

Bell County Master Gardeners
Tip of the Week
By Candy Mullen
“Drought: What is it? Part One”

In case you haven't noticed, our region and most of Texas is in severe drought conditions. “What exactly does that mean and what impact does it have on me?” you may ask. As gardeners and keepers of the soil it has a huge impact on you as well as the entire population. This will be a three-part article to help you understand the severity of the impact and what all of us can do to help right now.

A drought is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm the local economy. Add the current heat we've had and we are in trouble in Texas. We might think the pictures of Africa, and other nations cannot happen in America, but this is a false hope. Your relatives might have talked about the “Great Dust Bowl” of the 30's. That happened because of drought and improper farming methods to put it simply. This global phenomenon has a widespread impact on agriculture. The United Nations estimates that an area of fertile soil the size of Ukraine is lost every year because of drought, deforestation, and climate instability.

Drought can also reduce water quality, because lower water flows reduce dilution of pollutants and increase contamination of remaining water sources. Common consequences of drought include: Diminished crop growth or yield productions and carrying capacity for livestock; dustbowls, themselves a sign of erosion, which further erode the landscape; Dust storms, when drought hits an area suffering from desertification and erosion; habitat damage, affecting both terrestrial and aquatic wildlife; reduced electricity production due to insufficient available coolant for power stations, and reduced water flow through hydroelectric dams; shortages of water for industrial users; snakes migration and increases in snakebites; wildfires, such as Australian and Texan bushfires, are more common during times of drought; not to mention the social traumas that occur also.

Scientists tend to define droughts in three main ways.

(1) Meteorological drought is brought about when there is a prolonged period with less than average precipitation. Meteorological drought usually precedes the other kinds of drought.

(2) Agricultural droughts are droughts that affect crop production or the ecology of the range. This condition can also arise independently from any change in precipitation levels when soil conditions and erosion triggered by poorly planned agricultural endeavors cause a shortfall in water available to the crops. However,

in a traditional drought, it is caused by an extended period of below average precipitation.

(3) Hydrological drought is brought about when the water reserves available in sources such as aquifers, lakes and reservoirs fall below the statistical average. That is when methods to conserve remaining water reserves are prescribed by municipalities to include: Outdoor water-use restriction - Regulating the use of sprinklers, hoses or buckets on outdoor plants, filling pools, and other water-intensive home maintenance tasks; Rainwater harvesting - Collection and storage of rainwater from roofs or other suitable catchments and using recycled water - Former wastewater (sewage) that has been treated and purified for reuse.

As Master Gardeners we have long advocated the use of native plants for our landscapes. Notice the many brown grasses around now and the contrasts of the bright green water-guzzling lawns you see. Too much water is used to maintain those lawns that would be better with usage of our native grasses. Droughts are periodic, alternating with floods over a series of years. The worst droughts in the history of the United States occurred during the 1930s and 1950s, periods of time known as Dust Bowl years. From 1950 to 1957, Texas experienced the most severe drought in recorded history. By the time the drought ended, 244 of Texas' 254 counties had been declared federal disaster areas!

There were extensive droughts through the first decade of the 21st century all over the Southeastern United States, continuing as far westward as Texas. The Southeastern United States was affected by heavy droughts extending from the Carolinas toward Mississippi and even into Tennessee and Kentucky. Droughts affecting Florida were so severe lakes were actually drying out. Wildfires, forest fires and brush fires were very prevalent in association with the first decade of the 21st century. Missouri, Arkansas, (portions of) Louisiana, Tennessee, southeast Iowa and northern Illinois were hit with severe droughts and heat during 2005. In 2008 and 2009, much of south and south-central Texas were in a state of exceptional drought. We are there right now in 2011. As concerned citizens we must take steps to husband our resources and use them wisely. Next column I will address water conservation and steps the single average homeowner can take to preserve their landscape and still have a wonderful yard. Have any questions about gardening in Central Texas? Contact ask.bcmqa@gmail.com