



# THE DIRT



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## Not So Dear Deer

By Rachel Brag, rbinndak@gmail.com

**E**nglish is a puzzling language. Why do the words deer and dear even have to be pronounced the same?

There is nothing dear about deer in your yard and garden. Whether you live in town or the country, these pests most likely have made you use words not normally in your vocabulary.

So let's address the not-so-dear creature that strolls through your garden, browsing on plants, eating the tops and even pulling the plants out, leaving the root lying on the ground to remind you of their dastardly deeds.

Deer damage is different from that of rabbits. Deer tear plants when dining at your garden buffet, whereas rabbit damage results in a clean cut.

Deer are creatures of habit and if they are used to being in your yard and garden, breaking the habit is next to impossible but can be done with relentless persistence.

Installing a game camera can be a good investment. It will help you learn their habits

and who's visiting. (Fig. A) Game cameras can be purchased with the feature that will send a notice to your cell phone when a photo or video has been taken, should you care to be awakened in the middle of the night to scare them off.

Deer have identifying features you will recognize after they have visited a number of times. This is valuable information because during the annual hunting season, the culprit can be removed. Of course, your location and personal views on hunting will dictate if this control method is an option.

It has been said deer can jump high and deer can jump far but they can't do both at the same time. They also don't like to jump over a solid fence, such as a wood fence, if they are not familiar with the landing spot on the other side. But once they get sight of your luscious garden on the other side, the battle has begun. Location and building codes will dictate what type of fencing you can install.

If you plan on using a single fence, it must be eight feet high and made of a material that eliminates crawling through. A low volt electric fence will not readily



Rachel Brag



Fig. A

**NDSU** EXTENSION SERVICE

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deter deer as they have a dry foot pad, and in order to send the message "stay out" the fence must have some "zing" to it.

I live in the country and I had a .5 joule output electric fence that was 8-feet high around my small backyard vegetable garden. It kept the deer out for three growing seasons, until this past summer when we didn't have rain for an extended period of time and it failed to keep out one particular doe. The fence was not grounded properly so it couldn't do its job.

Be sure to check with local codes and ordinances before erecting an electric fence.

Around the perimeter on two sides of our yard we put up a 42-inch woven wire fence and went up to eight feet high with four additional

strands of barb wire. This has stopped the deer highway through our front yard.

Another single fence option is plastic mesh fencing that can be purchased up to seven feet high and is less noticeable because it blends into the environment. It is lightweight and can be permanently or temporarily installed.

A double fence is a successful option for keeping out deer.

Deer have poor depth perception due to the location of their eyes on their heads. They will not breach a fence that is double because it confuses them when determining if they can jump over it.

The first fence must keep them from crawling through. Some choices for a perimeter fence is woven wire, solid wood, chain link, or electric with enough punch for them to take notice.

This fence doesn't need to be high. It can be successful at 3 to 3 1/2 -feet high. The second, or inside fence, is placed 24-30 inches from the first and can consist of only a top wire approximately the same height as the top of the first fence.

The second fence can be as simple as old clothesline rope held in place with push-in electrical fence posts. The second fence, when installed with push-in posts, can easily be removed when the growing season is over should you not want to look at it year round.

I have used the double fence method for many years around my larger vegetable garden, where the corn, tomatoes, cabbage, vines and potatoes are grown. To date, it has not failed to keep the deer out.

A slightly different take on confusing deer in regard to fence height and depth is placing a single fence as low as four feet tall, leaning outward at a 45- to 60-degree angle (instead of straight up and down). If using this method, make sure the bottom wires or rails are close enough to the ground and to each other to deter deer from crawling through.

The key to any successful fence is keeping the fence in good shape. Check regularly for tree branches or a limb that may have fallen and compromise the integrity of the fence. An attempted breach by deer can cause damage that will need repair.

Whatever you do, don't let your fence fail because then the deer will have to be retrained to stay out.

There are many spray options on the market. The most successful ones contain ingredients the deer find distasteful.

When purchasing a spray, look for rosemary or mint oil, garlic and a possible heat agent, such as pepper, on the ingredient list. (Fig. B)

Most all sprays will also contain putrescent whole egg solids, which causes the mixture to have an unpleasant odor. A strict adherence to

timely application is required for sprays to be successful.

