

CONTENTS

ASSESSING YOUR GARDEN'S ECOSYSTEM & CLIMATE

THE BASICS OF SOIL HEALTH

BIODIVERSITY IN YOUR GARDEN

PLANTING & SEEDLING CARE

GARDEN CARE & MAINTAINENCE



A NOTE FROM JOSH & REBECCA TICKELL

Why you should plant, no matter how much:

By adopting regenerative techniques in our gardens, we become part of the solution, directly contributing to the regeneration of soil, improvement of water cycles, and enhancement of ecosystem health. Every patch of regenerative garden helps sequester carbon from the atmosphere, addressing one of the most pressing issues of our era—climate change.

As part of a community of like-minded individuals, gardeners can play a significant role in transforming our food systems, restoring our planet, and ensuring a healthier future for the next generations.

Gardening is an art form that marries patience with action, observation with intervention. This guide aims to equip you with the knowledge to create a thriving garden, encouraging a symbiotic relationship with nature. Each section provides practical advice, ensuring that your garden not only flourishes but also reflects the dedication and love invested in it.

Welcome to the rewarding world of spring planting, where every gardener can contribute to the cycle of life, one seed at a time.

For more information about the initiative and how you can contribute, visit <u>100MILLIONACRES.ORG</u>

Introduction to Regenerative Gardening

Regenerative agriculture emphasizes soil health as vital for overall ecosystem well-being. This guide follows that approach to enrich soil, promote biodiversity, enhance resilience, and reduce carbon in home gardens, and enhance food quality.

The Importance of Regenerative Practices in Home Gardens

Home gardens play a crucial role in environmental impact. By adopting regenerative practices, gardens can become biodiversity hotspots and productive spaces. This guide aims to equip readers with actionable knowledge for moving their gardens towards regenerative practices.

In embracing regenerative gardening, we strengthen our connection to the earth, fostering fertility and abundance for future generations.



Assessing Your Garden's Ecosystem & Climate

Every garden has a unique ecosystem that tells a story through its soil, plants, insects, and animals. Before starting with regenerative gardening this spring, it's essential to understand our garden's current state. This involves observing the plant diversity, pollinator activity like bees and butterflies, and the presence of earthworms in the soil.

Each element contributes to the garden's life cycle, highlighting its interconnectedness and importance in fostering a thriving ecosystem.



Get to know your garden

- Make a list of all the plants and bugs you see. Each one plays a crucial ecosystem function; take a few moments to determine what that function is.
- Keep a journal of your observations. Jot down findings for each area of your garden throughout the year.
- Create a drawing, something that shows the various areas of your garden to begin to assess your space. Mark the sunny and shady spots, the nature of your soil, and how water moves through your space.

- Chart the sun's path. Spend a few days noting the sun's path across your garden. Which areas bask in full sunlight, and which lie in gentle shade?
- Take a handful of earth; feel its texture between your fingers. Is it heavy and clay-like, or light and sandy?
- Consider the flow of water in your space. Are there areas prone to drying out, or perhaps spots where water gathers? This will help you understand where your garden will most need your attention.



Determining your garden's microclimate

Understanding the microclimate of your home garden is crucial for choosing suitable plants. Microclimates are unique areas within your garden that deviate from the general environmental conditions, offering distinct growing conditions. Factors like proximity to water, wind patterns, soil type, and nearby structures such as buildings or trees can influence microclimates.

Determining your garden's microclimate

USDA Hardiness Zones

Plant hardiness zones are used as a guide to help gardeners and landscapers choose plants that are likely to thrive in their specific climate conditions.

These zones show which plants can handle winter temperatures in your area, helping you choose plants that can survive local frost dates and temperature swings.

