

Master Gardener Update September 2022

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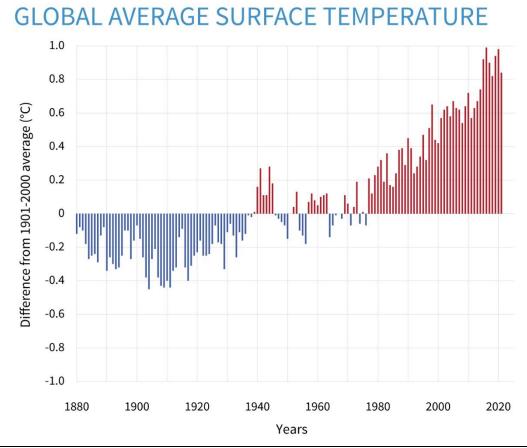
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What Can Master Gardeners Do to Fight Climate Change?

Master Gardeners, simply by virtue of our love of gardening, are stewards of the earth. Today our skills are needed more than ever, to fight an insidious foe that is rapidly changing the world around us – climate change.

The Intergovernmental
Panel on Climate Change
(IPCC) is the leading
scientific authority on all
things related to global
warming. The body was
established in 1988 as part
of the United Nations
Environment Programme
(UNEP) and the World
Meteorological Organization
(WMO). The Panel's goal is
to inform policymakers



Websites

MGV Hours Reporting: mastergardener. extension.wisc.edu/ report-your-hours/

Canvas UW Online Classroom:

https://canvas.wisc.edu/

RPMGA Blog:

rpmga.blogspot.com

RPMGA on Facebook:

Hit control/click on this link:

RPMGA on Facebook

Rotary Gardens:

rotary botanical gardens. org

Wisconsin Master Gardener Program:

mastergardener. extension.wisc.edu

Wisconsin Master Gardener Association (WIMGA): wimga.org

around the world of the risks of fossil fuel driven climate change so they can take appropriate remedial action. At present there are <u>195 participating members</u>.

The IPCC has meticulously charted the earth's ambient temperature for decades. The results may shock you.

Earth's temperature has risen by 0.14° Fahrenheit (0.08° Celsius) per decade since 1880, but the rate of warming since 1981 is more than twice that: 0.32° F (0.18° C) per decade.

The results of this temperature increase are becoming more and more apparent. Heat related events have been experienced around the world. Forests are burning to ash. Lakes and rivers are drying up. Deserts are appearing where there were none before. Droughts are killing crops and livestock, making food security a worldwide issue. The earth, the largest and most fragile system we know, is out of balance, and many believe man is at fault.

Universities around the world have opened departments dedicated to the environmental sciences. The University of Wisconsin – Madison, Environmental Sciences department, for example, offers programs to budding environmentalists with this promise – "The Environmental Sciences major satisfies the growing demand among entry-level students for a rigorous, science-based program that promotes critical thinking and emphasizes environmental problem solving in service to society."

But, what can we do? You and me? Although some master gardeners have been educated in the environmental sciences, there are many of us who have not.

As I see it the answer to that question is a simple one. Get informed. Educate yourself. Join with other master gardeners to look for ways to educate people on this, perhaps the most important message we will ever be asked to relay to others. Join with others of like mind and work toward a common goal – do what you can in your home, your garden, your community, to save the earth.

As master gardeners we have access to an environmental education department at the UW-Madison that is consistently ranked among the best nationally and internationally. The UW College of the Environment is the largest college of its type in the nation.

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RPMGA September Program: Desert Gardening

Wednesday, September 21, 3-4:00 p.m.

A special event featuring one of our own: MGV Beverly Feltz, who moved to Utah last year.

An invitation from Bev: Ever wonder what it's like to live in the desert? Can you grow anything in the desert besides cacti? How hard is it to grow flowers? If you have wondered these things, as I did, then join me for a talk on Desert Gardening. It can be challenging but fun and rewarding at the same time. With the right tools and knowledge, you can have beautiful flowering plants and fresh vegetables. You will hear about things you can do to save time and improve results in your own backyards and gardens.

Attend in Person: Ground Floor Conference Room, Hedberg Public Library
Attend via Zoom: Watch your email later this month for a link to the Zoom connection.

