Garden for Climate Victory!

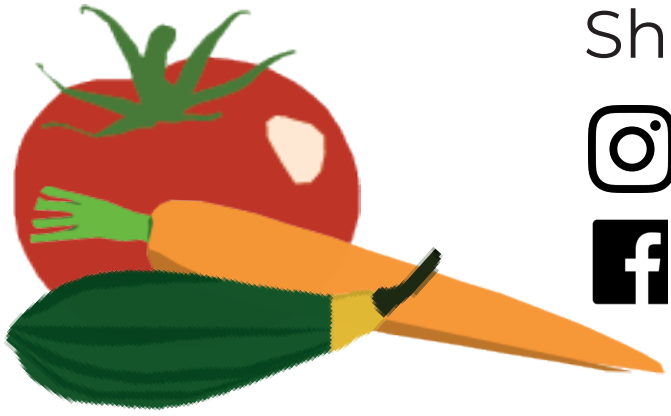
Brought to You By: Railyard Park Conservancy · NM Healthy Soil Working Group · Santa Fe Children's Museum

What is a Climate Victory Garden?

Climate Victory Gardens reference the Victory Garden movement in the 1940s. They present an opportunity to produce healthy, local food and take action against climate change. A Climate Victory Garden is grounded in the carbon-sucking principles of regenerative agriculture.

Why Garden?

- Purchase less food that has traveled across the country;
- Receive the benefits of healthy and safe nutrition;
- Compost food scraps and yard waste, keeping it out of landfills;
- Use less water and decrease erosion, flooding and pollution;
- Most importantly, reduce evaporation and capture atmospheric carbon in healthy soil.



Share Your Progress!

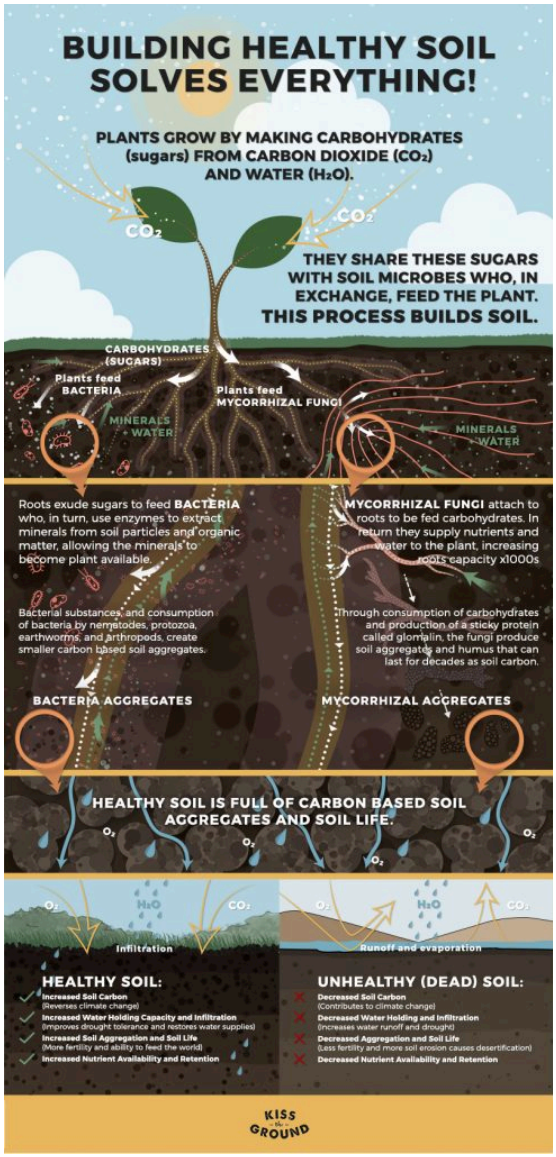
#GardenForClimateVictory
#ClimateVictoryGarden
#TakeBackEarthDay
#PlantTheSeed
#SoilNotOil

Thank you to Plants of the Southwest for generously providing the seeds for your Climate Victory Garden!

GARDEN FOR CLIMATE VICTORY

We're bringing victory gardens back. This time, it's for the climate.

Climate Victory Gardens reference the Victory Garden movement in the 1940s. All across the country, home gardeners grew 40 percent of the nation's food as a way to support war efforts during WWII. Today, we need to similarly rally together to solve the climate crisis.



What is Healthy Soil?