LEARN MORE:

<u>USDA Plant Hardiness Zone</u> <u>Map</u>

<u>How to Determine Your</u> Garden's Microclimate

Assess Your Microclimates

<u>Finding Microclimates In</u> Gardens



Shade & wind

Shade from trees or structures is crucial, as it varies with the time of day and season. Structures can also shield plants from wind, while paved surfaces and decks can absorb and release heat, affecting microclimates and plant growth.

Sun exposure

Determine what direction your garden faces. Some
gardens receive shade from a
slope, a structure, shrubs, or
trees.

In short, gardens with:

- Eastern exposure get morning sun, less wind, and are typically moister.
- Western exposure get afternoon sun and are hotter, windier, and drier.
- Northern exposure are shady much of the day and are cooler and moister.
- Southern exposure are warm and sunny even in winter. Thus, southern exposure gardens have longer growing seasons, and are warmer and drier.

The Basics of Soil Health

Soil is vital to your garden, being more than just a collection of dirt. It's a living ecosystem that supports plant growth. Healthy soil contains a diverse range of microorganisms, fungi, and beneficial bacteria that nourish plants.

With the map of your garden sketched and the land's character understood, our next step in this springtime rite is to awaken the soil from its winter slumber. Soil, after all, is not just dirt—it's a living, breathing foundation that sustains your garden. Enriching your soil is akin to setting a lavish table for guests; it's about providing a feast for the plants you wish to grow.



How can you improve the health of your garden's soil?

Test soil composition

Getting a soil test to assess soil composition and pH levels is crucial for efficient gardening. This test provides valuable insights into what your soil needs to support successful plant growth and is available from your **local garden center** or **cooperative extension.**

This test will reveal the pH and nutrient levels of your soil, guiding you on what amendments it may need. Does your soil yearn for the alkalinity of lime, or the acidity of sulfur? Perhaps a meal of bone meal or green sand to replenish phosphorus or potassium? Tailor your soil's diet to its needs.



LEARN MORE:

What is the Country Extension Office?

Why Test Soil in a Garden?

How can you improve the health of your garden's soil?

Add organic matter

You can increase the amount of organic matter in your soil by adding compost, aged animal manures, green manures (cover crops), mulches or peat moss. Because most soil life and plant roots are located in the top 6 inches of soil, concentrate on this upper layer.



Reduce tillage to preserve soil structure

Reducing or eliminating tillage in your garden will promote healthy soil, improve water retention, and support beneficial soil life, leading to healthier plants and higher yields without the negative impacts of excessive tillage.

Practice crop rotation

Crop rotation is essential in a regenerative garden because it helps prevent soil depletion and pest build-up. By rotating crops each season, different nutrients are used and returned to the soil, maintaining its fertility and balance. This practice also disrupts pest life cycles, reducing the need for chemical pesticides and promoting a healthier growing environment for plants.

COMPOST

Composting is the aerobic decomposition of organic materials by microorganisms. It transforms raw materials—such as leaves, grass clippings, garden trimmings, food scraps, animal manure, and agricultural residues—into compost, a valuable earthy-smelling soil conditioner, teeming with life.

To learn more about making your own compost, read <u>All</u> <u>About Composting.</u>

Inviting the Earthworms

Observe the return of earthworms as a sign of healthy soil. These tireless tillers aerate the soil and break down organic matter, turning your garden bed into a fertile ground ready for planting. Welcome them as the unseen gardeners they are, for their presence is a testament to the health of your soil.

Avoid chemical fertilizers

Avoiding chemical fertilizers in a regenerative garden is crucial as they can harm beneficial organisms. Opting for natural methods such as composting and mulching supports soil fertility and biodiversity, leading to healthier plants and nutrient-rich food for consumption.



LEARN MORE:

Transitioning to a no-tillage garden

Organic Matter and Soil Amendments

Biodiversity in Your Garden

Encouraging biodiversity in your garden is crucial for resilience, productivity, and pest control. This involves planting a variety of species, particularly native plants suited to your region and beneficial for local wildlife.