If you can't make the 9/21 date: We will record the program and make it available for later viewing.



Note: The garden pictures in the collage above are from the Red Hills Desert Garden which is located in the Washington County Water Conservancy District, in St. George, Utah. The garden is just three miles from Bev's new home. Red Hills Desert Garden is Utah's first desert conservation garden. The nearly 5-acre garden features 5,000 water-efficient plants, a 1,150-foot stream stocked with native and endangered fish species, a replica slot canyon and prehistoric dinosaur tracks found onsite dating back 200 million years. The project is a collaboration of Washington County Water Conservancy District, the City of St. George, and the Virgin River Program. Thousands have visited the garden since its spring 2015 opening.

We hope to see you all either in person or by Zoom. Looking forward to this exciting event!

Coffee Chat Returns Tuesday, September 13 at 1:00 p.m.

This monthly online get-together for Rock, Jefferson and Walworth counties returns on Tuesday, September 13, at 1:00 p.m. Watch your email for a Zoom link from Julie Hill.



Two Fundraising Events in September

Annual Fall Plant Sale

Visit the Rotary Botanical Gardens' Horticulture Center (follow signs off Palmer Dr.) for this annual plant sale which includes an assortment of mums, perennials, asters, bulbs and compost. RBG Friends Members receive 10% off purchases on all the sale days, and can enjoy a special Members Only pre-sale on Thursday. If you are not a member you may purchase a membership during this event. Dates and hours for the plant sale are:

- Thursday, September 8, 4:00pm 7:00pm Members Only Presale.
 Come early for the best selection!
- Friday/Saturday, **September 9** and **10**, 9:00am 5:00pm
- Sunday, **September 11,** 9:00am noon



Terrific Turtles Garden Art Auction, Thursday, September 29, 5:30-8:00 p.m.



RBG's summer garden art project always draws crowds as visitors admire the creativity of the artists. As always, the chosen forms—turtles, this year—were built in-house by RBG Grumpies and Grumpettes. Each of the 37 turtles was then designed and executed by a local artist(s). Before going on display for the summer, Uztig CARSTAR clear-coated them to withstand the elements. This year our artists range from preschoolers to a gentleman in his 80s. Our hat's off to them and to all the artists and volunteers who've made this fundraiser possible for the past 13 years. But summer's drawing to a close. Now's your chance to purchase some amazing art while supporting RBG. Auctioneer Gary Weber will direct the night's action. Preview begins at 5:30 p.m., auction begins at 6 p.m.

Rotary Talks and Walks for Education Hours

Botanical Talk: Weed Identification and Management, Thursday, September 15, 5:30-7:30 p.m. FREE!

Weeds are the bane of every gardener! This program will help you become familiar with common weeds and plant growth forms. Along with presenter Ann Pedder Reilly, we will walk through the gardens to find weeds, use our observation skills to describe them using words you already know, and try to identify them. Weed management will also be discussed with an emphasis on environmental safety. You'll leave with resources for identifying weeds on your own. Please dress or bring clothes and footwear suitable for some time outdoors. Free! Register by September 13 at https://rotarybotanicalgardens.org/event/weed-identification-and-management/, by calling (608) 752-3885, or in person at the Garden Gift Gallery.











"What's in Bloom? Tour" Wednesday, September 28, 5-6:00 p.m.

Director of Horticulture, Michael Jesiolowski, leads his last "What's in Bloom" Tour for the season. He provides a behind-the-scenes look at what's blooming this late in the season and answers any questions you may have. This event is **free for RBG members**, or \$10 for non-members. To register, call (608) 752-3885 or sign up in person the day of the tour.

Volunteer Opportunities



Rotary Gardens relies on volunteers to staff its two annual plant sales and probably still needs some help with the upcoming Fall Plant Sale, taking place Sept. 8-11. Cashier positions are full for all 4 days, but there are still shifts for loaders and yard help. All the positions can involve answering garden questions. To see what shifts are still open and to sign up, go to https://signup.com/go/dszABvU.

