil conservation nursery, it is most likely propagated by seed and will be variable in traits, such as leaf color intensity, form and suckering.

Is there a difference between the Schubert chokecherry (*Prunus virginiana* 'Schubert') and the Canada Red (*Prunus virginiana* 'Canada Red')?

Not hardly, said Greg Morgenson, the woody plant research specialist at NDSU and the former manager of the Lincoln Oakes Nursery.

"It's pretty much the same thing," he said. "There's no way to tell them apart. Canada Red Cherry is just a fancy name. Schubert isn't a very glamorous name."

The trees can grow 20 to 30 feet tall with a spread of 18 to 25 feet. It flowers in spring, usually in early May, with fragrant white flowers that grow on racemes and fill the air around the tree with a light, floral fragrance, sort of like God's Febreze. The flowers turn into dark red 1/3-inch round fruits that are face-crinkling bitter to eat (hence, the name chokecherry), but have been used for years



This beautiful specimen of the Canada Red cherry tree is most likely crossbred with a Mayday cherry tree, indicated by the thick trunk.

by North Dakotans for jams, jellies and wine.

The wood, leaves and pits of the chokecherry tree are toxic, but the fruits are edible.

The leaves initially appear in a bright green/chartreuse color, and turn deep red or burgundy as they mature.

The tree doesn't come without its problems, including suckering which can create large bushes (really, multi-stemmed trees) if not kept in check.

It is also susceptible to black knot fungus, fall web worm and X-Disease, but more on those later.

While it has been used for years in shelter belt plantings, the tree reached a pinnacle of popularity in boulevard plantings and backyard plantings in the 1980s and 1990s, when it was used liberally in new neighborhoods throughout cities in North Dakota.

They were a big tree and they grew fairly fast, Morgenson noted, and they were called Canada Red Cherry trees, many of them hybridized with the European Bird Cherry tree, also known as the Mayday cherry tree. Cultivars were developed that grew thicker trunks, fewer or no suckers and more tree forms. Newer cultivars, such as 'Merlot' or 'Midnight Red Cherry', have better tree form and darker foliage.

## Suckers

The trees are naturally going to sucker, Morgenson said. It's part of the tree maintaining itself.

Suckers are going to happen, unless the tree is grafted to non-suckering root stock, but the ornamental tree industry doesn't consistently do that, for some reason, he said. "It just was another step they did not want to go through."

Can suckers be controlled?

No.

"There are sprays (such as Sucker Stop), but I don't know how effective they are," he said. "The tree is going to want to sucker, and it's going to do it."

Cultivars that are hybridized with the Mayday or European Bird Cherry trees may sport fewer suckers, but that hybridization may introduce another problem.

One of the things some researchers have hypothesized is the red-leafed chokecherry trees that have the Mayday genetics are highly susceptible to black knot, more so than regular chokecherry trees, Morgenson said.

## Black Knot Fungus

The trees are susceptible to black knot fungus, the spores of which are spread through the air and water droplets. The problem has become more prevalent in North Dakota.

"If there's a number of chokecherry trees in



Canada Red cherry trees were very popular for backyard and boulevard plantings in the 1980s and 1990s, so neighborhoods built during those decades will have plenty of them. Most cities no longer use them for boulevard plantings.



Black knot fungus is spread through spores, and will girdle branches, eventually killing them.

the area, there's a pretty good chance it will spread," Morgenson said.

Black knot can girdle the branches, and if it's left uncontrolled, eventually it will kill a number of branches, possibly weakening the tree to the point it's no longer viable and will need to be removed.

Controlling black knot is a challenge. Branches with evidence of the infection should be trimmed away. Trees can be sprayed with a fungicide in early spring, and will require several applications before and after bud break and flowering to be effective.

But the truth is, "most people aren't going to spray their trees every spring to control it," Morgenson said.

## Fall Web Worm

This webbed nest is the larval stage of a moth, which seems to like chokecherry trees. The web, while can be a little scary to see in your tree, generally does not cause permanent damage. It only looks bad -- and the tree will rebound just fine next spring.

The caterpillars feed on the foliage, and the webbing forms a canopy to protect them from birds. If you don't like the unsightly web in your tree, you can either cut it out or open the webbed nest with a stick and knock out the caterpillars, Morgenson said.

