

# *Yavapai Gardens*

Master Gardener Newsletter

June-July 2020

---



## Table of Contents

Buffalo Grass . . .	pg 1
Gardening for Stress . . .	pg 2
Common Garden Problems . . .	pg 4
Mg News . . .	pg 7

## *Buffalograss*

*By Judy Kennedy*



Have you got more water than you can use for your yard? Do you want a yard that resembles the greens at the golf course? Do you enjoy mowing every week? If you answered yes to any of those questions, then this

article is not for you.

I want to introduce you to, and convince you to try, Buffalograss. *Buchloe dactyloides* is the scientific name used by Ackerfield but I found it under *Bouteloua dactyloides* in the USDA database and also in several other references. Since I am completely “under-qualified” to join in that argument, I’ll just call it Buffalograss.

Buffalograss is a grass—WOW, that took a leap of imagination didn’t it? As such, it appears in the family Poaceae. It is a perennial native and is a “warm season” plant. “Warm season” means it is not going to green up as early as blue grass and you will think it has died until temperatures are between 75-90°F. It will do most of its growing in the summer, but in the cooler weather of late fall and winter it will go dormant, turn brown, and won’t green up again until warm weather returns.

Describing grasses takes a whole new vocabulary, but here goes. Buffalograss is slender plant with erect stems and it may form mats. There are generally female plants and male plants. The male spikelets (consisting of a pair of bracts and enclosed floret) are in two rows on one side of the seedhead and have one or two branches per seedhead. The female spikelets are burrs on short stems which are generally hidden among the leaves.

The leaf blades are smooth or slightly hairy, have parallel venation, and are flat with in-rolled tips. They are grayish to bluish-green. The plant is always short (< 6 inches) and is stoloniferous. Those stolons (above ground stems) will root at their nodes.

Its fibrous root system allows it to form a dense sod which was used by the early settlers to build sod houses. I have found that it becomes so dense that it will crowd out weeds. I found one habitat description for Buffalograss as



"well-drained clay loam, clay, or limestone but it does not like sand". My experience has been growing it in a very sandy soil and it does really well. It is often used as substitute for turf grass because it stays low and makes a beautiful low-water lawn.

Native to the western and central U.S. states and Canadian provinces, Buffalograss is a primary component of short grass prairies. It was the primary food source for herds of bison which roamed the Great Plains, hence the name. It is considered a good quality forage for domestic livestock and wildlife. It is pollinated by butterflies and is the larval host of the Green Skipper Butterfly.

*Bouteloua* was named for brothers Claudio and Esteban Boutelou-Agraz who were Spanish botanists and horticulturalists; while *dactyloides* comes from the Greek *daktylos* for finger, referring to the grass as finger-like.

Well are you convinced? It is available either as seed or plugs both on-line and locally. It can be rather pricey, so shop around and get just a small amount until you learn to like it as much as I do.



# Gardening for Stress

By Laurie Cameron

In early March, my husband, my son who lives in Tucson, and I set off for Illinois by car to see Bill's ninety-year-old mother. The coronavirus was on the horizon, but life was pretty normal. We returned two and a half weeks later just in time to seriously shelter in place. The best part about arriving home was my garden.



The yellow iris were in full bloom as were the euphorbia and many of the salvia. Since then our redbud is blooming, our purple irises are budding, and both our Japanese maples have leafed out. I go out into my yard for a visit several times a day just to watch my plants come to life.

There are buds all over the roses, the grape vine is leafing out, the crepe myrtle is showing signs of life, and the pansies in my hanging baskets are bright spots in the yard.

What is interesting is that I have turned into a somewhat overly protective mother hen. When I saw insects around my roses, I immediately grabbed some Neem Oil spray and doused the little suckers. I have ordered seeds and am nursing them along with a heating pad and grow light. This is a little unusual for me. In the past I have simply thrown some seed in my garden beds and hoped for the best. Generally, I tend to be the *laissez-faire* type of gardener. Of course I put some effort into nurturing my plants along, for the most part I subscribe to a survival-of-the-fittest philosophy. Indeed, with the exception of a small fenced-in part of the yard, my garden consists entirely of water-wise plants that are resistant to deer, rabbits, and javelina.

