

CLIMATE CHANGE TIPS FOR GARDENERS

Blanca Poteat, Frederick County Master Gardener

Gardeners are optimists. And winter is the perfect time for making optimistic gardening plans. Growing plants and trees, for food and landscape, offers you lots of benefits: fresh vegetables, fruits, and flowers; fresh air and physical activity; a sense of self-reliance; a future-oriented attitude; resilience; and the sheer pleasure of digging in the dirt. Improving our shared environment is a definite bonus. Like baseball fans, gardeners thrive by growing and changing and always looking forward to next year.

However, our traditional gardening practices are facing challenges from climate change caused by increasing concentrations of carbon dioxide in the earth's atmosphere. We are all experiencing the effects of "warmer winters, hotter summers, flooding and drought [that] affect plant growth and impact the many organisms that interact with plants (pest insects, pollinators, diseases, microbes)," the University of Maryland Extension notes. "The climate-related changes that have already occurred require...growing practices suited to a 'new normal' set of environmental conditions."

Climate change is a global issue and requires global solutions and shared actions. But many hands, lighter work: individuals, and especially individual gardeners, can help reduce the climate-changing carbon in the atmosphere by adapting our living and gardening practices. We can grow and nurture more plants, shrubs, trees, and soil that absorb significant amounts of that carbon. A recent National Geographic article noted that "trees—all plants, in fact—use the energy of sunlight, and through the process of photosynthesis they take carbon dioxide (CO₂) from the air and water from the ground. In the process of converting it into wood they release oxygen into the air." So, looking forward in the New Year, how can gardeners help reduce carbon and respond to those "warmer winters, hotter summers, flooding and drought"?

Everyone can be a gardener. Whether you garden in pots, on balconies and porches, or in yards, gardens or community gardens, it all counts. And on a cold winter day, a pot of soil, a handful of flower bulbs or onion sets, and a seed catalogue can help kindle your hopes for spring.

Here are some tips for responding to climate changes in your new year's gardening:

- To reduce water use, plant hardy drought- and heat-tolerant plant varieties that require less water.
- To increase plant productivity and carbon absorption, retain moisture, and reduce soil loss through erosion and stormwater runoff, add organic matter (compost, leaf mulch and others) to garden soil.
- To protect people, pets, birds, and pollinators, use organic pest controls, row covers, companion planting and other methods rather than chemical pesticides to control harmful insects.
- To conserve rain and stormwater, install rain barrels for garden and landscape re-use.
- To increase your landscape's carbon absorption, plant trees wherever possible, especially oak, which has good carbon absorption capacity and is native to Maryland.

- To encourage pollinators, and add color to your garden and landscape, plant nectar- and pollen-rich flowers for bees and other insects, as well as milkweed for monarch butterflies. Approximately one in every three mouthfuls of our food depends on pollinators. To encourage birds that control garden insect pests and eat weed seeds, reduce lawn areas and plant gardens and native landscape plants instead, to increase produce for people and birds' shelter, food and nesting areas.
- To work toward Bay-Wise and Pollinator-Friendly certifications for your gardens and landscapes through the Frederick County Master Gardener program, check out <https://extension.umd.edu/frederick-county/home-gardening/master-gardener-program> and click on “publications,” or call 301-600-1594.

Do you have more questions about adapting gardening to climate change? Want to incorporate native plants and attract pollinators? Wondering how to participate in community gardens? Find the answers to these and other home gardening questions at the web sites listed below.

Gardening: Home and Garden Information Center, University of Maryland,

<https://extension.umd.edu/hgic>

Native plants: <https://extension.umd.edu/hgic/topics/native-plant-resources>

Birds: The Cornell Lab of Ornithology, <https://www.birds.cornell.edu/home/>

Pollinators: Xerces Society, <https://xerces.org/pollinator-conservation-resources/72>

Climate change: <https://extension.umd.edu/hgic/topics/climate-change-and-gardening>

Community gardens:

- <https://www.recreater.com/196/Community-Gardens>
- <https://www.cityoffrederickmd.gov/1059/Garden-Plots>
- <http://hacfrederick.org/gardens/>
- <https://www.thurmont.com/2258/Community-Garden-Information>
- <https://www.facebook.com/pages/category/Local-Business/FNP-Community-Garden-499308175351/>
- <https://extension.umd.edu/hgic/topics/community-gardens>



All photos by Blanca Poteat

Gardeners must learn to contend with warmer winters, hotter summers, flooding, and drought in Maryland home gardens for good vegetable produce, such as this tomato harvest from last summer, glowing in the late afternoon sun.



Heavy rains can cause flooding, resulting in erosion and soil nutrient depletion through stormwater runoff. To increase plant productivity and carbon absorption, retain nutrients and moisture, and reduce soil loss, you can divert downspouts, create rain gardens, or use rain barrels and other stormwater management plans.



Climate changes demand that we plant more drought-tolerant plants, such as the zinnia, to help important insect pollinators like this common Maryland Easter Tiger Swallowtail butterfly.

Check our website for upcoming seminars at <http://extension.umd.edu/frederick-county/home-gardening>, or call us at [301-600-1596](tel:301-600-1596).

For more information about the Frederick County Master Gardener/Horticulture Program, visit: <http://extension.umd.edu/frederick-county/home-gardening> or call Susan Trice at the University of Maryland Extension Frederick County office, 301-600-1596.

Find us on Facebook at <http://www.facebook.com/mastergardenersfrederickcountymaryland>

The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, genetic information, political affiliation, and gender identity or expression.