

Up your sustainability game with these six simple tips for climate-smart gardening – and do your part to fight for a healthier future for our fragile planet.

After a long – and in some places very cold – winter, spring is almost here. And with its arrival comes one of our favorite things to do as the days get longer and sunnier.

What if we told you that you can make a major difference without leaving your own backyard? That's right, by simply rethinking how you garden, you can do your part to fight the climate crisis.

With just a little bit of gumption and some know-how, you can lessen your carbon footprint and conserve important resources like water, all while showing your family, friends, and neighbors how much you care about common sense solutions. Solutions they can then take back to their own gardens.

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LAY OFF THE SYNTHETIC FERTILIZERS

There are plenty of reasons to be weary of synthetic fertilizers. Chemical runoff from haphazardly applied fertilizer can drain into streams and lakes, making its way to our water supplies. They can disrupt naturally occurring soil ecosystems, and are a temporary solution to a long-term solvable problem.

But when it comes to climate, it's their manufacturing that really gets our goat.

“Four to six tons of carbon are typically emitted into the atmosphere per ton of nitrogen manufactured,” according to Dr. David Wolfe, professor of plant and soil ecology in the School of Integrative Plant Science at Cornell University. “Anything you can do to be more efficient and conservative about nitrogen use is one of the biggest things you can do in the garden.”

Instead, look to compost, worm castings, and manures to perk up your plants.

And for next year's garden, consider sheet composting (though we prefer its fun nickname, “lasagna gardening”), a cold composting method where alternating layers of carbon and nitrogen materials are placed directly on the soil and break down over time, turning into a fantastic growing medium.



PLANT TREES AND OTHER PERENNIALS

Environmentally, trees and shrubs are all kinds of awesome. Their size and long lives mean they remove more carbon dioxide (CO₂) – the heat-trapping greenhouse gas driving the climate crisis – from the atmosphere than other plants, sequestering it in both above- and below-ground biomass. Their one-and-done planting means they require less energy (and all that comes with it) than many other plants too, particularly compared to the constant tending annuals often require. And their roots secure soil in place, making them important to fighting things like erosion and even holding back dangerous mudslides.

They also offer cool shade in the summer and protection from blistering winter winds, so a well-placed tree can even reduce emissions (and energy bills!) associated with heating and cooling your home.

STOP WASTING WATER

We know that the warmer temperatures associated with the climate crisis increase the rate of evaporation of water into the atmosphere, drying out some areas and then falling as excess precipitation in others. This can lead to a cycle of water misuse in ever-drier areas, and plant diseases in regions where average annual precipitation is on the rise.

Watering of lawns and gardens is estimated to account for 30 percent of all residential water use in the US, according to the EPA, and that number “can be much higher in drier parts of the country and in more water-intensive landscapes.” And as much as 50 percent of it lost to evaporation, wind, or runoff.

Fifty percent! That’s never okay, but it’s particularly uncool at a time when climate change-exacerbated drought is pushing cities with millions of residents ever-closer to running out of water entirely.

So, what can you do?

If you have a small or medium-sized garden, you can easily hand-water your veggies rather than use an overhead sprinkler system, applying the water near the base of the plant slowly to allow time for it to absorb into the soil near the roots. Also, consider drip irrigation, a type of micro-irrigation that helps maintain ideal moisture levels by allowing water to drip slowly and directly to the roots of plants.

“Less frequent, deep watering also encourages deeper root growth to areas where the soil stays moist longer,” according to the Cornell Cooperative Extension. “If supplemental water is determined to be necessary at a specific time and location, be sure to use no more than is needed and minimize your use of potable water.”

You can also capture and save rainwater for later use in a rain barrel or cistern. (Just make sure you keep it covered to save your rain harvest from becoming a breeding ground for mosquitos.) But before you head to your local garden supply shop to pick up a big ole bucket, make sure you check out your state’s laws around rainwater collection. Some US states and municipalities, largely (but not exclusively) in the American West, have laws restricting the collection of rainwater.

**Climate Reality**

about a year ago

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REALLY FOCUS ON SOIL HEALTH, IN GENERAL

The story of climate change's impact on soil health is really a tale of changing precipitation patterns. Extreme downpours can lead to runoff and erosion, stripping healthy soil of key nutrients needed to sustain agriculture. On the other end of the spectrum, frequent droughts can kill off the vital living soil ecosystems necessary to grow healthy crops – and of course, plants can't grow without water either.

But you can fortify your soil against climate change-related weather challenges, increase its fertility and productivity, and even improve your plants' resistance to pests and disease by training your eye on something called "soil organic matter."

Healthy soil rich in organic matter sequesters carbon and stores water kind of like a sponge, helping it mitigate climate impacts like heavy rainfall and short-term drought by keeping the right amount of water where your plants need it – in the ground around its roots, an area called the "rhizosphere."

It also adds nutrients to your foods as all that organic matter breaks down. (A very big bonus you can feel!) So

remember to keep your plants happy by feeding their soil organic matter regularly with compost and by growing cover crops.

SO JUST DIAL DOWN THE TILLAGE, OK?

A low- or no-till approach to gardening plays a very big role in building the soil organic matter talked about above. The reason why is pretty simple: When you tear up the ground, you wreck the soil ecosystem.

At its most basic, no-till gardening is the practice of growing produce without disturbing the soil through tillage or plowing. In addition to locking up more carbon in the soil, this approach dramatically cuts back on fossil-fuel use in gardening. After all, gasoline-powered garden tools are emitters of CO₂.

No- or low-till gardening plays a role in making some of the other tips on this list even easier. As soil organic carbon levels increase through reduced tillage, so does the amount of nutrients that the soil can hold, meaning gardeners have less need for synthetic fertilizers.

AND OPT FOR HAND TOOLS

So, if you can't use your trusted weed eater or rototiller in the garden, how are you supposed to get anything done? We hear you, and believe us, we understand. So we'll break it to you gentle – you're gonna have to do this the old fashioned way.

There are numerous easy-to-use hand tools that can help make gardening a clean, exhaust-free breeze. From push mowers and rakes to the real nuts-and-bolts stuff like hand trowels, shears, and weeders, no matter what you're trying to do, there's a gizmo for that.

If you're looking to scale up your garden game and smaller implements simply won't cut it, consider adding a broadfork to your shed. These big guys consist of five or six metal tines, each around eight inches long and spaced a few inches apart, on a horizontal crossbar with two handles that extend upwards to around chest or shoulder level, depending on your height. To operate, you step on the crossbar, driving the tines into the ground, and pull backward to loosen the soil.

A broadfork will lightly aerate the soil and improve drainage while leaving the soil layers intact, preserving the soil structure and the living ecosystems necessary for your plants to thrive.

Now, take the extra step to help us protect what matters.

While it's unlikely to inspire a telethon, over time the toll of erosion, pollution, losses in organic matter, and other soil impacts of the climate crisis imperil a very basic human need – to eat.

Take an in-depth look at climate change's impact on soil health as well as what's at stake and what you can do to support a world where we can provide our booming population with fresh, healthy food grown in a sustainable soil ecosystem in *Right Under Your Feet: Soil Health and the Climate Crisis*.

Download this free resource now – and make sure you share it with your friends and family.