I know, of course, that this sudden obsession with my garden is a direct result of the pandemic. Many studies have shown that gardening is a great reliever of stress. When many services are shutting down, green industry businesses have been deemed as "essential" and remain open in every state. Even though we as master gardeners, know the benefits of gardening, it's worth looking at what the experts are saying.





The Journal of Health and Psychology in 2012 reported the first research-based evidence "demonstrating that gardening promotes relief from acute stress. In the study, participants were placed in stressful situations, followed by recovery activities. Those who were given gardening tasks measured longer-lasting reduction in the stress hormone cortisol than participants in other activities."

In 2011, Neuroscience Journal described research showing that "a beneficial bacterium common in soil, *Mycobacterium vaccae*, triggers the release of serotonin in the human body, elevating mood and decreasing anxiety."

Physical activity not only helps your mental outlook, it also boosts your immune system. It helps improve blood circulation in the brain, which also triggers the release of neurotransmitters such as dopamine and serotonin. These substances are known to reduce stress, increase energy, and boost mood. Some gardening activities can burn as much as 600 calories per hour. Here is a list of activities related to tending a garden and their average calorie burn:

*Shoveling dirt: 400-600 calories/hour*

*Moving rocks and landscaping: 400-600 calories/hour.*

*Raking and cleaning up leaves: 350-450 calories/hour.*

*Planting, pulling weeds, watering: 200-400 calories/hour.*



the stresses brought on by the pandemic. While you may not be able to hike around Belle Rock, having your piece of nature right outside your back door can help you feel some of this connection.

The beauty of nature is a great stress-reliever in itself. Having your own bit of beauty available as a place for meditation, contemplation, and relaxation can provide quite a bit of relief from stress. It's all part of making your home a haven from stress.

Finally, gardening in some areas of the country may be quite simplistic but Yavapai Master Gardeners have come to appreciate that it is a little more challenging in this part of the world. It isn't a stressful challenge though--rather it is more of a brain exercise that helps those who would like to be mentally stimulated.

We are fortunate that the weather has been working for us in Yavapai County this year. I recently paid a visit to a well-known gardening center in the Verde Valley and the place was overflowing with healthy nursery plants. Sadly, for them, it wasn't overflowing with gardening enthusiasts as it would be for any normal March.

*And forget not that the earth delights to feel your bare feet and the winds long to play with your hair.*

*--Khalil Gibra*

Sources:

"Reduce pandemic stress and anxiety with gardening and greenery," AgWeek, Mar 21st 2020, <https://www.agweek.com/lifestyle/home-and-garden/5005515-Reduce-pandemic-stress-and-anxiety-with-gardening-and-greenery>

"How to Use Gardening for Stress Relief," VeryWellMind, November 24, 2019, <https://www.verywellmind.com/gardening-for-stress-relief-3144600>

"Vitamin D and the Immune System," NCBI Resources, Aug 1, 2012, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3166406/>

"Many garden centers, greenhouses and nurseries deemed 'essential businesses'," Greenhouse Management, March 30, 2020, <https://www.greenhousemag.com/article/greenhouses-nurseries-garden-centers-essential-coronavirus/>



Just getting out in the sunlight can actually improve your mood! (This is part of why Seasonal Affective Disorder affects some people during winter months when there is less sunlight.)

Sunlight also provides an influx of vitamin D, and the fresh air that goes with it is good for your health. Medical experts during the pandemic have advised that Vitamin D promotes the immune system.

Being in touch with nature and the great outdoors can help you feel more removed from all

# Common Gardening Problems

by Nora Graf

I occasionally have the opportunity to hear the questions coming into the MG Help Desk. One of the things I have realized is that most people don't know what they are doing. That sounds harsh but I don't mean it that way. I just think that people no longer garden as kids. They didn't grow up in an



environment where the family garden was an important part of the food supply. They didn't have grandparents, aunts or uncles who had farms and would take them out into their gardens when they were young. We have become part of an urban environment where gardening is neither necessary nor is there always space for it. Another factor is that people from lush parts of the country move to the desert. They find it difficult to make the change when it comes to gardening. They want to grow the same way they used to, using the same plants and then can't seem to figure out why things keep dying. That's where Master Gardeners come in—to help guide and teach people how to garden here. Below is a list of the common problems found in gardening. These can be applied to gardens everywhere. We are not alone and even as Master Gardeners we sometimes struggle.

