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## Gardening | How to help your plants beat the heat

By Debbie Menchek Gardening

This summer's heat and drought are not just an expression of the vagaries of Mother Nature – we have seen hot dry weather before. The heat and drought may be the standard for summers to come.

No one knows for sure what will happen, but scientists who study climate change expect climate zones to continue shifting northward. The 2012 Plant Hardiness Zone Map for the first time shows Horry and Georgetown counties in Zone 8-B, the warmer half of Zone 8. The map elevates Charleston for the first time in Zone 9-A, the cooler half of Zone 9. Climate research suggests that our summers will continue to be hot and dry.

What does this mean to gardeners? Water deeply. Mulch diligently. Add compost often.

If you do not already water deeply it is time to start. Roots grow where there is moisture. Train plant roots to grow deeper. Be sure to water early in the morning when the air is humid. You will lose less water to evaporation, and the drying sun will decrease the chance of fungal disease on plants.

High temperatures kill plant roots. That makes it vital to keep summertime gardens well mulched, not just to help soil hold moisture, but to moderate soil temperature in an effort to protect plants' roots from extreme heat.

Top dress the soil, side dress plants, add compost to the soil continuously. Compost is a sponge that holds water in the soil. Compost continuously releases nutrients plants need without harming roots which are already under stress. Keep in mind that in hot dry conditions chemical fertilizer can burn roots.

Plants range from 50 percent to 90 percent water. The hotter it is the more quickly they lose water. Even if well-watered some plants wilt in the middle of the day because they cannot take up water fast enough to meet their needs. The wilt disappears overnight but returns in the heat of the next day. This cycle is stressful for plants. Provide them with afternoon shade if possible. If they are perennials, come fall consider moving them to a location that will provide them with afternoon shade next summer.

Young trees, especially during dry weather, need to be kept well watered until they are established. Replace grass around both young and mature trees with mulch to eliminate competition for water and soil nutrients.

The root system around the trunk of a mature tree functions to support the tree. Most trees' feeder roots which take up water and nutrients are in the top 18 inches of soil. Their root systems may extend two or more times beyond the drip line radius. You will find some trees like river birch drop leaves in response to stress from heat and drought. If you choose to water an established tree that is showing stress, water long and slowly in the area of the drip line, not the trunk.

Plants grown under the eaves of a house need to be watered more frequently even in the best of weather conditions. They get very little water from precipitation, and reflected heat from walls intensifies heat.

What do heat and drought mean for gardening in the future?

Think twice about removing long established trees and shrubs. They have developed root systems that can handle heat and drought.

When you buy plants for long-term planting, think not just of the right plant for the right place, but the right drought tolerant plant for the right place. Consider Mediterranean perennials. Choose plants that grow in a range of zones. For example, a plant recommended for Zones 6 through 10 is a better bet for the future that a plant suited for only Zones 6 through 8.

All of us who garden face new challenges in our changing climate. If you are a gardener who likes to test the limits of what you can grow you can expect to have scores of new prospects for your trials, too.

Reach DEBBIE MENCHEK, a Clemson Master Gardener, at dmgha3@aol.com.

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