Tree Planting Help for the City of Janesville

Janesville has received a Trees Forever grant from Alliant Energy. This program encourages communities to consider global warming and get the maximum benefit by planting trees to shade buildings, cool heat islands, and so on. Janesville will purchase as many 5-7 gallon potted trees as the \$4,900 grant allows (potted trees are a requirement of the program). Those trees will arrive in the third week of September and need to be planted on various city properties as soon as possible. The Janesville Urban Forestry Alliance (JUFA) is working with the city's Department of Public Works Operations Superintendent, Ethan Lee, to organize the what, when and where of this tree planting event, with volunteers at multiple sites on the same day. Please consider helping! Watch your inbox later this month for the details or contact Mary Kay Thompson (mastergardenermary@gmail.com) to volunteer. (The tree at left is an Autumn Blaze maple.)

Prairie Seed Collecting for Kettle Moraine Land Trust:

For both these events, you're encouraged to wear long pants, long sleeves, closed-toe shoes or boots, and a sun hat. Bring a refillable water bottle.

Hackmatack National Wildlife Refuge, Saturday, September 24, 10 a.m. to 1:00 p.m. We'll be collecting seeds at the Turner Tract, located just northwest of Genoa City, Wisconsin on County Trunk H. No experience needed: you will harvest seeds under the guidance of professional staff from Kettle Moraine Land Trust and Geneva Lake Conservancy. Seeds collected will be turned over to the US Fish & Wildlife Service for use within the Refuge. For more info, go to https://kmlandtrust.org/event/stewardship septem-ber 2022/

Price Park Conservancy, Saturday, October 1, 1-3:30 p.m.

Join us for family stewardship event near Elkhorn, WI. Please pre-register with rory@kmlandtrust.org Info and park location can be found at https://kmlandtrust.org/event/prairieseedcollection-october-2022/



"<u>Milkweed Seed Collection</u>" by <u>U.S. Fish and</u> Wildlife Service - Midwest Region

Events for Fun

Allium Bulb Sale at Edgerton Hospital, Wednesday, September 28 to Saturday, October 1, 9:00 a.m. to 3:00 p.m. daily, in the Hospital Lobby

From Mark Dwyer: Alliums were a huge it out in the Edgerton Hospital Healing Garden this past spring and their merits (aside from beauty) include being perennial and being deer/critter proof! We'll have thousands of bulbs, representing 15 kinds (see below), all pre-packaged and ready for sale and planting!

Note: Interested in a car pool to the allium sale? Mary Kay Thompson (<u>master-gardenermary@gmail.com</u>) is willing to drive from Janesville. Ruth Flescher

(<u>vafello2@gmail.com</u>) is willing to from Whitewater. Get in touch!

Allium (mixed package)
Allium karataviense 'Red Giant Star'
Allium caeruleum
Allium christophii
Allium 'Gladiator'
Allium 'Globemaster'
Allium 'Graceful Beauty'
Allium sphaerocephalon
Allium 'Purple Sensation'
Allium amethystinum 'Red Mohican'
Allium atropurpureum
Allium 'Purple Suze'
Allium 'Ambassador'
Allium ampeloprasum 'Ping Pong'

Allium stipitatum 'Violet Beauty'









Real People, Real Climate, Real Changes, Welty Environmental Center, Sept. 6 to Nov. 21, Weekdays 9am-3pm; Weekends from 12-4pm

Take a journey through climate change with a visit to the interactive exhibition, *Real People, Real Climate, Real Changes*. Bring your family and friends to Welty, and learn together how climate is changing and how it's affecting people's lives around the country and around the world. *Real People, Real Climate, Real Changes* was developed by the National Center for Atmospheric Research and the UCAR Center for Science Education to help share the science of climate change and how it impacts people's lives. The exhibit is traveling around the country and is coming to Beloit thanks to generous support from UW's Nelson Institute Center for Climatic Research. Admission is free.

Harvest Festival at Silverwood County Park, Saturday, September 17, 11:00 a.m.-4:00 p.m.

Celebrate the beauty of the season in this FREE and Family Friendly event at Silverwood County Park.