Create layers in your garden, such as ground covers, shrubs, and trees, to provide habitats for diverse creatures. Leaving some areas wild can also offer shelter and food for beneficial insects, birds, and other wildlife, contributing to the garden's overall balance and health.



Why increase biodiversity?

Encouraging biodiversity in a garden helps mimic natural ecosystems, promoting biodiversity, improving soil health, enhancing nutrient cycling, providing habitat for beneficial organisms, and increasing overall resilience to pests and diseases.

Specific plant choices and habitat features may need to be adapted based on the local climate, soil conditions, and available space in your garden.



Incorporate a mix of plant species categorized by different garden layers:

Ground covers

Using ground cover helps suppress weeds, prevent soil erosion, and improve soil health by adding organic matter.
Ground provides a habitat for beneficial insects and prevents soil erosion.

Wild areas

Maintaining wild areas with native plants supports diverse creatures, from ground-nesting bees to mammals, enhancing biodiversity with minimal maintenance.



Shrubs & trees

Shrubs and trees provide vertical structure to the garden, creating diverse habitats for various organisms. They offer shade, shelter, and nesting sites for birds, insects, and small mammals, contributing to increased biodiversity.

Native plants

Native plants are well-adapted to the local climate, soil, and environmental conditions, requiring less water, fertilizer, and maintenance once established. Native plants also provide critical habitat and food sources for local wildlife, including pollinators like bees and butterflies, as well as birds and other beneficial insects.

Pollinators & Companion planting

Consider incorporating plants like. lavender, marigold, which attract bees, butterflies, and other beneficial insects.
Additionally, practice companion planting by pairing plants that mutually benefit each other, such as tomatoes and basil or carrots and onions. This ancient practice fosters a balanced garden where plants support one another's growth.

Habitat features

Leaf or Brush Piles: Shelter for insects and small animals.

Bird Baths or Ponds: Water sources for wildlife.

LEARN MORE:

Native plants in the United States: characteristics, benefits, and where to purchase them

<u>Lady Bird Johnson Wildflower</u> <u>Center's Native Plant Database</u>

Your local university extension service or botanical garden:

These institutions often have resources, workshops, and plant sales featuring native plants suitable for your specific region and climate.

Planting & Seedling Care

Seed choice in your garden is crucial for many reasons as it determines how well your plants will adapt to your climate, soil type, and local environment. From timing your plantings to spacing seedlings, watering wisely, labeling and record-keeping, and transplanting with care, each step plays a crucial role in the health and productivity of your garden.

By understanding and implementing these essential processes, you'll set your garden up for success and enjoy a bountiful harvest season after season. Let's dive into each of these aspects in detail to help you cultivate a thriving garden.



Planting & Seedling Care

Labeling & record-keeping

Mark each planting area with labels indicating the plant type and variety. This simple step prevents confusion and aids in the management of your garden. Keep a garden journal to record what you've planted and when, noting any observations or adjustments you make throughout the season.

Watering

After planting, thorough watering helps settle the soil around the seeds or seedlings, eliminating air pockets and ensuring that moisture reaches the roots. Water gently to avoid displacing seeds or damaging tender plants. As your garden grows, adjust your watering practices to meet the needs of your plants, always aiming for deep, infrequent waterings that encourage robust root systems.



Timing

Refer back to your climate zone's last frost date and use it as a guide. Some plants tolerate cold snaps; others need the warmth of late spring to flourish. Mark your calendar with planting dates, turning anticipation into action.

Sowing seeds directly

Direct sowing is ideal for root vegetables like carrots and beets, and hardy greens such as kale and chard. Prepare your soil to a fine tilth, and follow the seed packet's instructions for depth and spacing then keep moist.



Starting seedlings indoors

For plants requiring a head start, begin indoors under grow lights or in a sunny window. Use peat pots or seed trays filled with seed starting mix, planting seeds at the recommended depth. This controlled environment nurtures your young plants, providing them with the care they need to grow strong and resilient.

