



# *High on the Desert* Cochise County Master Gardener *Newsletter*

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The University of Arizona and U.S. Department of Agriculture Cooperating

## The Virtual Gardener—Summer Watering Strategies

It's been a long, dry winter and spring. Even the cacti are looking stressed. I'm fighting to keep my plants alive under the blast furnace heat of a June sun. Water too little and the plants die. Water too much and the plants die. Water carelessly and you waste precious water through run-off or evaporation and the plants still die. What to do?

Although the summer rains are just around the corner, our watering problems will not be over when they arrive. The torrential, but erratic, chubascos that arrive with the monsoon drop their rains hit or miss. Often they release them so quickly and in such volume that the soil cannot absorb the water and it runs off or puddles and quickly evaporates. Our plants, like Coleridge's Ancient Mariner, find themselves surrounded by water but without a drop to drink. It is up to us as gardeners to correct this problem through irrigation. The danger is that we drop our guard during the monsoon and think the rains will supply all the water needs of our plants.

We sometimes forget that plants only get water in one way: through their roots. No matter how much water we spray on their tops, if no water is available to their

roots, they will die. So the first rule of irrigation is to water the roots, not the leaves. This means getting water to the areas around base of the plants and to the depths where the roots reside.

One of the biggest mistakes many gardeners make is applying water at the wrong places, especially when watering shrubs and trees. Watering should start at the drip line (the line on the ground beneath the edge of the canopy) and extend outward from one and a half to four times the width of the canopy. That's where the rains fall, and that's where the plant puts its water-absorbing roots, not under the canopy where it's dry. It's also important to apply water uniformly around the entire perimeter of the plant.

The next mistake is watering too little and too quickly. Water must be applied slowly enough so that it doesn't run off or puddle on the surface and evaporate but soaks into the soil. The amount of water required is determined by the depth of the roots—the deeper the roots, the more water that must be applied to reach them. As a rule of thumb, trees need to be watered to a depth of two or three feet, shrubs to a depth of one to two feet, and

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smaller plants to a depth of six inches to a foot. The amount of water that must be applied for it to penetrate to these depths over large areas is usually more than you think. The depth of penetration is best measured using a soil probe.

Although under-watering is usually considered the biggest threat to our plants during the hot summer months, over-watering can also become a problem. In their zeal to make sure their plants get enough water, some gardeners apply so much water that the soil becomes saturated leaving no room for air. When there is no air in the soil the roots can't breathe, causing them to lose their ability to take up water, and the plants die. The best practice is to allow the soil to dry out before watering again. This actually promotes root growth.

Soaker hoses, drip systems, and even flood irrigation are better solutions for watering than sprinklers. By spraying water into the air in small droplets, sprinklers actually promote the loss of water through evaporation. They also apply water to the tops of plants instead of directly to the soil where it can become more readily available to the roots.

Overhead sprinklers are not recommended because they waste water not because getting water on the leaves is harmful to plants. In fact an occasional shower bath can be beneficial by washing the dust and even harmful insects off the leaves. There is a persistent myth that water droplets on leaves can act as tiny lenses that magnify the rays of the sun and burn the leaves. This is simply false. It is also claimed that water on leaves promotes the growth of mold and fungus. This may be true in very humid climates, but it is certainly not true in our desert climate.

And finally, it is usually recommended to water early in the morning or in the evening when it



is cooler. Again, this is not because watering during the heat of the day is harmful to plants. They seem to survive quite well when Mother Nature dumps rain on them in the middle of the day. The reason for watering when it's cooler is to cut down on water loss from evaporation.

For lots more tips on effective watering techniques, check out the following web sites.

**How to Water a Plant...the Right Way**—how to water potted plants

**10 Golden Rules for Watering—Gardening with minimal water**—useful tips for conserving water

**Irrigation 101: Garden Watering Options**—includes some pros and cons of drip irrigation

**How to water plants in your yard**—video presentation

**Can Water Burn Leaves?**—dispels the myth of water droplets burning leaves

Adios! Keep on surfing!

Gary Gruenhagen, Master Gardener  
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## Cuttings 'N' Clippings

✿ For information on the Cochise County Master Gardeners contact Valerie at: [valeriedavidson@email.arizona.edu](mailto:valeriedavidson@email.arizona.edu) or the Cochise County Master Gardeners web site at:

<http://cals.arizona.edu/cochise/mg/>

✿ Join Water Wise on a guided tour of local rain harvesting installations on **Saturday, July 14, 9:00 AM—1:00 PM**. Participants caravan to locations in the Bisbee area. The location is Ecoasis, 99 W Highway 92, Bisbee, Az. Registration is required. For information and registration contact Valerie at: [valeriedavidson@email.arizona.edu](mailto:valeriedavidson@email.arizona.edu) or 520-8278, Ext 2141.

Check out the Water Wise web site for their 2018 schedule at: <http://waterwise.arizona.edu/>

✿ AZ Native Plant Society will not meet again until September 2018. For more information, follow AZ Native Plant Society on their web site: <http://www.aznps.com/chapters/cochise/cochise.htm>



## July Reminders

- ♦ Keep the pests under control
- ♦ You can still plant something
- ♦ Keep watering!

## Return of the Turkey Vultures: Part 4

In circling back to the first article in this series ([April 2018](#)), we are reminded of one of the most important services Turkey Vultures provide, the role of a refuse worker. As gross as it is, carrion eaters fill a vital niche by keeping our environment clean by what they consume. Best not to read the next few paragraphs while eating lunch!

