

# *Play in the Dirt*

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As a child, you played in the dirt. Why did you ever stop? This is where the magic happens. Healthy, carbon-filled soil is the foundation of a healthy garden system and a healthy, biodiversity-filled environment. There's a wonderful chain of events that unfolds when you care for soil with regenerative organic practices.

When you improve soil by feeding it carbon, you're actually feeding the soil ecosystem made up of microbes such as fungi, bacteria, and all sorts of essential living things. These organisms, in turn, help feed your plants, and your garden thrives.

The reasons for this are layered like an onion. You can begin unraveling its complexity by connecting the dots of the ecological food web that exists in your garden and the greater environment. However, in its simplest terms, microbes and plants have co-evolved throughout natural history (over billions of years!). They each help the other and are, in most cases, interdependent. What's interesting is, we've co-evolved with microbes too. In fact, our bodies contain more microbial genes than human genes! (It may sound wild, but it's true.)

It's fair to say that **WE ARE NATURE.**

This only makes sense because why is it that when you play in the dirt, you feel happier? It's the microbes! Bacteria in soil increase the serotonin levels in your body that act as a natural antidepressant, ultimately generating the warm fuzzy feelings we all need so much. Think of it as your personal vitamin N (vitamin Nature). Interestingly, microbes also help your body interpret the world around you. Science has found that the more microbe-rich your environment, the healthier you are. You're less likely to suffer from health concerns such as anxiety, allergies, and inflammatory diseases such as asthma.

Just like your body is more microbe than human, healthy soil is too. There are more microbes in a single teaspoon of rich garden soil than there are people on Earth.

How do you create healthy soil to foster a healthy garden system and a happier, healthier you?

**With no-dig, regenerative gardening.**

# How to Grow a No-Dig, Regenerative Garden

REGENERATIVE GARDENING EMPLOYS NATURE-BASED PRACTICES THAT WORK IN CONCERT WITH NATURAL SYSTEMS, SUCH AS THE CARBON CYCLE AND FOOD WEBS.

## BASICS OF REGENERATIVE GARDENING

- FEED AND PROTECT SOIL.
- FOSTER AND CELEBRATE BIODIVERSITY WITH ORGANIC PRACTICES AND THOUGHTFUL PLANTING.
- INCREASE RESILIENCY BY WORKING WITH NATURE.

## Start with Carbon

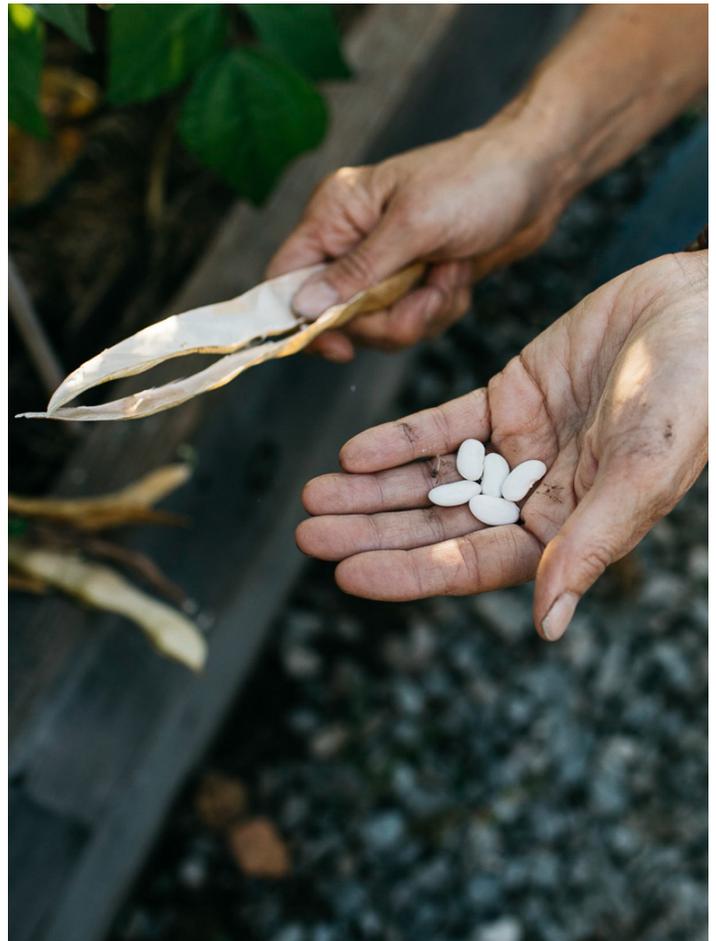
Before diving into the best practices of regenerative gardening, let's back up for a moment. First, to understand regenerative gardening, we need to rethink our relationship to carbon. Carbon has a bad rap thanks to its ever-increasing presence in the atmosphere, but what we forget is that carbon is an essential building block of life. (All living things contain carbon.) It's also important to remember that carbon's primary home is in the ground. And! When we feed the soil carbon-based amendments such as compost, we're feeding the soil ecosystem, which provides an endless number of benefits.