## X-Disease

X-Disease is a native disease in native chokecherries.

It's cyclic, Morgenson noted, taking advantage of drought situations when trees are under stress.

"It's not a fungus. It's not a virus. It's a whole different group of phytoplasma," Morgenson said. "It's a pretty serious disease of all cherry trees."

It's harder to detect on the red/burgundy leaves of a Canada Red or Schubert tree, but in the green-leafed chokecherry trees, the leaves will turn orange and the fruit will shrivel, he said. It can kill a tree in several years, and since the trees are popular in shelter belts, that is a concern.

There is some resistance in some trees in North Dakota, he said, and one of the pathologists at NDSU is doing selection for X Disease resistance in shelter belts, though not much has been done in ornamental trees.

### Author Bio:

Laura Kourajian, who has a beautiful Canada Red Cherry tree in her front yard, is one of those gardeners who hates to throw out any potted plant in the fall, even when they are begging to be done.

# 2015 International Master Gardener Conference

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

**F**ifteen intrepid North Dakotans traveled to the 2015 International Master Gardener Conference in Council Bluffs, IA. Little did they know they would face more than 10 inches of rain in two days. Despite flash flood warnings, the North Dakotans enjoyed 2 ½ days of informative seminars and garden tours and a very warm midwestern welcome.

One of the official themes of the conference was promoting Midwest native plants.

Growing native plants in home gardens is beneficial for many reasons. Native gardens provide nectar, pollen, and habitat for native pollinators, such as bumble bees and leaf cutter bees. In a landscape, native plants tend to be low maintenance because they are adapted to the local environment.

In addition, many native plants are just plain beautiful.

This will be an important theme for North Dakota Master Gardeners because the Master Gardener Program will sponsor 10 or more pollinator gardens with both native and ornamental bee friendly plants across the state in the coming year.

An unofficial theme interwoven into the conference was more philosophical.

Starting with the keynote speakers and continuing in the breakout sessions was the message that adversity provides an opportunity for productive change.

Keynote speaker Mark Hirsch detailed his transformation from a busy news photographer to an artist who was sparked by a life-threatening car accident. While recovering from head trauma, he began taking one picture a day of a grand old bur oak tree.

Day by day as he recovered, Hirsch discovered the ecosystem that depended upon this solitary oak tree in a Wisconsin corn field. North Dakotans were so moved by his story that many of them purchased his book, "That Tree."

The adversity theme continued in the plethora of landscape design classes.

Landscape designer Kerry Ann Mendez was forced to redesign her gardens when her husband broke his neck. With less time on her hands, Mendez vowed to take charge of her gardens and make them more low maintenance so she would have time to care for her family.

Without sacrificing beauty, Mendez integrated plants into her borders that do not require deadheading or frequent division or rejuvenation.

Throughout the conference, attendees had the chance to participate in hands-on workshops on landscape design, plant diagnosis, trough gardening, floral design and therapeutic horticulture. Most popular were the workshops on creating hypertufa and papercrete containers.

Master Gardener coordinators organized several sessions on the administrative aspects of running state and county programs. The emphasis was on retaining Master Gardener volunteers.

In a study conducted by Iowa State University, researchers concluded that Master Gardeners leave the program for three reasons: (1) not enough education; (2) scarcity of suitable projects; and (3) lack of fun.

The North Dakota Master Gardener Program is working on improving on all three aspects.

The best part of the conference was the bonding that occurred among the North Dakota delegation.

We had 14 Master Gardener interns and volunteers from Bismarck, Jamestown, Ellendale, Kindred, Fargo, Grand Forks, and Grafton.

We ate a lot of our meals together and used Cliff Haugen's cowboy hat as a homing beacon to find our table in the crowd of 750 people.

Our Master Gardeners are extraordinary. They are warm people with a desire for more education and to better their communities.

#### **Author Bio:**

*Esther McGinnis is the NDSU Extension Horticulturist for eastern North Dakota, Assistant Professor in Plant Sciences, and the Director of the Master Gardener Program.*

## **FALL LEAVES** Summer's Gift to Gardeners

By Rachel Brag, [rbinndak@gmail.com](mailto:rbinndak@gmail.com)

**T**he fallen leaves have definitely made a final goodbye wave to summer but they can help you say hello to a more vibrant garden.