Turkey Vultures have an excellent sense of smell and can be picky eaters (pun intended!). Although they eat a wide variety of carrion ranging from small and large mammals to fish, they prefer their meal recently dead. Turkey Vultures get a bad rap because some people think Turkey Vultures kill their food like Black Vultures can. But Turkey Vultures (TVs) do not, so no fear if you are on your last legs in the desert and see a TV circling. It won't kill you. It will wait. In addition to ridding the environment of carrion, TVs also eat the flesh of diseased animals, reducing the spread of anthrax, botulism and rabies.

Smelling is uncommon in the avian world, but not to TVs. To locate their next meal, TVs smell the overpowering garlic/skunk-like odor of ethyl mercaptan—a gas emitted when animals begin to decay, and they can pick up the scent from over a mile away. Not only are the vultures refuse workers, they also work gratis for the natural gas companies. Natural gas workers look for circling vultures to help them locate leaking pipes because the vultures are attracted to the odor.

Not surprisingly, TVs have few natural predators. The vultures puke semi-digested food on predators to drive them away. Not only is the projectile vomit foul-smelling, but it can sting the predator's eyes and face. As an aside, I recently spoke with some researchers who had to take data on some young vultures. They appropriately suited up, but neglected to cover their faces. Sure enough, they got puked on. They said it was the most offensive smelling thing they had ever experienced and promptly lost their lunch, too.

Given the grossness of the TV, it may be hard to accept that they are protected under the U.S. Migratory Bird Treaty Act of 1918 (actually all migratory birds are protected under this Act). We cannot harm or kill the birds. But from what you have learned, I hope you now know why we need to protect them. Here are a few things you can do to help these magnificent birds do their jobs.

Unprotected powerlines are lethal to birds. When juvenile TVs learn to fly, they can hop from trees to power lines. If live wire protectors are not used, the birds can be electrocuted. Lead ammunition can poison TVs. Because vultures and other carrion-eating birds may eat animals shot by hunters, they can also eat the lead shot and bullet fragments that will kill the birds.



TVs are also killed by people. People hit them with their cars. People also kill them because they are afraid that the birds spread disease. Contrary to that belief, as said earlier, TVs keep disease from spreading by eating dead animals.

What can you do to protect these important birds? Report possible electrocutions to your electric company so protective devices can be added to dangerous poles and wires. If you hunt, use lead-free shot. If you see TVs on the road, slow down when driving. But most of all, celebrate these magnificent birds! Your friends may think you are weird, but that's OK. Educate them!

For more in-depth information about Turkey Vultures, there is a wonderful book recently published by Kate Fallon, *Vulture, the Unloved Bird* available at Bisbee's Copper Queen Library and local bookstores.

*Cado Daily, Guest Author, Water Resources Coordinator, Water Wise Program – Retired!*

*University of Arizona Cochise County Cooperative Extension*

## Planting in Hot Weather

July is another hot month in the high desert garden, thankfully, though, a bit cooler than June. Continue to plant summer vegetables such as melons, cucumbers, beans, pumpkins, eggplant, okra, and summer and winter squash. You can still plant peppers and tomatoes, but it's best to buy them as plants from a nursery; don't start them from seed this late in the summer. Summer rains will lessen the need for additional watering, but continue to water during dry spells. An irrigation or drip system, plus mulch, makes this task easier and conserves water. Plant herbs, too. Basil,

mint, oregano, sage, chives, and thyme all do well in the heat, but avoid dill, cilantro, and parsley, which prefer cooler temperatures. Good annual flower choices include sunflowers, cosmos, vincas, marigolds, and zinnias. Continue to deadhead roses and other flowering plants to stimulate new flower growth and to remove unsightly spent blooms.

It's important when using fertilizers, pesticides, or herbicides to follow the directions on the label precisely. It is against federal law to apply pesticides or herbicides other than in accordance with the label. Don't mix products in the same container or application. Mixing sulfate and ammonium

phosphate is a rare exception that has been well studied and recommended by no less an authority than the University of Arizona Cooperative Extension. Realize that over-application of fertilizers can kill plants. Excess nitrogen to a slightly lesser degree will result in lush growth, so you'll have tomato plants that look gorgeous, but that don't flower and don't produce fruit—and a beautiful tomato plant with no 'maters ain't worth much in my book!

*Bill Schulze, Master Gardener*

**(Editor's Note:** This article written by Bill Schulze was adapted from a July 2011 article published in the *Sierra Vista Herald*.)



*Essential advice for the gardener: grow peas of mind, lettuce be thankful, squash selfishness, turnip to help thy neighbor, and always make thyme for loved ones.*

~Author Unknown

### Did you know . . .

- ◆ This newsletter has been published monthly since December 1989 and on-line since December 1999, reaching a world-wide audience?
- ◆ The Cooperative Extension Office in Willcox has published hard copies of the newsletter every month?
- ◆ This newsletter expresses the true spirit of Cooperative Extension by taking the "University" to the people?
- ◆ You can find all of the articles ever published on the Cochise County Master Gardener web site?
- ◆ Editor Carolyn Gruenhagen, a Cochise County Master Gardener since 1990, has put together every one of the 360 issues?
- ◆ Gary Gruenhagen, a Cochise County Master Gardener since 1994, has written 229 informative and instructional articles in his Virtual Gardener column?
- ◆ Gary has also written dozens of articles for both the newsletter, *Sierra Vista Herald*, and other publications?
- ◆ Carolyn & Gary were selected as the 2008 University of Arizona College of Agriculture and Life Sciences as the Extensionists of the Year for their work on the newsletter and many other Master Gardeners projects?
- ◆ They were also featured on the cover and in an article of SSVEC's *Current Magazine* of March 2009?
- ◆ Hundreds of Master Gardeners, guest authors, and many Extension Agents have contributed articles to the newsletter? Thank you!
- ◆ Sadly the time has come for Carolyn & Gary to say goodbye. This will be the last issue of the Cochise County Master Gardener Newsletter we produce.

*Thank you readers!*