- * Music by the band "Back Porch Twilight."
- * Pottery Demonstrations courtesy of the Arts Council of Edgerton with wheels for hands-on throwing
- * Spinning demonstrations at the wool arts booth
- * Dan Bussey will bring his knowledge of Heirloom Apples and have several examples for tasting
- * Kid's Crafts
- * Pie and beverage booth (for purchase)
- * Food booth courtesy of Edgerton Boy Scout Troop 422 (for purchase)

More Training Coming Up in September and Beyond

Looking for Level 2 MGV training--The Plants Plus modules? You can find them in the online classroom, Canvas, which you access with your UW NetID at https://canvas.wisc.edu/ As of now, Plants Plus modules are ONLY available in Canvas. Check regularly for new modules!

UW Division of Horticulture, Any Time, Online

Separate from the Plants Plus modules in Canvas, the Wisconsin Horticulture website has a list of online workshops and education sessions on a variety of topics. These video presentations feature research—based gardening and horticulture information. Increase your knowledge by joining UW-Madison experts. Some topics feature a single video, some include a series of videos on the topic. Times vary, but all are free. Check out what's available by clicking here: https://hort.extension.wisc.edu/videos/

Olbrich Botanical Gardens, Madison, WI

Classes are in person at the Gardens unless otherwise noted. Fees listed are for Olbrich Members/General Public. For more info, copy and paste this address: http://www.olbrich.org/education/classes.cfm

Registration for these classes has closed (or is about to), but try calling to see if they'll let you in at the last minute: 608-246-4550.

September 9, 13 Sedges, 5-6:30 p.m., \$16/\$20. Register by September 1.

Registration is open for these classes. If a class is shown as "filled," see if you can get on a waiting list. Cancellations do occur.

September 12, Planting a Prairie: Choose Your Own Adventure, 6-8:00 p.m., \$27/\$33. Register by September 5.

September 13, Are Flowers Necessary? 5-6:30 p.m., \$16/\$20. Register by September 6.

September 20, The Art of Rewilding: Inviting Nature to Your Yard, 6-8:00 p.m., \$12/\$15. Register by September 13.

September 21, Your Winter-Ready Garden, 5:30-7:00 p.m., \$21/\$26. Register by September 14.

September 22, Fall Tips and Tricks from Olbrich's Herb Garden, 5:30-6:45 p.m., \$16/\$20. Register by September 15.

September 27, Fall Blooms & Bouquets Walk, 5:30-7:00 p.m., \$28/\$35. Register by September 20.

September 29, Getting Your Garden Ready for Winter, 5:30-7:30 p.m., **online,** \$18/\$22. Register by September 22.

October 5, Seed Saving Workshop, 2-3:30 p.m., \$12/\$15. Register by September 28.

October 5, Managing Moths: Lymantria dispar (Spongy Moth), 6-7:15 p.m., **online,** \$12/\$15. Register by September 28.



"Seed Saving 101" by PHOTO/arts
Magazine is licensed under CC BY 2.0

Wisconsin Horticulture Update, Fridays, 9:30-10:30 a.m., online (note: no WHU on September 2)

September is the last month for the weekly Wisconsin Horticulture Update. The Update is a 1-hour review of statewide growing conditions, degree days, insect and disease activity and more, plus special topics. Recordings of past sessions are posted in the Canvas Classroom (https://canvas.wisc.edu) as is a link to the schedule. September specialist reports are on the 9th (Fruit Insects Update) and the 16th (Fall Pruning of Woody Ornamentals). Sept 30 will be a year-end wrap up with tips for the fall and winter. No registration required. This

link goes directly to the Zoom meeting on Friday mornings:

Log into the WHU on Friday at 9:30am)

UW-Arboretum Nature Hike, Sunday, September 4 or September 18, 1 p.m. – 2:30 p.m.

Learn about Arboretum land, plants, animals, fungi, phenology, and ecology. Geared for adults, these longer walks may cover some sloping terrain. Wear sturdy closed-toe shoes and come seasonally prepared for weather and insects. Walks take place except in unsafe weather. Free, no registration required. Meet at the Visitor Center.



Bringing the Garden Inside, Wednesday, September 7, noon-12:30 p.m., online

Get ready to continue enjoying your garden by bringing your plants indoors. You'll learn about which plants can come in, the requirements for growing plants indoors after they have been outside all summer, and how to properly transition them to their new indoor home. Presented by Darrin Kimbler, Agriculture Educator, UW-Madison Division of Extension Iron County. Free, but registration required. Click here to register

Hike in the UW-Arboretum Grady Tract, Sunday, September 11, 1-3:00 p.m.