When it comes to preparing your soil for next year and the following years, use those valuable leaves for more than a quick toss into the burn pile.

Consider all the opportunities for using leaves; compost them, make leaf mold, use them as a mulch or mow them into your lawn. The leaves of one large shade tree can be worth as much as \$50 of plant food and humus.

Pound for pound, the leaves of most trees contain twice as many minerals as

manure. For example, the mineral content (calcium, magnesium, potassium, nitrogen, and phosphorus) of a sugar maple leaf is over five percent, while even common pine needles have 2.5 percent of their weight in calcium, magnesium, nitrogen and phosphorus, plus other trace elements. Since most trees are deep-rooted, they absorb minerals from deep in the soil and a good portion of these minerals go into the leaves. 50 to 80 percent of all the nutrients trees extract from the ground end up in the leaves.

### **Compost**

Autumn leaves are a perfect boost to your compost pile as the brown or carbon part of

the mix.

Carbon-rich leaves balance high-nitrogen compost ingredients such as grass clippings. Be aware that leaves take time to break down so don't add them in large amounts/piles. Create layers with a mix of leaves and the last of your herbicide free grass clippings. Chopping the leaves with a lawn mower will help them compost quicker and makes them easier to gather.

If you've made the final pass with your lawn mower for the season, bag up and save those precious leaves for next years' compost pile. Having a few bags of dry leaves on hand is invaluable when managing your compost heap.

Store chopped leaves (they are more compact and take less space than whole leaves) in an open weave sack or burlap bag. A soggy odoriferous compost bin is a common problem which is the result of too much green material. It is much easier to add a few layers of dry leaves to an imbalanced compost pile than searching for brown matter next spring and summer.

## Leaf Mold

Leaf mold is made much in the same way as compost but with little or no nitrogen added to the leaves. Unlike compost, leaf mold is only partially decomposed, leaving bits and pieces of the leaves visible in the finished product.

Leaf mold is high in carbon and it conditions the soil, lacing it with fungi and



Photo is of 1 year old leaf mold.

micronutrients, which help plants grow. The nitrogen content varies from .2 to 5 percent.

Leaf mold stimulates the microbial activity in the soil which in turn releases nitrogen and other nutrients to the roots of your plants. In addition, worms love it and what gardener wouldn't be thrilled to have more productive worms!

Gardening columnist Alys Fowler says, "Worms like to line their homes with it, sleep in it, reproduce in it and, finally, eat it. If you put a layer of semi-rotted leaf mold on the surface of the soil in spring, the worms get at it so fast it seems to disappear before your eyes. They drag rotting leaves from the surface and start turning it into humus deep below."

The value of humus is that it significantly influences the bulk density of soil and contributes to moisture and nutrient retention. Humus can hold the equivalent of 80–90% of its weight in moisture, and therefore increases the soil's capacity to withstand drought conditions. Leaf mold also helps break up dense, compacted soils and makes it easier for plant roots to penetrate.

Making good quality leaf mold requires patience...and at least two years.

Leaf mold that is less than two years old should be used as mulch, soil amender, covering for bare soil in winter and top dressing lawns in fall.

Good quality, well-rotted leaf mold (two or more years old) can be used as seed-sowing compost, or mixed with garden compost or other good quality medium for use in potting.

Don't be hindered by the fact it takes 2 years to produce, simply add to the top of your pile or leaf mold cage every year and take the material off the bottom of the pile when it's ready. If you shred the leaves (mow over them), they will decompose faster, but you can still make leaf mold without shredding.

Non-waxy leaves (oak, beech, etc.) break down quickly and are ready to use sooner. Thicker waxy leaves (elm, maple, horse chestnut, etc.) take longer to decompose and benefit from shredding.

Piling them in a contained area such as done with compost or putting them into large plastic bags with holes are both ways in which leaves will turn into a rich crumbly medium. Leaf mold needs to remain moist and aerated to break down quickly. After one to three years, fungus will have broken the leaves down to a special compost that smells like the woods.

## Mulch

Whole leaves can form a mat that water can't penetrate so chop or shred leaves before using them as a mulch. Walnut leaves contain substances that inhibit plant growth so be cautious when using leaves from this tree. Mulch plants to retain moisture or insulate tender plants with a 6-inch blanket of chopped leaves to protect them from winter wind and cold.