Switching from one brand of spray to another is a good idea because it keeps the deer from becoming accustomed to the smell/taste of one particular brand.

Quality sprays are not cheap and if you have a large area to spray, it can be an expensive endeavor.

There are many homemade concoctions to be found on the internet that their chefs will vow do the job. I tried one that had egg solids and oils on the ingredient list. It did work but straining the rotten eggs so they wouldn't plug up my sprayer was a smelly messy experience. It took a large quantity of eggs to make a pint of repellent because the straining reduced the usable liquid by 60-70 percent.

The odor of wild predators has been said to deter deer. Coyote, wolf, bobcat and mountain lion urine is available for purchase.

After losing five trees to buck rubbings one fall, I purchased jute balls scented with coyote urine. The only thing that was affected was the \$89 to my wallet, as the rubbings continued. One tree actually had the top broken out, with the top and attached scent ball laying on the ground. (Fig. C)

Motion-activated sprinklers will spray a sudden jet or stream of water at the invaders. The sprinklers are available in solar-powered, battery-powered, attached to a water source via hose or with its own self contained water reservoir.

If you have done any research on deterring deer, there is always the recommendation of human hair and bath soap placed in a mesh bag around the perimeter of your garden/yard. Even smelly worn clothes have been suggested.

Cutting dryer sheets into strips and tying them around the area to be protected has worked for some gardeners. There are some folks who have had success with these methods, but they are circumstantial at best.

The deer in our yard have grown accustomed to my husband and I moving about so they know our scent. When I hung several of his very smelly work shirts on posts by my garden, it didn't phase them at all.

Whatever method you choose, don't give up. If you cannot find the materials or items you



Fig. C



Fig. B

want in your local trade area, most items are available for purchase on the internet. After living in a rural area where an internet map had my acreage labeled by a hunter as "deer spot one," I'm winning the battle by using a combination of the above methods.

Now the deer can only look at my garden and drool.

## Resources:

University of Vermont Extension, Department of Plant and Soil Science, Dr. Leonard Perry, Extension Professor, Effective Deer Fences.

University of Nebraska, USDA National Wildlife Research Center-Staff Publications, Comparison of Commercial Deer Repellents.

# Save Money, Water and Time with Xeriscaping

By Martha Willand,  
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## What is Xeriscaping?

Xeriscaping refers to landscaping that conserves water. Xeros is the Greek word for "dry," and 'scape' comes from Latin word for "stalk."

Originally developed in the 1980s for arid and semi-arid regions, xeriscaping uses plants that require minimal water, incorporates techniques that efficiently use water and reduce evaporation, and creates sustainable landscapes compatible with local rainfall.

Xeriscaping can be performed on both small and large scales, from small flower gardens to replacing turf in yards, and shrubs and tree plantings. Xeriscaping has become increasingly important nationwide as our water consumption continues to rise while ground water tables drop and we face pervasive droughts.

According to the U.S. Environmental Protection Agency, the average family uses 320 gallons of water per day. Approximately 30 percent of this use is for outdoor purposes nationwide, but it can be up to 60 percent in more arid regions.

Xeriscaping can not only help minimize our water consumption but can lower monthly water bills.

## Benefits of Xeriscaping

- Less maintenance and lower costs: Maintenance is minimal, only needing occasional pruning and weeding. Watering requirements are low, helping you to save on water bills. Perennial plantings are also economical providing long-term benefits.
- No fertilizers or pesticides: By using mulches and amending soils, native plants can thrive and eliminates the need for chemical supplements. Sufficient nutrients are provided by healthy organic soil.
- Enhanced real estate value: A good xeriscape can increase property values and offset the costs of installation.
- Less air pollution: Mowing large turf areas requires fossil fuels and creates emissions. Small turf areas can be



Xeriscape garden in the Allen Centennial Gardens on the campus of the University of Wisconsin-Madison. Photo credit: James Steakley, Creative Commons 4.0

maintained with a reel mower.

- Provides wildlife habitat: Native wildflowers, shrubs and trees provide food and habitat for local wildlife, and can help native bees and other pollinator populations.
- Year round beauty: Xeriscapes provide colorful landscapes even during times of drought, and can provide edible and decorative products throughout the year.
- Environmental value: Xeriscaping can help improve air quality through carbon sequestration and reduces storm water runoff.