## Plant the right plants

Did you grow gardenias, rhubarb or peonies somewhere else and try to grow them here? The bad news is they don't grow well here. I'm not saying you can't try but it's time to throw away the old plant list and get comfortable with new species that are compatible with the zone in which you live. It isn't just temperature and rainfall to worry about, it's the soils too. Gardenias are a perfect example. They don't like alkaline soils and find full summer sun nearly unbearable. About the only time I've seen nice-looking plants are those in containers that are fussed over. Go to a good nursery and look and see what they are selling: talk to people who have successful gardens (a long-time local Master Gardener is a good choice!) They can help you find new plants that will work.

## Soil, it's not as bad as you think

How many times have I heard that the soil here is

horrible, it won't grow anything, how could anything live in it? While our soils are difficult, well really difficult, look around at all those plants growing in the desert. In fact, Arizona deserts are pretty lush. Don't give up, there is a way. First don't assume you can turn native soils into the deep soils of Iowa. Just not going to happen. Don't add massive quantities of sand, gypsum, fertilizer, organic matter, wood chips and probably other things. It doesn't work and you can create more problems. Changing the structure of soil is nearly impossible. Instead, find varieties that are suited to the area. Don't amend the soil when planting trees and perennials. Keep looking there are plants that will survive and thrive in our native soils.

You can build raised beds and bring in soil. Just don't use bagged "soil" mixes by themselves. Over a few seasons they will degrade and not grow much of anything. Make sure to use real soil (dirt) as the biggest component in a raised bed. I've managed a couple of gardens in the Verde Valley in native soils and it was work but the gardens grew well.

## Fertilizer, too much (the more common problem) and too little.

Fertilizer does not solve every plant problem. In fact, people tend to add too much fertilizer to plants. Our soils actually have a good supply of the nutrients that plants need. The one thing they do lack is organic matter and nitrogen. Organic matter, which is a source of nitrogen is readily burned out of the soil in the sun and heat of summer. Adding some organic matter on a regular basis especially in vegetable or annual gardens, is a good idea. If you are not sure what to do, watch the plant. It will tell you what it needs. For example, too much nitrogen will help create big lush tomato plants, but they produce less fruit. There are some good resources explaining nutrient deficiencies. The first two are from the University of Arizona, the last one is from Montana State University, it has some pictures which might be helpful. Whatever the problem don't just throw in more fertilizer. Getting a soil test is a good start to stop spending money on fertilizer. Fertilizer is not the solution to every gardening problem. Do not over fertilize!

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1106.pdf>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/essentialplantnutrients2008.html>

This links to a good tutorial on understanding and diagnosing nutrient deficiencies from Montana State University.

<http://landresources.montana.edu/nm/documents/NM9.pdf>

### Watering, too much, too little

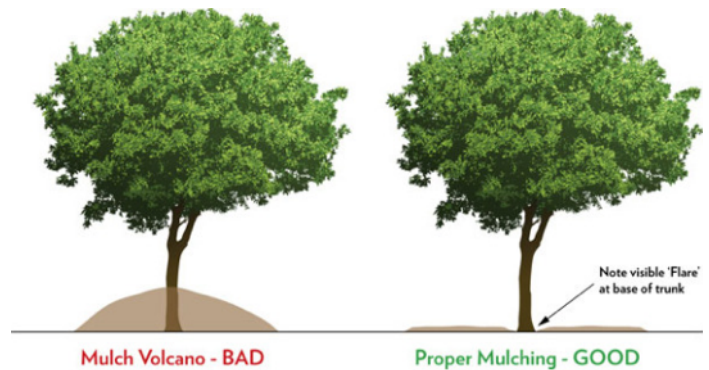
Problems people have with watering is remarkable. It's often the first question I ask about if someone comes to me with a garden problem. People truly have no idea of how much water is needed, how water moves through the soil and how to make sure their plants get what they need. Some general things for people to understand: This is a desert, rain can't be counted on, even when it rains it's not very much and it doesn't always come when the plant needs it the most. I've heard many times, "It rained so I didn't water." Everyone should get a shovel (or the handy inexpensive soil probes from the Extension office!) and physically find out how deep the water goes. You probably will be very surprised; a half-inch of rain isn't that much. It's not going as deep as you think. If your drip system is turning on for just 15 minutes every day, your trees are certainly not getting the right amount of watering and smaller plants may be getting too much. Slow, deep, less-frequent watering is the best for landscape plants and trees. Tomatoes need deeper watering than beets, trees need deeper watering than annuals. Some plants need to dry out between watering (iris, most natives). Others, like most vegetables, don't want wet soils but need consistent watering. That just means keeping the soil moist all the time, not too wet, not too dry. It's worth your time to learn how to water properly. Don't ever think having a drip system solves watering issues. You solve the watering problems by keeping your drip system working correctly to match the plant's needs.