## Mow leaves into your lawn

If you don't have the time or the patience for any of the above options for using your leaves, your lawn can benefit from them.

A fine layer of chopped leaves will break down over the winter and be incorporated



Mulching leaves with a push mowers. Photo credit: Rebecca Finneran, MSUE. [www.migarden.msu.edu](http://www.migarden.msu.edu)

into your lawn by earthworms. The mix of nitrogen rich grass clippings and carbon rich leaves will create a perfect lawn food for your grass in the spring.

Remove the bagging system from your lawn mower and let your equipment do the work for you. Mow often to create a fine mulch; the longer you leave the leaves requires more passes with the mower to achieve an even finish. Fall rains will carry the finely chopped leaves down into the grass for a less messy look if they have been mowed over multiple times. In contrast, whole leaves should not be left on the lawn over winter because they can mat down and promote the development of snow mold.

So now when you look out at your lawn covered in fallen leaves, think of all they have to offer. Enjoy the sights and scents of autumn as you put those colorful "summers gifts" to work in your yard and garden.

### Author Bio:

After retiring 5 years ago from owning a quilt and sewing machine shop, Rachel Brag expanded her vegetable garden. This fall 193 pounds of cabbage was made into sauerkraut.



# From the Bookshelf

By Lila Hlebichuk,  
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With gardens put to bed, winter almost upon us and the new garden catalogs yet to arrive, most of us can find a few minutes to watch a DVD or read a great book with a gardening theme, of course.

First from the book shelf is the award winning documentary "My Father's Garden."

This movie presents the story of two farmers, both dedicated to their families and producing good food, but by two diverse methods and with two very different outcomes. The first story focuses on a native son.

Frederick Kirschenmann, states, "The food and agricultural system is everybody's business; the farmers cannot do this by themselves."

Dr. Frederick Kirschenmann is a professor in the Iowa State University Department of Religion and Philosophy, and is a Distinguished Fellow and former Second Director at the Leopold Center for Sustainable Agriculture.

Kirschenmann left the family farm near Medina, N.D., to go to college and become a university professor.

During this time, farmers all over the Midwest were struggling to survive. Sarah Vogel, who was the North Dakota agriculture commissioner from 1989-1997, said she had staff members whose job was to teach farmers how to qualify for food stamps.

In 1977, when one of Kirschenmann's students told him about organic farming, he made the decision to return to North Dakota and the farm which had been in his family for two generations to see if organic farming could reverse the bleak financial outlook. The first year was very successful; the next couple of years were great learning experiences.

In the fourth year of diversity and rotation of crops as well as returning nutrients to the soil via the farm's cattle operation, Kirschenmann's father, Ted, took a handful of rich black soil and said, "I never thought I could farm without chemicals."

Today the Kirschenmann Family Farm is rented to a family who joined the farm almost 20 years ago. It is still operating as an organic and biodynamic certified operation.

I asked Dr. Kirschenmann how these practices on thousands of acres might apply to the backyard gardener.



"The same principles--regenerative, resilient operations grounded in relationships with nature, with markets and customers, apply to farmers markets and backyard gardens," he said.

In the film, Director Miranda Smith also includes snippets from home movies showing her family's orange orchard in Florida where her father Herbert Smith, turned an alligator-, snake- and insect-infested plot of scrub brush into a successful orange orchard.

This movie can be purchased or rented from several sources including Amazon.com and Mirandaproductions.com. You can also request that your local public library obtain a copy.