## Seven Principles of Xeriscaping

There are seven guiding principles to consider when installing a xeriscape, according to several sources, including Denver Water, which coined the term xeriscape.

### 1. Planning and Design

There are several steps to follow in finding a successful xeriscape design. They include:

Family needs and uses: What types of activities will occur on the space? Are there pets that may affect plantings?



Gaillardia aristata (blanketflower or firewheel), that was photographed in the neighborhood called Capitol Hill - Denver, Colorado USA. (c)2007 Johnathan J. Stegeman, Creative Commons 3.0

Budget and timeline: How much can you afford? Are you planning to perform the work yourself or hire contractors? Do you plan to complete everything in the first year, or can it be done over a few years?

Map and analyze: Before you begin designing your xeriscape, visit a local nursery to familiarize yourself with drought-resistant species compatible with your plant hardiness zone. Using graph paper, plot the area noting the four directions, current trees,

shrubs, turf and buildings, sunny and shady areas, slopes and aspect. Other items you may want to include may be contours, rocks or landscaping features, soil characteristics, topsoil depth, stability or potential flooding areas (runoff areas can be used for a rain garden).

## 2. Soil Improvement/Analysis

Soil is the most important component of a successful garden. The ideal soil for a xeriscape allows for quick draining yet maintains soil moisture. This can be difficult in arid and semi-arid areas, but a little tender loving care can go a long way toward the success of your water-conserving landscape.

Compost is an ideal organic material that can be added to your soil to increase aeration and it is an affordable and environmentally sound practice. Other organic materials may include peat moss, animal manure or processed bark. You may also want to get your soil tested at a local garden center or through NDSU soil lab.

## 3. Appropriate Plant Selection

For best results, choose plants that are native to your region. Native drought-tolerant plants will already have adaptations that make them adept for the climate and site -- hairy, sticky or waxy leaf surfaces; leaves that are small, thick, glossy, silver-grey or fuzzy; spines or prickles; extensive root systems; small, less showy flowers, or fast-growing.

Group plants with the highest drought-tolerance together furthest away from water sources, and group those needing more moisture closer to water sources or flooding zones.

Purchase plants or seeds from reputable nurseries and garden centers. Most will sell native and introduced species that are adapted to your area and within your plant hardiness zone. They may also have a warranty from 6 months to one year from the date of purchase.

Transplanting from the wild is not recommended as attempts are often unsuccessful due to the extensive root systems. It is sometime illegal in some areas, too.

One can gather seed from wild plants, but seed quality can be poor in the wild, and propagation requirements can make germination difficult. A list of native seed and plant retailers can be found in the list of additional reading at the end of this article.

## 4. Practical Turf Areas

"More than 24 million acres of suburbia are planted in lawn. Each year \$7.5 billion is spent on the care of that lawn, including more than 67 million pounds of pesticides. In addition, the average lawn requires 10,000

gallons of water over the course of a summer to keep it that emerald green so many continue to covet." Stevie Daniels, 1995, *The Wild Lawn Handbook*

Traditional turf grasses like Kentucky bluegrass are generally highly revered, but they require extensive seeding densities, and high amounts of water and fertilizer.

Native northern Great Plains grasses are adapted to our extreme climate, require less maintenance, conserve water and can improve the habitat in our yards. You may want to retain some traditional turf for open space, pets or children or visual appeal, but you can reseed new or existing turf with water-conserving species adapted to you area. A local seed house or nursery can help find appropriate grass mixes for your area.

In North Dakota, grass seed mixes may include: blue grama, buffalograss, sideoats grama, western wheatgrass or green needlegrass. Seed mixes will differ based on location and soils within North Dakota.

## 5. Efficient Irrigation

The goal of xeriscaping is conserving water.

We can avoid overwatering by using soaker hoses and drip-irrigation systems. These systems are efficient since they reduce moisture loss through evaporation, deliver water directly to the base of the plant, and they deliver water at a slow rate, reducing erosion and pooling of water and encouraging root growth. Monitor soil moisture to determine the best time for irrigating.

Irrigation considerations:

- Sloped landscapes require water to be applied more slowly than flat surfaces to allow adequate infiltration and prevent runoff. Berms and terraces hold water and stabilize severe slopes.
- In general, it's best to water deeply and less frequently. South and west exposures require more frequent watering than north or east exposures.
- Avoid sprinklers that emit a fine mist high in the air.
- Water either in the early morning or at dusk to minimize evaporation.
- Design plantings and structures to capture snow for additional moisture.