Learn about Arboretum land, plants, animals, fungi, phenology, and ecology. Geared for adults, these longer walks may cover some sloping terrain. Wear sturdy closed-toe shoes and come seasonally prepared for weather and insects. Walks take place except in unsafe weather. Free, no registration required. Meet at Grady Tract parking lot, southeast corner of Seminole Hwy. and W. Beltline Frontage Rd.

Native Landscaping for Pollinators, Wednesday, September 14, 6:30-8:00 p.m., online

Join the Kettle Morraine Land Trust on Zoom for the September Armchair Conservation Virtual Program on native plants for pollinators. Learn about how we can help provide critical habitat in our own backyards. Pre-register for this event with rory@kmlandtrust.org

Fall in the UW-Arboretum Native Plant Garden, Saturday, September 17, 1-3:00 p.m.

Color, fruits, seeds, late blooming plants, late-season insects—we will find these and more in the diverse native plant gardens around the Visitor Center. Susan Carpenter, garden curator, will lead this tour. Tours take place except in unsafe weather. Free, no registration required. Meet at the Visitor Center.

Native by Design: Gardening for a Sustainable Future, Sunday, September 18, 8:45 a.m.-4:30 p.m.

The UW-Arboretum's annual native gardening conference teaches and promotes the use of native plants in home landscapes for biodiversity, habitat, beauty, and sustainability. Expert-led workshops inspire and inform gardeners and landowners to create and maintain native gardens or small-scale restorations. Keynote: "Gardening with Native Plants of the Midwest," Alan Branhagen, Minnesota Landscape Arboretum. Fee: \$70. Students: \$30 with ID. Register by September 8 at https://arboretum.wisc.edu/event/170537/

Walking Outdoor Garden Tour of Nicholas Conservatory & Gardens, Rockford, IL, Thursday, September 22, 10:30 a.m. to noon

Join our volunteer docent on a tour of the outdoor gardens at Nicholas Conservatory & Gardens. Learn about native and exotic plants, shade and sun loving plants, and NCG/Sinnissippi history and fun facts. Dress for the weather. Walking shoes and a bottle of water are recommended. Meet at entrance to Nicholas Conservatory. No fee mentioned, but check when you register (registration required). Click Here to sign up.

Dahlias: Digging, Dividing and Diseases, Tuesday, September 27, 1:30-2:30 p.m., online

Dahlias can be a dazzling cut flower for your flower bed or garden. Gain Dahlia growing tips for summer care while learning to identify pest and diseases that can damage blooms. Fall brings new techniques for digging and dividing the tubers as a way of propagating for next season's flowers. Presenter: Christina Lueking, Illinois Extension Horticulture Educator. Free but registration required. To sign up, go to https://web.extension.illinois.edu/registration/?RegistrationID=26177



"<u>Terracotta Dahlia.</u>" by <u>Bernard Spraga</u> is marked with <u>CCO 1.0</u>.

Seed Collecting in the UW-Whitewater Nature Preserve, Wednesday, October 5, 6-7:00 p.m.

Over 100 acres on the Whitewater campus's northeastern border are being restored and actively managed as a native prairie and woodland. You will learn more about native plant species found in prairie and savanna ecosystems as you collect seeds for helping maintain and improve the prairie. Free, but registration required by noon on October 4. Go to

https://www.uww.edu/ce/gardenlandscape/gardenlandscapetours/naturepreservetours

Green Thumb Gardening – Fall Series, online, mostly Mondays, 6:00-8:00 p.m.

The Green Thumb Gardening class series gives you the practical knowledge to keep your home garden thriving! Dane County Extension educators and local horticulture experts will provide in-depth and accessible information for everyone from the novice to the experienced gardener. Register for individual classes at \$12 each. Attend virtually from home or in person at the Extension office in Madison. For Online classes: Click Here to Register or to see the full schedule. Zoom links will be provided after registration.