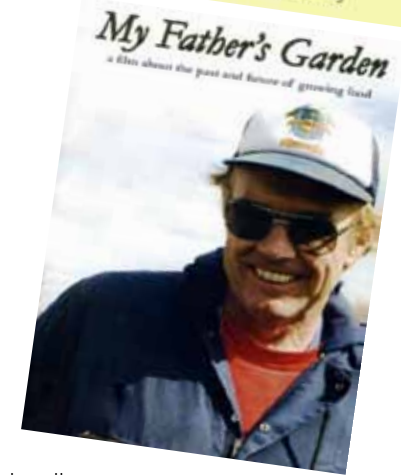
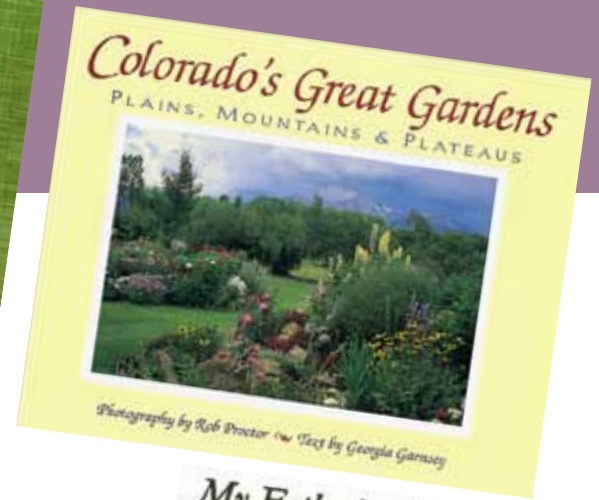
Second from the book shelf is "Animal, Vegetable, Miracle: A Year of Food Life," by Barbara Kingsolver.

This non-fiction book by New York Times best-selling novelist Barbara Kingsolver chronicles the year she and her family moved back to their Virginia farm from Tucson, Az.

Realizing that each food item in a typical U.S. meal has traveled an average of 1,500 miles and all that bodes for the environment, their goal was to live the entire year on foods that were grown by themselves and locally by their neighbors, or learn to live without. A few exceptions were made for items such as coffee and olive oil.

They harvested their own animals that "they had the good sense not to name" and learned how to "unload excess zucchini" just like the rest of us.

Kingsolver's husband, Dr. Steven Hopp, a professor in Environmental Studies at Emory and Henry College, includes sidebar information, such as "If every U.S. citizen ate just one meal a week (any meal) composed of



locally and organically raised meats and produce, we would reduce our country's oil consumption by over 1.1 million barrels of oil every week."

References are in the book and on the Animal, Vegetable, Miracle website. [www.animalvegetablemiracle.com](http://www.animalvegetablemiracle.com)

Daughter Camille is included, giving her own take on cooking and growing your own food.

With the increasing urbanization of America, many people have lost touch with where our food comes from.

There was a joke circulating that may sadly be based in truth where a woman was protesting deer hunting. "Why can't you just buy your meat at the grocery store where no animal is harmed?" she asked angrily.

In contrast, at a Farmers Market buying corn, Kingsolver's daughter Camille protested when the vendor was about to pick a worm off the ear of corn. She paid for that ear of corn, the worm comes with it and since she was in charge of the chickens and egg production, the worm would go to feed her chickens.

Kingsolver's prose is as entertaining as it is educational, and as humorous as it is poignant.

The last book from the bookshelf is

"Colorado's Great Gardens," with photography by Rob Proctor and text by Georgia Gurnsey.

Colorado is as diverse as North Dakota and the gardens in this book are divided into the three areas of Plains, Mountains and Plateaus.

I am including this book because it is my go-to book for inspiration and peace on a cold and snowy day. I've had the good fortune to tour many of the gardens included in the book and the gardens are stunning.

This coffee table book can be purchased from Amazon for as low as \$5, including shipping. If it doesn't inspire a North Dakota's Great Gardens book, we should at least get some great ideas for our own gardens or simply enjoy the fruits of many dedicated gardeners.

## Virtual Bookshelf

From the virtual book shelf are the many NDSU publications.

If you are not already on the mailing list to get Tom Kalb's Yard and Garden Report you can access the current as well as past issues at: [www.ag.ndsu.edu/yardandgardenreport/](http://www.ag.ndsu.edu/yardandgardenreport/)

Our own Esther McGinnis and Julie Garden-Robinson collaborated on From Garden to Table: Leafy Greens! – H1754 which includes great recipes as well as great information: [www.ag.ndsu.edu/publications/landing-pages/gardens-lawns-trees/leafy-greens-h-1754](http://www.ag.ndsu.edu/publications/landing-pages/gardens-lawns-trees/leafy-greens-h-1754)

Of the many Julie Garden-Robinson publications, two are especially timely now: Mix It Up to Expand Your Gift Giving Dollar With Food Mixes in a Jar – FN1494 and