Mulch made from shredded yard waste in a municipal recycling program, showing compost bins in the background and gloves in the foreground. Photo credit: Dvortygirl, Creative Commons 3.0

## 6. Use of Mulches

Mulches are used to minimize evaporation and surface temperatures, and to reduce erosion and weed growth. There are a wide variety of mulches available, and they can either be applied directly to the soil surface or over landscape fabric.

Organic mulches include peat moss, sphagnum moss, wood chips, sawdust, pine needles, bark, grass clippings, leaves, manure and coarse compost. Organic mulches slowly decompose and help to improve soil texture and add nutrients.

Because they become incorporated into the soil, they need to be "top-dressed" from time to time in order to reach the desired 2-3-inch depth.

Inorganic mulches include pea gravel, rocks, sand, perforated plastic sheeting, sand, vermiculite and perlite. These materials do not affect soil chemistry, are subject to movement by the wind and moving water, and are generally unaffected by microbial action.

Mulch considerations:

- Mulches should not be placed against the trunks of trees, but set back a few inches to minimize rodent damage, and fungal growth.
- Material that is too "fresh" (not weathered) may cause nitrogen deficiency. If a nitrogen deficiency occurs, the addition of some water soluble nitrogen fertilizer to the mulch will correct the problem.
- Gravel and rocks can increase soil temperatures and increase evaporation.
- Newly seeded areas should be mulched with light materials such as weed-free hay, straw, or composted grass clippings at a rate no more than ½-inch depth.

## 7. Appropriate Maintenance

Low maintenance is one of the benefits of xeriscaping. However, you will still want to prune and thin, mow and weed as necessary. As your garden continues to grow you may want to adjust your watering levels and irrigation system. If using organic mulches, you'll need to add materials annually.

Lastly, enjoy your xeriscape. You deserve it.

## For More Information

- USDA National Resource Conservation Service
- Land Grant Universities and Cooperative Extension Services
- USDA Fish & Wildlife Service Wildlife Refuges and Regional Offices
- State Wildlife and Natural Resource Agencies
- Native Plant Societies
- The Nature Conservancy
- Local Greenhouses and Nurseries

## Additional Reading

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# No Till Gardening

By Laura Kourajian, lkourajian@yahoo.com

**T**here are times when Abby Gold misses the sensual feeling of sun-warmed pulverized dirt sifting through her fingers, the kind of dirt -- so soft, so fine, so smooth -- that happens right after the garden plot is tilled in the spring.

But she doesn't miss it so much she'd convert from her practice of no-till gardening, which she has been using at her garden plots at the Probstfield Organic Community Gardens (<http://probstfieldcommunitygarden.weebly.com/>) in north Moorhead, Minn.

"I actually have never, ever gardened with any chemicals, even when I was in college or high school," said Gold, who is the vice chair for the Department of Public Health at North Dakota State University and a gardening enthusiast. "I was looking for a way to control the weeds and enhance fertility in the soil and I came across this method of no-till gardening through the Podoll family."

The Podolls, whom Gold read about in Lisa M. Hamilton's book "Deeply Rooted: Unconventional Farmers in the Age of Agribusiness," operate an organic seed farm, Prairie Road Organic Seed, near Fullerton in Dickey County (<https://www.prairieroadorganic.co/>).

Gold was able to tour the Podoll farm as part of an NDSU Extension tour, and she was hooked.

"They have not tilled their soil in 30 years," she said. "They've built it up every year with straw mulch."



Abby Gold

"Their top soil is 10 inches," she emphasized enthusiastically. "They never disturb their soil except to plant."

No-till gardening means different things to different gardeners, but to Gold, it means disturbing the soil as little as possible and using mulch to keep weeds at bay and conserve water. Indeed, mulch seems to be a key element to no-till gardening. The mulch can be most any organic matter -- grass clippings, leaves, straw, and even newspaper or cardboard.

If using grass clippings or straw, make sure there is no herbicide residue in the mulch, as that can affect your garden for this season, and possibly future seasons. If you use your own grass clippings, it's best to wait to use clippings until the 3rd or 4th mowing after using a herbicide, according to Esther McGinnis, Extension horticulturist and assistant professor in the Department of Plant Sciences at NDSU.