September 12 (Monday): Soils, Soil Testing, and Fertilizers

September 19 (Monday): Plant Propagation September 28 (Wednesday): Houseplants October 3 (Monday): Intro to Insects

October 6 (Thursday): Shade and Ornamental Tree Planting and Pruning

From Carrots, to Beets to Onions – Creating a Better Future for Some of Our Favorite Veggies, (a conversation with Dr. Irwin Goldman, University of Wisconsin-Madison), online anytime

An article from the website, Innovature.com in which Dr. Goldman discusses his vegetable breeding work. Reading can count for education hours. To read the article, go to https://innovature.com/article/creating-better-future-veggies?fbclid=lwAR03JfnUwaInnwK7LRRvyV9bRaXQwPoGoKzqFFI k60bb-ISGRG42mEI1V0







What Can Master Gardeners Do to Fight Climate Change? continued

On Oct, 28, 2021 the UW Environment geosciences program was ranked #6 on the US News best global universities list. The overall Best Global Universities ranking, now in its eighth year, encompasses the top 1,750 institutions spread across 90 countries, according to U.S. News. American universities make up eight of the top 10 spots. We are fortunate to have immediate access to some of the best minds in the world who are working to find answers to global warming.

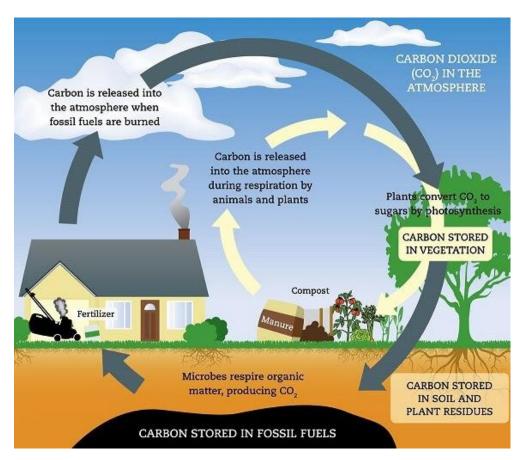
All around the country colleges and universities, scientific organizations and other educational groups are working to educate the public about the daunting task ahead of us: Changing our behavior so we can save the planet. Below are just a few of these outstanding resources available to you just by pulling up their websites on your computer.

- University of Wisconsin-Madison, <u>Nelson Institute for Environmental Studies</u> "The Nelson Institute for Environmental Studies is confronting global environmental challenges through imaginative research that transcends disciplinary boundaries, hands-on education that bridges classrooms and communities, and public programs that foster environmental conversations among people from business, government, academia, and advocacy."
- Michigan State University Extension has an Internet site titled "Climate Change Requires Smart Gardening".
- Oregon State University Extension Service offers help on their site titled "Top Tips for Gardeners to Help Fight Climate Change".
- The Union of Concerned Scientists offers this advice "The Climate-Friendly Gardener: A Guide to Combating Global Warming From the Ground Up"
- Cornell Cooperative Extension has posted a free course book (circa 2018) called <u>"Gardening in a Warming World A Climate Smart Gardening Course Book"</u>
- The National Wildlife Federation offers a 40-page publication which originated in 2007 <u>"The Gardener's Guide to Global Warming Challenges and Solutions"</u>
- <u>The University of Maine</u> has a website with a library of links to climate change sites around the Internet as well as targeted information for their master gardener program.

These are just a smattering of the committed organizations out there who have decided to tackle the seemingly overwhelming issue of global warming in their own communities, and in their own gardens. Take a moment or two and do a few searches to find master gardener groups, colleges, universities, citizen action groups and other organizations working to combat climate change. You may be surprised at how many there are.

Working from the handbook put together by the Union of Concerned Scientists I have isolated several simple changes to how we garden that could have significant impact on the problem, right in our back yards.