Nourish Your Immune System – FN1773: [www.ag.ndsu.edu/publications/landing-pages/food-and-nutrition/mix-it-up-to-expand-your-gift-giving-dollar-with-food-mixes-in-a-jar-fn-1494](http://www.ag.ndsu.edu/publications/landing-pages/food-and-nutrition/mix-it-up-to-expand-your-gift-giving-dollar-with-food-mixes-in-a-jar-fn-1494)

[www.ag.ndsu.edu/publications/landing-pages/food-and-nutrition/nourish-immune-system-fn-1773](http://www.ag.ndsu.edu/publications/landing-pages/food-and-nutrition/nourish-immune-system-fn-1773)

A full list of NDSU publications can be found at: [www.ag.ndsu.edu/publications](http://www.ag.ndsu.edu/publications)

### Author Bio:

*A retired computer programmer and networking technician, Lila Hlebichuk is a devoted gardener, reader, and dog fancier, showing her dogs in conformation and performance events.*



# Lasagna Gardening:

## No, it is NOT planting ingredients for lasagna

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

**T**his past summer, I developed a love/hate relationship with grass. Actually it's more of a hate relationship at this point.

First of all, south Fargo, where I live, barely has any full-grown trees which means for my grass to make it through the hot summer, we have to water it every other day.

Second of all, when I want the grass to die, it puts up a great fight to take over my garden and flower beds.

When we moved in a couple of years ago, our yard was essentially a blank slate -- no garden beds, no landscaping and a little too much possibility. We've done some landscaping and tried a number of tactics to create areas for flowers and vegetables, but a new approach recently came to my attention and it may just be the ticket to loving grass more than I hate it.

### Introducing lasagna gardening

The greatest part about lasagna gardening is there is no back-breaking digging or sod removal needed. Similar to assembling a lasagna for dinner, this layering technique of cardboard or newspaper, peat moss and grass clippings makes a perfect recipe of nutrient-rich, crumbly soil in which to plant, without the pesky grass.

Before placing the cardboard and wet newspaper over your grass, make sure to plot out the garden to see how much material you will need.

Brown corrugated cardboard can generally be found at any big-box store or grocery store. Stop on by and ask if you can take a load of cardboard off their hands. Flatten the boxes and lay them over the area of grass you want to turn into a garden bed, and wet them down, making sure to overlap them so no sod is peeking through the cracks.

Newspapers can also be used for the first layer.

The next layer is peat moss. Peat moss is typically sold in bales at home improvement and garden centers, but may be hard to come by this time of year.

However, the second layer can be made up of any organic material as long as it is free of protein (fat, meat, or bone). Many major cities

### More information about lasagna gardening can be found at the following links:

- [solutionsforyourlife.ufl.edu/hot\\_topics/sustainable\\_living/no\\_dig\\_garden.shtml](http://solutionsforyourlife.ufl.edu/hot_topics/sustainable_living/no_dig_garden.shtml)
- [extension.oregonstate.edu/gardening/layer-compost-lasagna-style-no-till-gardening](http://extension.oregonstate.edu/gardening/layer-compost-lasagna-style-no-till-gardening)

have compost available free or for low cost. Check with your city's landfill, solid waste or recycling center.

Spread the peat moss or compost evenly over the wet cardboard.

The third layer is grass clippings and chopped leaves.

Fall is a perfect time to create a lasagna garden with all the organic material around and it has the winter months to help it decompose, creating a perfect environment that will ideally be ready for planting in the spring. It may take longer for the material to decompose, depending on the weather.

The sod underneath the cardboard will decompose, as will the cardboard, the peat moss/compost and the grass clippings, leaving you with a nutrient rich garden bed without having to remove the sod.

We may be running short on time with snow soon to arrive, but this should give you enough tools to get started with your own lasagna garden yet this fall.

### Author Bio:

*Bethany Foyt is a marketing and communications manager at The Partner Channel, with business-writing experience in newsletters, blogs, and magazines about technology. She gardens as much as possible with two little ones, and writes children's books and poems on the side.*

# Prairie Grasslands are Glamorous

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

A prairie might not induce the awe-inspiring feelings of a mountain range or emanate the power of an ocean.

But a prairie is glamorous. One simply has to take time to look within a prairie to find its great beauty.