*Mulching is the key to no-till gardening. Here, the gardener is using straw mulch to hold in moisture and keep weeds at bay. The straw decomposes and becomes organic matter, boosting fertility for the next season.*



Straw mulch can pose an even bigger risk, as ditch straw may be sprayed with persistent agronomic herbicides which can last in the soil for years, McGinnis said. Your best bet? Buy straw mulch from a reputable supplier and ask all the right questions.

Gold uses straw, and buys about 25 small square bales of straw from a local farmer every year. There are four other gardeners at Probstfield using the no-till method, and her gardening neighbor uses grass clippings. So far, the gardens – one with straw mulch one with grass clippings – have progressed about equally, she said.

No-till gardening often means less work, but it doesn't mean no work.

Sure, there are fewer weeds, more fertile soil and no tilling work, but don't kid yourself, said Gold, the mulching is a lot of work. "I don't have to do the other stuff, but managing the mulch is work," she said.

"You can't just do it and ignore it."

To get started on a no-till plot, Gold said, do a regular tilling -- the only tilling you'll be doing ever again -- and plant your garden. As the plants begin to emerge, cover the garden with mulch. As the season progresses, keep adding mulch as necessary.

At the end of the season, she leaves that

mulch in place, pulls up her tomatoes (to prevent the potential spread of disease) and folds down the rest of her plants and stomps on them. She covers all that vegetation with another layer of straw mulch after everything has died down before putting the garden beds to, well, bed for the winter.

The next spring, without disturbing the soil, Gold lays a strip of coconut hull or peat moss on top of the dying, decaying mulch, and drops in her seeds. For seedlings, she digs into the decaying mulch only enough to plant.

(Some no-till gardeners, she said, will open the dirt to expose it to the sun and let it warm up for a few days before planting.)

Once things start growing, Gold adds another layer of straw mulch, and may replenish that if weeds start coming up. Those weeds that do sneak through are easier to pull because they are generally only embedded in the loose organic mulch.

"The soil is loose and dark and moist," Gold waxes as only a gardener could find joy in such things. "It's beautiful."

This summer will mark Gold's fourth summer of no-till gardening, the fourth summer her hoe and her spade will hang lonely in her garage.

Without disturbing the soil, the organic

matter and carbon stay in the soil and the earthworms are not disturbed, leading to greater fertility.

"My garden is pretty amazing," she said. "I'm not bragging. I just think my garden explodes. And I have a lot of other examples around me."

"Soil is the skin of the earth and we really need to take care of it," she said.



Abby Gold's garden production has exploded, she said, since she quit using the tiller and began using mulch, employing the no-till method of gardening.

# North Dakota Theme Gardens

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

**S**ome theme gardens are in a pot on a windowsill or balcony. Others are huge expanses, including hardscapes and statuary contrasting with a collage of plants.

All provide a feast for our senses.

What is certain is that beautiful theme gardens abound in the yards of our talented North Dakota Master Gardeners.

## A Stunning Succulent Garden

In the sunny, west facing front yard of long-time Bismarck Master Gardener Diane Gronfur, cactus, sedums and other succulents provide season long interest with their blooms and beautiful foliage. The sun and well drained, sandy soil provide the ideal spot for the many hardy plants that do well in North Dakota.

Gronfur has found containers - especially broken pots - make the perfect planters for cascading sedums. She has both hardy and non-hardy varieties.

Plants in containers do require extra care in the winter, she noted.

Hardy varieties are moved to an unheated part of the garage, except for the heavier troughs, which are not moved but are covered in mulch.

All non-hardy succulents are brought inside for the winter. Gronfur keeps her plants under an artificial lighting system, but said good natural lighting can work as well.

Many, non-hardy succulents, like aloes and jade plants, are excellent year-round houseplants.

"All sedums are succulents, however not all succulents are sedums," she noted.



Succulents come in many colors, including lime green and deep burgundy, and many are hardy in North Dakota.



Succulents come in many foliage colors, including lime green and deep burgundy. The early, mid-season or late blooms come in all shades of pink and other colors as well. Tall, short, mounds or cascading, the beautiful foliage delights the senses.