- 1. Choose low emission products and practices Gasoline-powered garden tools are major emitters of cardon dioxide (CO2), the primary global warming gas. Emissions can also come from unexpected sources such as fossil fuel-based fertilizers and pesticides and peat-based potting mixes. Use electric or push mowers, rakes (instead of gas-powered leaf blowers) and other low-or no-emission tools. Make your own compost and learn to use natural pest-control methods.
- 2. Don't leave garden soil naked Stabilize, build, and add nutrients to garden soil that would otherwise remain bare by planting winter cover crops such as grasses, cereal grains, or legumes. In addition to preventing erosion and keeping weeds down, they add car
 - bon to the soil when they are turned under in the spring. Peas, beans, clovers, and other legumes convert nitrogen from the atmosphere into natural fertilizer.
- 3. Plant trees and shrubs Because of their size and long life-span, trees and large shrubs remove more heat-trapping CO2 from the atmosphere than other plants. As an added bonus, well-placed trees offer summer shade and protection from winter winds, reducing emissions associated with home heating and air conditioning.
- 4. Recycle yard and food waste Organic waste decomposing in oxygen-poor landfills generates methane, a heat-trapping gas 23 times more potent than CO2. By contrast, composting this waste in the presence of oxygen minimizes methane production. Composting also produces a nutrient-rich soil amendment that reduces the need for synthetic fertilizer while helping soil store more carbon.





but some studies suggest that this climate benefit may be undercut by heat-trapping nitrous oxide emissions related to fertilizer use and generous watering. While there is no scientific consensus yet on the climate impact of lawns, you can make yours as climate-friendly as possible by choosing drought-tolerant species, mowing high, watering during the coolest part of the day, and leaving grass clippings to fertilize the soil (and add extra carbon) naturally. (Author's note: Do without lawns altogether by planting low growing perennial groundcovers that are commonly known as "walk-upons". See box below for plants you may not be familiar with.)

Make your grass "greener" - Lawns absorb carbon from the atmosphere,

Figure 1-Creeping Thyme

Walk-Upon Perennial Groundcovers

- Corsican sandwort (*Arenaria balearica*) Sandwort produces tiny white flowers in spring. This plant is best for small spaces in cool shade. Zones 4 to 11.
- Rupturewort (*Herniaria glabra*) Herniaria is a well behaved but rugged groundcover that gradually creates a carpet of tiny green leaves that turn bronzy red in fall and winter. Zones 5 to 9.
- Blue star creeper (*Isotoma fluviatilis*) This a fast-growing groundcover for foot traffic that produces blue, star-shaped blooms in spring and early summer. Blue star creeper should be planted where its rambunctious nature won't be a problem. Zones 5 to 9.
- Creeping jenny (*Lysimachia nummularia*) Creeping jenny is also known as moneywort due to the golden, coin shaped leaves. Buttery yellow flowers appear in late spring. Zones 3 to 8.
- Creeping Thyme (*Thymus praecox*) is a hardy, low-growing perennial, with fairly minimal requirements. An evergreen with lightly haired foliage, this tiny-growing creeping thyme varietal rarely over 3 inches or 7.5 cm. will appear in low, dense mats, which sprawl. Zones 4 to 9.
- Canadian Wild Ginger (*Asarum canadense*) A low, colony-forming perennial bears a pair of large, velvety, heart-shaped leaves. Growing at ground level in the crotch between 2 leafstalks is a single darkish red-brown to green-brown flower. The flower is at ground level, hidden beneath the leaves. Zones 2 to 7.

Oregon State University suggests we gardeners do more, with less.

• When faced with the need for a tool or some piece of equipment you know you will only use once, don't buy a new one. Borrow it from a fellow MGV, a neighbor, or rent the item. If your local library has a "Library of Things" that includes garden tools, borrow the tool you need long enough for your project and return it. If your local library doesn't have this kind of lending option, think about creating one – maybe in your own neighborhood.



Figure 2- A TREX adirondack chair made entirely of recycled flex plastic.

