HELPLINE HOT TOPIC for SEPTEMBER 2018

**Climate Change and Gardening**

**By Cynthia Zimmerman**

SEPTEMBER. I remember when it meant the first day of school, putting away the white shoes, and the beginning of fall with cooler nights and the planting of cool weather plants. Now school starts in August, you can wear white shoes year round and temperatures remain at summer levels until September 22 (autumn solstice) and beyond. Last fall my trees didn’t even bother to participate in fall color change, instead giving up the ghost with leaves just turning brown and falling off. What used to be the check list for fall gardening now requires adjusting and adapting due to our changing climate.

Not so subtle hints of our changing climate are evident all over California. The state has lost 130 million trees since 2010 due to drought, warming temperatures, and insect infestations. The air is filled with smoke and haze from wild fires. Dust whips across fields laid fallow by extended drought. Water supplies are diminished due to record low snow pack in the Sierras. Triple digit temperatures hit a record 30 continuous this summer.

Gardening across the United States is evolving due to climate change whether or not we like it.

Warmer winters, hotter summers, flooding, fires, and drought affect plant growth and impact wildlife, pests, insects, pollinators, diseases and microbes. Higher average temperatures and changing precipitation patterns are causing plants to bloom earlier, creating unpredictable growing seasons. Many native plants are even finding it hard survive in their historic ranges. Pollinators, breeding birds, insects, and other wildlife and the plants they depend on can be disrupted. “We are the first generation that has not been able to look to the past for guidance on when to plant, what to plant and what pests and diseases to expect” according to Dr. Sara Via Professor & Climate Extension Specialist.

To meet the challenge of climate change, gardeners are in a unique position to lead the charge. We can take steps to engage in growing practices suited to a “new normal” set of environmental conditions. Fall is the perfect time of the year to re-evaluate the garden and yard; determining what is thriving, what didn’t work, what can be done better, what to do to make your garden more climate-friendly by storing more heat-trapping gases than it generates.

Researchers in agriculture, climate and soil sciences, forestry, and urban ecology have identified a number of practices than can likely move your garden to a climate friendly environment.

1. Ground Level. Get your soil in shape. Compost. Mulch. Take a low-till approach leaving vegetative cover.
2. Water Wisdom. Start choosing drought-tolerant and water wise plants. Make sure irrigation systems are operating appropriately. Less frequent, deeper waterings.
3. Plant Choices. Choose appropriate plant selections that are tough and adaptable. Right plant, right place. Plant trees and shrubs to remove more heat-trapping CO2. Avoid invasive plants. Create a garden of diversity to increase success and provide for wildlife. Grow your own vegetables and fruits and buy locally grown. Consider a no mow lawn such as buffalo grass, or lawn grasses with fewer needs.
4. Keeping Up Appearances. Be judicious with fertilizers and use fewer synthetic chemical fertilizers and pesticides. Recycle everything you can and reduce the use of disposable products. Leave lawn clippings on the ground as you mow. Collect and compost leave using them in the garden. Keep mowers and other equipment running efficiently and consider electric versions to minimize CO2 emissions. Use solar and LED options for outdoor lighting.

“Gardeners are both stewards and guardians of our environment, and can make a difference in the fight against climate change.” Gardening for Climate Change (National Wildlife Federation)

For further information you might like to check out the following:

<https://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/climate-friendly-gardener.pdf> The Climate-Friendly Gardener

<http://ucanr.edu/sites/mgfresno/files/235861.pdf> Beautiful Plants for a Changing Climate Smart Gardening Conference Fresno 2016

<https://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/climate-friendly-gardener.pdf> Climate Victory Gardens