Spacing for success

As you plant, whether from seed or seedling, be mindful of the space each plant will need to reach its full potential. Crowding can lead to competition for light, water, and nutrients, while ample space encourages healthy growth. Use your map as a guide to distribute your plants in arrangements that allow for air circulation and easy access for care and harvesting.

Transplanting

When the time comes to move your seedlings outdoors, acclimatization is key. Gradually introduce them to the outside world through a process called hardening off, exposing them to sunlight and outdoor temperatures incrementally. This process reduces transplant shock, helping your plants adjust to their new environment. When planting, handle the root ball gently, and ensure the soil is well-watered to welcome vour seedlings to their new home.

LEARN MORE:

<u>Vegetable Planting Calendar</u>

<u>Regenerative Garden Design</u>

<u>Difference Between Heirlooms</u> <u>and Open-Pullunated Seeds</u>

Heirlooms and hybrids

Decide between heirloom varieties, with their rich history and unique flavors, and hybrids, bred for disease resistance and uniformity. Heirlooms can offer a connection to the gardening traditions of the past, while hybrids might provide reliability and vigor. Your choice will shape the character and resilience of your garden.

Garden Care & Maintenance

The secret to a thriving garden is consistent, mindful care.
Regular checks allow you to respond to the needs of your plants, whether that be watering, weeding, or warding off pests.
Each visit is an opportunity to connect with your garden, observing the subtle changes and celebrating the growth.

This chapter is dedicated to the art of nurturing your garden, ensuring that your plants receive the care and attention they need to flourish and fill your space with life and bounty.



Garden Care & Maintenance

Watering revisisted

As your plants grow, their water needs will evolve. Young seedlings may need gentle daily watering, while established plants prefer a deep soak. The best time to water is early in the morning, reducing evaporation and preventing disease. Use a rain gauge to monitor natural rainfall and adjust your watering schedule accordingly, ensuring your plants receive an inch of water per week as a general rule.



The battle against weeds

Weeds compete with your plants for water, nutrients, and light. Regular weeding keeps these intruders at bay. Mulching with organic materials like straw or wood chips can suppress weed growth, conserve soil moisture, and add nutrients back into the soil as they decompose. Embrace mulching as both a preventive measure and a nurturing practice for your garden.

Pest and disease management

Vigilance is your best defense against pests and diseases. Inspect your plants regularly for signs of trouble, such as chewed leaves or discolored foliage. Whenever possible, use organic methods to manage pests and diseases, such as introducing beneficial insects, using natural repellents, or removing affected parts of plants to prevent the spread. Remember, a healthy plant is the best defense against pests and diseases.



Supporting your plants

Some plants, like tomatoes, cucumbers, and peas, thrive with a little support. Trellises, stakes, and cages encourage vertical growth, improving air circulation and reducing disease risk. Supporting plants also makes harvesting easier and keeps fruits clean and undamaged.

The Joy of thinning

Thinning might seem counterintuitive, but it's crucial for preventing overcrowding. By removing some seedlings, you ensure that those remaining have enough space to develop fully. Use thinning as an opportunity to choose the strongest plants to continue growing, much like curating a collection of the best performers for your garden show.

LEARN MORE:

<u>Garden Watering Strategies</u>

How to deal with weeds in a notill, organic garden

Pests & Diseases In Your Garden

Embracing patience

Gardening is a lesson in patience. Not every plant will thrive, and not every season will be a bountiful one. Embrace these experiences as opportunities to learn and grow as a gardener. Celebrate the successes, large and small, and remember that each season brings a new chance to try again.

As your garden matures, so too will your skills and knowledge. Nurturing your garden is an ongoing journey, one that rewards not just with the fruits of your labor but with the peace and satisfaction found in the rhythm of gardening life.



BE PART OF THE REVOLUTION.

JOIN THE MOVEMENT!