North Dakota lies within the heart of the Prairie Pothole Region and includes all three major prairie types—tallgrass prairie, mixed-grass prairie and shortgrass prairie. Each prairie type is made up of a variety of grasses and wildflowers.

The decline of bees and other pollinators has been in the news a lot lately, and according to the U.S. Fish and Wildlife Service, North America's grasslands is the continent's most endangered ecosystem.

It is estimated only 3 percent of remaining tallgrass prairie is unplowed in North Dakota. Most virgin tallgrass prairie is found in the Red River Valley.

Towering grasses such as big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), and switchgrass (*Panicum virgatum*) are the dominant plants in a tallgrass prairie. They thrive in the wetter climate of eastern North Dakota.

Shortgrass and mixed-grass prairies have fared a bit better. Short and mixed-grass prairies can be found in the Little Missouri National Grassland in southwestern North Dakota. This is the largest grassland in the United States and covers close to 1 million acres. This national grassland is not all contiguous because privately-owned land is scattered through it.

Shortgrass prairies are adapted to the drier climate of southwestern North Dakota. The most common shortgrasses are blue grama (*Bouteloua gracilis*), buffalograss (*Bouteloua dactyloides*), and western wheatgrass (*Pascopyrum smithii*).

Mixed-grass prairie once covered about 85 percent of North Dakota and contained an intermediate mix of grasses from both tallgrass and shortgrass prairies. Today, mixed-grass prairie exists in about 30 percent of the state and is the most common prairie type in North Dakota.

Native prairies are an excellent example of biodiversity, and maintaining this is essential to the health and future of the earth's ecological systems.

Conservation of these untouched prairies is imperative. Once a native prairie is plowed, it's gone.

It takes decades of careful



Big Bluestem. Photo Credit: Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

planning, planting and management to restore the complexity of these biologically rich grasslands.

Prairie restoration is a method to restore prairie land, but these reconstructed prairies are often less diverse and are highly susceptible to invasive and/or non-native grasses.

Bigger prairies obviously are more beneficial, but even small patches of native gardens around homes and buildings are pocket refuges for native wildlife.

## How to help.

As master gardeners, we can help preserve and restore the beauty of native plants through education, outreach and public awareness. Educating oneself on native plants, invasive species, pollinators and wildlife interactions can help.

## Resources:

U.S. Fish and Wildlife Service, [www.fws.gov](http://www.fws.gov), contains information on the National Wildlife Refuge System and locations of native prairies.

Resources for North Dakota prairie grass, wildflower and tree identification: North Dakota Game and Fish Department, [gf.nd.gov](http://gf.nd.gov), and Northern Prairie Wildlife Research Center, [www.npwrc.usgs.gov](http://www.npwrc.usgs.gov).

Companies that sell native plants for restorations and gardening: Prairie Restorations, Inc., [www.prairieresto.com](http://www.prairieresto.com), and Prairie Moon Nursery, [www.prairiemoon.com](http://www.prairiemoon.com).

## Author Bio:

Rena Mehlhoff's mother taught her the joy of gardening at a young age and continues to enjoy it to this day, even the weeding.

## Bismarck's First Pollinator Garden

The Lewis and Clark Wildlife Club have prepared Bismarck's first pollinator garden site for planting. The 9,000 square foot site is located at the new Johnny Gisi Memorial Park located at 2601 E. Calgary Ave. in Bismarck, ND.

The volunteers have tilled the site, planted a cover crop of oats, and managed invasive weeds, primarily Canada thistle and wormwood sage. Next May, to take advantage of the full growing season, Lewis and Clark volunteers plan to work with Girl Scouts and Boy Scouts to plant a mixture of 15-20 native wild flowers and 7 species of prairie grasses, including purple coneflower, butterfly weed, blue grama grass, and green needle grass.

Developing Bismarck's Pollinator Garden has been a wonderful partnership with many individuals and groups stepping forward to lend a hand. Partners include Bismarck Parks and Recreation District, USDA's Natural Resources Conservation Service, USDA's Plant Material Center, and the Xerces Society.



Volunteers from the Lewis and Clark Wildlife Club prepared the pollinator garden site for planting. Photo Credit: Bill Bicknell.



## Have a story idea?

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