Some succulents can handle part-shade, however the blooms are usually not as profuse.

Gronfur has many favorites in her garden, including the variegated Elsie's Gold, the darkest Black Jack, Blue Pearl, the unique foliage of T-Rex and the vibrant blooms of Mr. Goodbud. More new succulents are making their way to market and euphorbias are a current favorite in Gronfur's garden.

Photos of individual sedums and other succulents, their care and much more information can be found on the Master Gardener website under Master Gardener Resources in the replay of Gronfur's February 23, 2016, "Success with Succulents" webinar. <http://www.ag.ndsu.edu/mastergardener>



*Broken pots can find a second life as a home for cascading succulents.*



Mary Gardens have been around since medieval times. Through the meanings of the plants, a floral mosaic of Mary's life, mysteries and virtues are created. There are hundreds of flowers, herbs, shrubs and trees in a Mary Garden, including:

- Coleus – Joseph's Coat
- Daylily – St. Joseph's Lily
- Hydrangea – Hail Mary
- Rose - Emblem of Mary, Queen of Flowers
- Salvia – Mary's Shawl
- Snapdragon – Infant Jesus' Shoes
- Veronica – Our Lady's Faith

Terrie is happy to share her extensive research and experience and can be reached at [trinitygardens.nd@gmail.com](mailto:trinitygardens.nd@gmail.com) or (701) 746-5915.

*Areas of Mann's gardens are dedicated to the Sacred Heart of Jesus, The Holy Trinity, Baptism and The Eucharist.*



### A Devotional Garden to the Blessed Virgin Mary

English poet Dorothy Frances Gurney stated, "One is nearer God's heart in a garden than anywhere else on earth."

Just outside of Grand Forks, the gardens of Master Gardener and graphic designer Terrie Mann will delight and inspire as they combine dry stream beds, a sculpture garden, rock gardens, woodland gardens, an ornamental grass garden, a potager vegetable garden, paths, paved areas, a grape arbor, a gazebo and fountains.

Over the last 26 years, Terrie's research and focus have taken a deeply personal turn. The gardens have evolved into Trinity Gardens, a Mary Garden to honor the Blessed Virgin Mary. There are areas dedicated to the Sacred Heart of Jesus, The Holy Trinity, Baptism and The Eucharist.

### Paradise on the Prairie

What do the sun, moon, stars, books and coffee have in common? They all play a part in the theme gardens of Master Gardener Kathleen Wiese. Her gardens are located just north of Bismarck.

Wiese Acres has many breathtakingly beautiful theme gardens, including a children's garden, welcome garden, woodland fairy garden and gardens that honor her family.



*Terrie Mann's Trinity Gardens honors the Blessed Virgin Mary.*



*Wiese Acres 2016*



Kathleen Weise's theme gardens include a bridge in the Sun, Moon and Stars garden (above) to remind us there is "Somewhere Over the Rainbow" (above), and a bookcase complete with bricks painted to resemble books in her nostalgia garden (right).



A garden dedicated to her son is the Sun, Moon and Stars garden. Fond memories of how her father and son enjoyed their time together watching and discussing the night skies provided the idea for this special garden. The bridge reminds us there is "Somewhere Over the Rainbow," Wiese said.

Gazing balls provide the solar system background for the beautiful plants with names reflecting the night skies. There are the heucheras named Galaxy and Midnight Bayou. Some of the daylilies include Alaskan Midnight, Buttermilk Moon, Up Against the Sun and Spacecoast Starburst. Many other aptly named plants surround the fire pit, the focal point for a garden to be enjoyed at night as well as during the day.

In the nostalgia garden, a bookcase was crafted from scrap barn wood from her parents' farm. It holds books, created by her sister-in-law, that can handle the weather. These bricks are painted in amazing likeness to the books Wiese holds dear.

Also from the farm is an old pump jack and the washtub that was used for bathing. The plants include old peony varieties, iris, a Hansa rose and Hyperion daylilies. The plants or starts were from the gardens of her mother and mother-in-law or, like the cosmos, were plants they loved to grow in their gardens.

The morning garden, with comfortable chairs surrounded by any plants that love morning sun, is a favorite spot to enjoy the first coffee of the day. This cottage-type garden bursts with color and textures to get any day off to a good start.