- Stop using single use plastic in your home and garden. Learn to make paper pots from old newspapers. Start sets in recycled cardboard egg cartons. Reuse plastic pots you get when you buy nursery plants after rinsing them free of soil and sanitizing them in 10% bleach water. Recycle all single use flexible plastic (bags primarily) by wiping them clean and dropping them off at a recycle location. (Often grocery stores provide bins for flex plastic. Flex isn't recycled at the curb in many communities. It is a specialty item recycled by a small number of manufacturers who process it into raw material that is then used for garden furniture, street lights posts and other items that are sturdy and long-lasting.) Make a point to buy items that are packaged in paper wrappings. Avoid vacuum formed plastic, and formed plastic foam containers whenever possible. Buy laundry detergent sheets instead of heavy liquid detergent. Consider that thousands of tons of water in liquid detergent are being shipped across the country in large plastic jugs by truck whereas lightweight detergent sheets can fit in a recyclable paper envelope.
- During the growing season don't buy fruit or veggies at the store. Most of them have been shipped long distances by truck, train or plane, adding a heavy carbon deficit to every bite you take. Eat locally grown veggies in season. Grow your own veggies, or buy from vendors at a local fruit/vegetable stand or Farmer's Market. Take your own bags to the grocery store. Reuse until the bags are no longer usable, then recycle.
- Eliminate non-essential trips by car. Instead, do like our grandparents used to do. Shop one day a week. Keep a list of needs, and pick everything up in one day. If you live in town, ride the bus for short jaunts. Public transportation is a public service in most municipalities and it is usually remarkably inexpensive. Take advantage of it.
- Buy a bicycle with saddlebags or a big basket. Use the bike during good weather to run errands, or even to get to work.
- When putting together a greenhouse or high tunnel, instead of automatically opting to use sheet plastic as a cover, design and build a unit which can use recycled windows instead. Home renovation projects often see tons of usable materials thrown into dumpsters for shipment to the nearest landfill perfectly usable materials that could be of value for many years.

- Reduce or eliminate your use of peat or peat-based soil mixes. Peat is a non-renewable resource and the process by which it is harvested releases large amounts of carbon into the atmosphere. Instead look for mixes that contain coconut coir, compost or other water-holding materials.
- Conserve water by choosing drought-tolerant plants. Although we don't often
 use watering needs as a way in which to choose our vegetables, learning to select vegetables for their water needs could become an easy way to help conserve water. Familiar plants that are drought-tolerant are:
 - Swiss chard (Beta vulgaris) ...
 - o Cowpeas (Vigna unguiculata) ...
 - o Okra (Abelmoschus esculentus) ...
 - o Pole beans (Phaseolus vulgaris) ...
 - o Zucchini (Cucurbita pepo) ...
 - o Amaranth (Amaranthus spp.) ...
 - o Tomatoes (Solanum lycopersicum) ...
 - Mustard greens (Brassica juncea) and,
 - o Jerusalem artichokes (Helianthus tuberosus L.)

This is not an all-inclusive list. There are many other drought tolerant vegetable varieties, and even landscaping plants out there.



Figure 3 - Okra. Drought resistant vegetable.

The National Wildlife Federation's booklet offers up a passionate and practical summary of its commitment in the fight against global warming. Under the heading "SOLUTIONS TO GLOBAL WARMING ARE IN GARDENERS' HANDS", the NWF goes on to say,

"Although the predictions for global warming are dire, they are not inevitable. Just as the IPCC projects serious consequences if we continue to emit greenhouse gases at the current rate, it also concludes that global warming and its impacts will be significantly lessened if we start now on a path to reduce our global warming pollution. As gardeners, we are both guardians and stewards of our environment, and it is important for us to realize that there are many simple and thoughtful ways that we can work with nature to solve the problem. Through the following actions, we can make an enormous difference in our own backyards, in our communities, and in the way our government deals with this critical issue. In fact, we gardeners can take the lead in providing a healthy climate for our children's future."

The booklet goes on to offer these suggestions:

- Improve your energy efficiency,
- Reduce the threat of invasive species expansion,
- Incorporate a diversity of native plants into your landscape,
- Develop a rain garden,
- Establish a "green roof"

Taking action in your community:

- Connect places for wildlife by certifying your neighborhood as a Community Wildlife Habitat,
- Participate in citizen science,
- Encourage local home and garden retailers to carry energy-efficient products.

In closing I am moved to offer this poignant little essay on the realities of global warming:

Gardens and Backyard Wildlife Sentinels of a Changing Climate

As many gardeners and backyard wildlife enthusiasts across the country have begun to notice, global warming is already having a significant impact on nature: Plants are leafing out and blooming earlier; Birds and butterflies are breeding and migrating earlier. Many wildlife species are shifting their ranges northward and to higher elevation. These are major warning signals that global warming is upon us, and they are just the tip of the iceberg of what changes are ahead if we do not take meaningful steps now to curb our emissions of CO2 and other greenhouse gases.

The above statement was written by the National Wildlife Federation in 2007.

Written by Mary Kay Thompson

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