### Rotating Plants

Farmers use this practice in large fields. It's much easier and useful to rotate various crops over hundreds of acres than in your twelve-by-twelve-foot vegetable bed. While it doesn't hurt anything to rotate crops, keeping your garden clean will help alleviate problems and adding compost will go a long way to keeping the soil healthy and your plants growing well.

### Mulch

I'm a big fan of mulching, depending on what you are growing. It's a great idea for vegetable and flower gardens and non-native shrubs and trees. Mulch holds moisture in the soil longer. Compost, pine



needles and bark work well. Don't bury your plant in it though. A couple of inches is probably fine depending on the plant and don't pile it deeply against the stems. Just enough to help conserve moisture. If you are mulching trees KEEP IT AWAY from the trunk. No volcano mulching!

### Sunshine

There is no lack of sun in Arizona. If you have grown up here, you begin to miss it if the weather stays cloudy and cold too long. For plants it is a key element to their survival. Some need more sun while others, considerably less. Most vegetables need six to eight hours a day. Iris need six to eight hours for them to bloom. The crinum (I know, an unusual plant around here) are amazing growers but they need some afternoon shade. Roses can grow well in full sun and partial shade. They just get a bit leggy in the shade, but they still bloom. It's about the right plant for the right place. Find out the best growing conditions the plant needs and understand what's going on in your yard to make sure that you are putting new plants in the best place for their survival, to bloom, or to produce food.

### Pests

There is a never-ending parade of insects to make life miserable. I have taken the extreme stand that I don't use insecticides in my yard. The one exception is that if the ants are so bad I can't go outside in sandals anymore, the ants nearest my paths have to go. I live with all the other pests and have simply given up some things because of insect issues. I no longer grow broccoli or cabbage because the aphids just cover the plant in large masses. I put up with the hornworms because they are temporary and I always get tomatoes in the end. I do it because I prefer to have the birds and butterflies safe. I never forget the hornworms turn into the amazing sphinx moths which pollinate my Datura and a lot of other plants. Most gardeners aren't that tolerant. Insect solutions should be species-specific. They are often short





lived. Have patience they just may go away on their own. Control is a matter of recognizing and identifying the problem and then finding a specific solution to it. Only buy an insecticide that lists your pest on the label. If your problem doesn't show up on the label, do not buy it. You waste your money, it's bad for the environment and won't solve your problem. Avoid broad spectrum insecticides if possible. If you don't know what the problem is get in touch with the MG help desk in Camp Verde or Prescott. Call the one closest to you. They are very good at identifying insects and can help you find a good solution. Once you know the name of the pest, look it up online. Sometimes there are long term solutions that are as simple as taking extra care in cleaning up the garden. Just don't get out the sprayer and use that container you've had on the shelf for five years.

### Larger Pests

These are mammals and birds. We are more tolerant of some species than others. In fact, some of them we encourage by feeding them. Birds are the primary example, but they can be voracious pests also. Nearly all birds are protected species under the Migratory Bird Act and several other laws and cannot be killed. Their nests and eggs are protected also. A few birds are not included in the Act. They are house sparrows (no other species of sparrows), pigeons, and starlings. Fish and Wildlife Departments can issue kill permits for some species as agriculture or health-related pests. Your yard is not included in that. If you are having problems with birds eating the fruit off your trees, the best solution is to apply bird netting or just hope you can pick the fruit before they do. I've found that birds have a remarkable ability to know exactly when you are planning to pick and moving in the night before. Bird netting isn't perfect but doesn't kill the birds. Feeding birds is legal.