Wiese's blog is a great place to experience more of her talent and creativity: <http://wieseacres.blogspot.com/>

For a wealth of additional information, be sure to visit or re-visit the replay of the webinar "Using Perennials in the Landscape" presented by Wiese on April 13, 2016.

This webinar is available on the Master Gardener website under Master Gardener Resources. <http://www.ag.ndsu.edu/mastergardener>

# Three Ways to Bring Art to Your Garden

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

**W**ith garden art, anything goes. Whether you're developing a themed garden like the Master Gardeners featured in this issue of The Dirt, or simply struggling to find enough pots to plant in, it may be time to explore your artistic side.

## Here are a few types of garden art to consider:

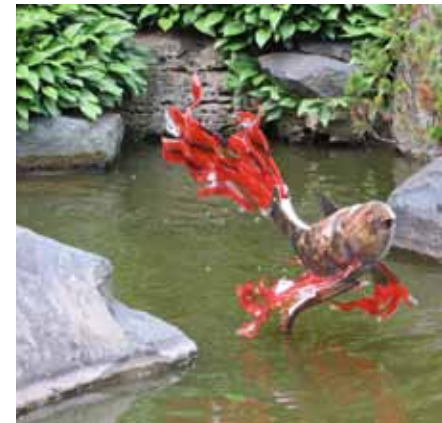
**Environmentally friendly:** A lot of garden art that is emerging involves repurposing household or landscape items. It's no wonder that garden art has found new life in this day and age of gardening.

**Ornamental:** Garden art can range from glass to aluminum to stone and bring amazing variety to a garden, enhancing a color palette or making a certain area of the garden shine. Make sure to consider durability when choosing art and, just like some of our flowers, move around as needed.

**Personal expression:** Expressing ourselves is a big reason so many of us take pride in our gardens and bringing garden art to that mix makes your garden an even bigger part of who you are.



Here's an idea for repurposing all those broken terra cotta pots stacked up on the garage. (Picture courtesy of Mary Derrick, UF/IFAS Extension.)



These examples of garden art are from the University of Minnesota Landscape Arboretum. (Pictures courtesy Esther McGinnis, 2014.)



# Pests on the Horizon: Rose Rosette Virus

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

**B**enjamin Franklin said, "In this world nothing can be said to be certain, except death and taxes."

Here in North Dakota, one can add new, invasive horticultural insects and diseases to the list of certainties.

First, Dutch elm disease raised its ugly head in 1969. More recently, spotted wing drosophila has decimated the production of raspberries and tart cherries and Japanese beetles threaten a whole host of different species.

In 2016, a new disease crept into North Dakota without fanfare and threatens the beloved rose.

First detected in Logan County, rose rosette virus is a matter of concern to rose aficionados. Microscopic creatures called eriophyid mites vector an emaravirus to susceptible rose shrubs. These tiny mites ride the wind currents to float to an adjoining rose shrub in the garden and spread the virus.

Unfortunately, the virus can escape detection, because the symptoms mimic other things. One of the most reported symptoms is excessive reddening of the leaves (Fig. 1). However, new growth on healthy rose shrubs may be red, so this symptom is not dispositive.

A second common symptom is the development of witches brooms. Witches brooms are the abnormal proliferation of leaves or shoots in an area (Fig. 2). Herbicide injury can also cause the production of witches brooms on roses but usually does not involve excessive red pigmentation.

Other symptoms include unusual stem elongation (Fig. 3), increased thorniness (Fig. 4), and having a large stem originate from a smaller stem (Fig. 5). Symptoms may differ depending upon the cultivar.

Most cultivated roses appear to be susceptible. Prairie rose, the state flower, appears to be resistant. Rose breeders around the country are attempting to breed resistant roses and \$4.6 million has been allocated to research this disease.

The disease is not curable and is eventually fatal in two to three years.

Rose collectors should be extra careful in buying new roses, because the disease spreads through the nursery trade. Choose healthy-looking shrubs and avoid purchasing from nurseries that appear to have diseased shrubs.

When planting rose shrubs, put extra space between them to prevent the mites from spreading from shrub to shrub. For rose collectors, be vigilant in scouting for the disease. Your local Extension agent can help you with diagnosis if you are unsure of the symptoms.

