

Keeping Plants Healthy During Hot and Dry Weather



**Justin Stefanski,
Extension Agent II**

This summer, rain has been a scarce commodity and a complete anomaly for many folks. Pockets of monsoon-like deluges have blessed some, while hardly a drop has fallen for weeks on end for others. Couple that with sweltering hot weather and soil conditions have remained dry as bone and less than ideal for plant health. My own yard has been a victim, with cracks showing on the surface of the soil that are easily two

to three inches wide. According to the US Drought Monitor as of August 20th, many portions of the state are now listed as being in a severe to moderate drought. Areas of southern Rutherford County, where I happen to reside, are now listed as abnormally dry. This rating will most certainly be upgraded to moderate drought conditions when the next report is posted in a few days. The end result has been a higher water bill and stressed landscapes. This not only hurts your bank account, but quite also, your pride if you happen to be an avid plant enthusiast.

Our plants have certainly needed supplemental water this summer, without it, many would have already bit the dust. However, we can't overlook the simple fact that most people have a limited understanding of how much, how often, and when best to water their plants. From my personal experience as an Extension Agent, I have observed two types of 'waterers'. The first being the 'soak it chill you choke it' and the other 'the mist and go' type. If a little is good, then a lot is better, isn't that what most people assume? Sure, yes it can be, especially when speaking of money or chocolate cake, but as far as water goes, this is a very different tale.

One of the leading causes of plant decline, particularly here in middle Tennessee where we are blessed with shallow clay soils, is fungal root rot. Poorly drained soils and plant roots typically don't get along very well. Simply put, overwatering is a death sentence for many of our most common landscape plants. The same can be said of not giving plants an adequate amount of water. Not supplying plants with enough water can lead to a range of issues, not the least of which being total plant mortality during heat and drought.

The 'soak till you choke' type will water daily, sometimes multiple times a day, for excessive amounts of time. I have been to yards that were so wet that they were bog-like in the middle of summer. I will never forget a site visit back in 2012 where a homeowner called regarding a sick maple tree early on in summer. This individual had run their garden hose continuously for five

full days and nights in hopes of saving their beloved maple tree. Needless to say, the only beneficiary of this egregious watering blunder, was the local water utility company. Inversely the 'mist and go' waterer, will water daily and always in insufficient quantities. My observation is that that for some gardeners, watering is a cathartic endeavor that puts them in a trance-like watering induced euphoric state. This aquatic horticultural high is too great to resist for some, but resist we must! Frequent and short watering events only result in moistening the top inch of soil. Tiny rootlets will form in this shallow moist layer. This top layer will dry out quickly and will result in root death unless they are watered daily. Shallow root develop is never a good thing and the goal of any watering practice, should be to promote deep water penetration where the roots will follow further down into the soil.

So, you now are asking, how much water do my plants need and how often do I need to sprinkle my horticultural darlings? For most plants, 1 inch of rainfall per week is sufficient to keep the soil moist during normal conditions. If hot and dry weather, such like we have had this summer occurs, then 1.5 inches per week is ideal. Now, how does one tell if they watering to fulfill this exact volume of water? Well, if you are using a sprinkler, simply putting a cup out and then measure the volume of water in the cup over a given time period of time. If you water for 30 minutes and only get .5 inch of water, then you will need to water for an hour to get the full one inch. If you get more than one inch in a given time frame, then shorten the duration. Getting this exact volume when hand watering can be slightly more challenging, but always error on the side of giving plants enough water when they need it the most. If you are ever in doubt as to when your plants need to be watered, use your index finger and stick it in the ground all the way to your biggest knuckle. If you feel wet soil on your fingertip, then you can probably go a few more days before watering. If it's dry, then you know what to do, get the hose out and go to town.

Frequency and volume are both essential to ensure your plants get adequate hydration when they need it the most. Remember, low volume frequent watering will only serve to promote shallow rooted plants that will not survive heat and will need constant watering to ensure the shallow roots stay hydrated. Less frequent, higher volume watering events are recommended. When you do water, try to ensure you are getting at least one inch of water if using a sprinkler. If hand watering, make sure you are slowly soaking plants and letting the water seep down into soil to help promote deeper root growth. Do your best to resist the urge to water each day. Try to space out watering events at least two to three days apart if possible. The best time to apply water is early in the day. Watering late in the evening or during the mid-day heat should be avoided. Soaking plants before dusk invites disease to occur, as plants will remain damp during the hot, humid and dark evening. Watering during the heat of the day will result in the water evaporating much quicker. If possible, water first thing in the morning. If you are a non-morning person like me, then after

breakfast will do just fine. Follow these tips and you will ensure your plants are well hydrated and able to survive these last few brutal weeks of summer. If you feel so inclined, please do a little rain dance jig when no one is watching. All we can do is dance, hope, and pray for rain in the coming months.



**Hand Watering,
Photo J. Stefanski**



**Overhead Sprinkler,
Photo J. Stefanski**

Happy Gardening!

For questions or comments, please feel free to reach me at the UT/TSU Rutherford County Extension office. Our main office line is 615-898-7710 and my email is jski@utk.edu. Additionally, please check us out on the web at rutherford.tennessee.edu to learn more about upcoming classes and all other Extension programming activities that we offer.