## REGENERATIVE GARDENING TECHNIQUES

**COVER GROUND.** Apply compost and other carbon-rich materials to the soil surface to protect and feed it. Because remember, there's a whole world beneath our feet. Think of it as an underground superhighway filled with bacteria, fungi, all sorts of other creatures, plus plant roots. When we feed the soil, we're feeding the greater system.

**PRACTICE NO-DIG GARDENING.** No-dig gardening is a framework for disturbing the soil as little as possible and protecting the underground superhighway.

**KEEP LIVING ROOTS IN THE GROUND.** As you know, plants capture solar energy and convert it into carbohydrates that are the food of life. From here, they create a myriad of phytonutrients essential for growth and survival. They also send some of these sugars and phytonutrients down into the soil via their root systems to barter with soil microbes for hard-to-find moisture and soil nutrients. We're maintaining this relationship when we maintain living roots in the ground by growing ground covers, cover crops, and perennials with different rooting depths. And, as it turns out, this relationship is key to not only returning carbon to soil but storing it there as well.



**GROW A DIVERSITY OF PLANTS.** Plants have co-evolved with animals and microbes from the beginning, and each has unique and often highly specialized relationships. When we grow a diversity of plants, we inherently invite and foster biodiversity, leading to the resiliency of ecosystems.

**PLANT NATIVES.** Plants native to your region are the life support systems of animals such as essential pollinators that are, again, native to your area.

**DON'T FORGET PERENNIALS.** While many kitchen vegetables are annuals, it's important to create space for perennials. Consider adding a perennial border comprised of plants of varying sizes and heights (because plants' root systems are often a reflection of growth above ground). Or, swap your lawn for a perennial garden that's filled with 50% or more native plants.

**GROW ORGANIC.** Pesticides, herbicides, and synthetic fertilizers kill indiscriminately and compromise biodiversity. The trick to managing issues such as a rush of aphids or cabbage worms is to foster soil, grow a diversity of plants and companion plants, and rely on barriers.



## FOSTER BIODIVERSITY AND GO BEYOND ORGANIC

If you hadn't heard, we're in the midst of the 6th mass extinction, and it's increasing at a rate faster than researchers previously expected. According to the World Wildlife Foundation, the current global rate of extinction averages about 10,000 species a year. Causes include loss of habitat, pesticide and herbicide use, and the climate crisis.

We can mitigate species extinction by leaving wild places wild, setting aside a portion of the Earth's landscapes and oceans for nature, and regenerating farmland, communities, and cityscapes. We can begin at home with one garden at a time—your garden, my garden, and your neighbors garden by going beyond organic with regenerative gardening.

When we employ the principles of regenerative organics in farms, gardens, and cityscapes, we're empowered with the potential to return carbon to soil and improve conditions for nature to rebound and do what it does best — grow!

Feedback loops between plants, soil microbes, and the myriad of biodiversity living above ground support one another, enabling all three systems to thrive. Meaning, in the process of caring for soil, you're not only creating a foundation for a flourishing garden, you're creating habitat for all living things, including wildlife like birds and pollinators.

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