Javelina, deer, coyotes, coatimundi, ring-tail cats and rabbits are the big mammals that people seem to like until they wander through the garden. The number one thing to know is to never feed any mammal. (It's against the law and you can be cited.) All of these animals can habituate to feeding and can be quite dangerous. They can bite severely, transmit rabies,

and even kill you. It is my opinion that the best way to handle them is put a fence around your house and/or your garden. It is against the law to kill them except in specific circumstances. You can check the Arizona Game & Fish website or call them for more information on what you can do to control them. <https://www.azgfd.com/Wildlife/> 602 942-3000

Fencing is expensive but exclusion may be the only reliable way to keep them out. Electric fences will work for deer and javelina, but not as much for the others. Jeff wrote some Backyard Gardener articles about all of them so you can get more details about protecting your garden from large mammals. <https://cals.arizona.edu/yavapai/anr/hort/byg/archive/coatimundi.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/ringtail2017.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/coyotes.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/copingwithdeer2016.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/preventingrabbitdamage2005.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/javelina.html>



Then there are the rodents. Gophers, rock squirrels and packrats (also known as woodrats) are common and can be quite destructive. They are similar but require different approaches to control. Gophers and rock squirrels dig burrows which can be dangerous as they can burrow underneath structures and create holes that can cause injuries when stepped in.

Packrats create large dens, sometimes in odd places like cars, but don't dig burrows. They will travel above ground to feast on your garden and sometimes any electrical wiring they come across. Rodents also attracts fleas and ticks and may carry diseases dangerous to humans. Control is difficult but you can trap them. Poisons are available but some are toxic to other animals including dogs and cats. Check out Jeff's articles for to learn more about them.

<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/pocketgopher2000.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/rocksquirrels2017.html>  
<https://cals.arizona.edu/yavapai/anr/hort/byg/archive/woodrat2018.html>



## ***Congratulations***

*for completing your first 50 hours*

*Mark Emanuele — mentor Peggy Stair*

*Paula Putao — mentor Herdis Maclellan*

*Lee Kaplan — mentor Linda Blaba*

*Trish Prawl — mentor Linda Guy*

*Wendy Ratner — mentor Angie Mazella*

*Phil McNally — mentor Bob Gessner*

*Laurin Pause — mentor Tricia Michelson*

From the Editor: Send or email articles to the address below. Email is preferred. Please see schedule for deadlines.

Nora Graf

mesquite2@hotmail.com

PO Box 3652

Camp Verde, AZ 86322

928-567-6703

Jeff Schalau

County Director, Yavapai County

Extension Agent, Agriculture & Natural Resources

email: jschalau@cals.arizona.edu

Prescott Office

840 Rodeo Dr. Building C

Prescott, AZ 86305

928-445-6590

MG Help Desk 928-45-6590 ext 222

Camp Verde Office

2830 Commonwealth Dr #103.

Camp Verde, AZ 86322

928-554-8999

MG Help Desk 928-554-8992

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension, The University of Arizona.

The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information in its programs and activities.

## **MG Announcements**

### **Congratulats Associate Master Gardeners!**

22 Associate Master Gardeners completed the 2020

Master Gardener Volunteer training on May 12<sup>th</sup>.

### **End of Fiscal Year is Approaching**

Our fiscal year for hours reporting ends on June 30<sup>th</sup>.

Please report all your hours for the fiscal year by July 5<sup>th</sup> so recognition hours can be determined.

### **Class Welcome – Reserve the Date**

We will hold a virtual “Class Welcome” on July 15<sup>th</sup>, 6:30pm. All Master Gardeners are invited to participate.

### **2020 Newsletter Deadline Schedule**

The newsletter comes out every two months. Please note the deadlines.

Publish	Date	Deadline
Feb-Mar	Feb 1	Articles Jan 5, announcements Jan 25
April-May	April 1	Articles March 5, announcements Mar 25
June-July	June 1	Articles May 5, announcements May 25
Aug-Sept	Aug 1	Articles July 5, announcements July 25
Oct-Nov	Oct 1	Articles Sept 5, announcements Sept 25
Dec-Jan	Dec 1	Articles Nov 5, announcements Nov 25

Arizona Cooperative Extension  
Yavapai County  
840 Rodeo Dr. Building C  
Prescott, AZ 86305

## MG NEWSLETTER



## *Next Meetings*

Mary Barnes will continue to send out information on opportunities for training and when the time comes resuming more normal activities. Keep checking your emails for the most current information.