Once the disease has been detected in your garden, it is important to dig up the entire plant and the root system because the disease is systemic in the plant. Carefully place the shrub in a plastic bag to prevent the mites from dropping off the infected plant and dispose of it. Research has shown that careful scouting and "rogueing" of infected plants can be effective even in large botanical gardens.

The Master Gardener Program has prepared a powerpoint so that Master Gardeners can give presentations to garden clubs. This powerpoint link will be shared via the listserv.

Olson, J., E. Rebek, and M. Schnelle. 2016. Rose rosette disease. Oklahoma Cooperative Extension Service, No. EPP7329 <http://pods.dasn.okstate.edu/docushare/dsweb/Get/Document-9207/EPP-7329web2016.pdf>



Fig. 1. Excessive red pigmentation is a symptom of rose rosette virus. Jennifer Olson, Oklahoma State University, Bugwood.org, Creative Commons 3.0



Fig. 2. Witches broom is an accumulation of leaves in one area. Esther McGinnis



Fig. 3. Excessively large stems may be a symptom. Jennifer Olson, Oklahoma State University, Bugwood.org, Creative Commons 3.0



Fig. 5. Stunted, distorted leaves may occur. Esther McGinnis



Fig. 4. Increased thorniness. Jennifer Olson, Oklahoma State University, Bugwood.org, Creative Commons 3.0

# Master Gardener Stakeholder Advisory Council

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**T**he North Dakota Extension Master Gardener program only exists because of the generosity and community ethic of our membership.

While the National Extension Master Gardener Committee sets minimum standards for the organization, the state program has much freedom to set guidelines and educational programming objectives to meet the needs of the membership. To make sure your voices are heard across the state, the Master Gardener Stakeholder Advisory Council has been recruited.

The following individuals have graciously agreed to serve on the committee: Audrey Kalil, Williston; Roxanne Hawley, Devils Lake; Terrie Mann, Grand Forks; Penny Seifert, Wahpeton; Anita Hofsommer, Fargo; Dan Buchanan, Jamestown, Kitty Torkelson, Lansford, and Meigan Cameron, Bismarck.

The first objective to be addressed will be the creation of an "emeritus" status for those individuals retiring from the program. Programming directions will also be discussed.

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## Something to look forward to: SPRING AND SUMMER GARDEN SHOWS

**S**pring doesn't officially start until March 20, in a gardener's heart, spring starts when the seed flats and heat mats come out and when the garden shows start populating the weekends.

Get your calendars out and start planning your weekends as well as your continuing education with this list. Gardening seminars and sessions count toward the ten hours of continuing education required by Oct. 31, 2017, to maintain your Master Gardener certification. (That requirement is waived for new MG interns who just completed the 40-hour core course.)

**February 22:** NDSU Field to Fork Webinars begin. For more information: <https://www.ag.ndsu.edu/fieldtofork>  
Preregistration required.

**February 24-26, Mar. 3-5:** Minneapolis Home + Garden Show, Minneapolis Convention Center. Featuring Hilary Farr of HGTV's "Love It or List It," Jeff Lewis, of Bravo's "Flipping Out," and Matt Muenster, host of DIY's "Bath Crashers."

**March 11:** Williston Spring Tree and Garden Workshop. For more information: <https://www.ag.ndsu.edu/WillistonREC/events>

**March 24-25:** NDSU Extension Service High Tunnel Conference, NDSU Alumni Center and Sudro Hall, Fargo. For more information, <https://www.ag.ndsu.edu/mastergardener/events/ndsu-high-tunnel-workshop>

**March 20, 27, April 3 and 10:** NDSU Extension Spring Fever Garden Forums. Watch your e-mails or check with your local Extension office for more information on topics and speakers.

**April 1:** West Otter Tail Gardening Day, Fergus Falls, Minn.

**April 8:** 31st Annual Gardening Saturday, Alerus Center, Grand Forks. Featuring Joe Bergeson, third generation owner of Bergeson Nursery in Fertile, Minn. <https://www.ag.ndsu.edu/grandforkscountyextension>

**April 20:** Pretty Bloomers Spring Gardening Workshop, Breckenridge, MN

**April 21-22:** Dakota Garden Expo, Bismarck Event Center, Bismarck. [www.dakotagardenexpo.production.townsquareblogs.com](http://www.dakotagardenexpo.production.townsquareblogs.com).



**Have a story idea?**

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