Together with sunlight, air and water, soil provides the basis for life on earth. Healthy soil itself is full of life! In one teaspoon of healthy soil, there are more microorganisms than people on earth. Healthy soil is also rich in organic matter and carbon that plants can absorb from the atmosphere and store underground with the help of the micro-biome. Maintaining this intricate ecosystem is critical for sustaining the wellbeing of plants, animals, humans and the planet!

How does a Climate Victory Garden work?

A Climate Victory Garden is grounded in the carbon-sucking principles of regenerative agriculture, which uses practices that mimic nature. Plants pull carbon from the air through photosynthesis, and then release it in the form of sugar into the soil. This feeds the mighty microorganisms that supply plants with the nutrients they need to grow. The process also deepens the reservoir of carbon stored in the soil. The more carbon in the ground, the better able it is to absorb carbon dioxide and other greenhouse gases, like methane and nitrous oxide.

Cultivating even a little patch of soil in your yard matters! A tiny regenerative garden of about a tenth of an acre can offset the carbon emissions of one American adult per year.

Put your Climate Victory Garden on the map at greenamerica.org/climatevictorygarden

GARDEN FOR CLIMATE VICTORY

Planting a Climate Victory Garden starts with healthy soil. You can't change the mineral foundation of your native soil, but you can bring it to life by following the 5 principles of soil health.

SOIL HEALTH PRINCIPLES

1. Keep soil covered
The best way to keep soil covered is to grow a dense and diverse carpet of plants or grasses, offering microbes both food and shelter. Protecting soil with a layer of mulch holds in moisture, reduces evaporation and cuts down on water vapor, which is another –and largely unrecognized– greenhouse gas!

2. Minimize soil disturbance & external inputs
Tilling, chemical fertilizers, herbicides and pesticides harm the web of life in the soil and should be avoided as much as possible. Alternatively, compost boosts soil health, promoting stronger plants and resilience towards disease, and supporting microbes that feed directly on parasites.

3. Maximize biodiversity
Greater diversity above and below the ground creates a more resilient and productive garden. Plants, insects and animals work together to provide a varied diet for soil microorganisms, with additional benefits such as breaking of disease cycles and creation of habitat for wildlife and pollinators.

4. Maintain living roots
Soil organisms cluster around living roots, where they exchange nutrients with plants. Seeding a variety of warm and cool season grasses, replacing annuals with perennials, or planting multi-species cover crops instead of fallowing are some of the strategies to ensure continuous roots year-round.

5. Integrate animals
Contract with a shepherd twice a year or borrow a neighbor's goats, sheep or cattle to restore soil health on rangeland. It's important to move animals often and allow grasses to recover in between grazing periods. Ducks and chickens can provide pest control and free fertilizer. Hedgerows or pollinator strips offer food and habitat for beneficial insects and earthworms thrive in healthy soil.

Planting a garden has the power to change the world. Regenerative gardens can help reverse climate change by restoring soil health, reducing water vapor and capturing CO^2.

Join New Mexico's soil health movement at

NMhealthysoil.org

GROWING INSTRUCTIONS

Asparagus (Mary Washington):
Asparagus is a perennial crop that can remain productive for 10 to 15 years., Produces succulent spears in spring. Ready to harvest lightly after two growing seasons. Drought tolerant but needs regular watering for production. Fern-like leaves and red berries look very pretty in an edible landscape. Choose a permanent location for your asparagus bed, amend well with lots of compost. Plant seeds in late April or early May, provided the soil is warm and damp (not wet). Soak seeds in water for a couple of hours before planting to encourage germination. Sow seeds thinly 1-2 inches deep in rows about 12" apart. Keep the seedbed well watered if it is dry and free of weeds. Seedlings will emerge after about 3 - 4 weeks, thin them to about 2" apart.

Buckwheat
Add cover crops to your garden to improve soil fertility! Buckwheat is an ideal summer cover crop, it makes nutrients available, tolerates poor soils and is a magnet for bees when in bloom. Requires warm weather, sow in late spring or summer 1/2 inch deep.

Bunching onion:
Bunching onions are a good choice for home gardeners. These onions do not produce large bulbs but are useful because you can harvest a few "green" onions (small bulbs and leaves) as you need them while they are growing.
Sow seeds in spring ½ inch deep and 1ft apart. Seeds germinate faster at higher temperatures. Water regularly if the weather is dry and mulch to cut down the need for water and to suppress weeds.

Love Lies Bleeding Amaranth:
Amaranth is a strikingly beautiful plant and an important mesoamerican food crop. The iron- and calcium-rich seeds can be dried and then cooked as a warm cereal, or ground into a flour. As amaranth is gluten free, it's a nutritious option for those with celiac disease. Amaranth leaves can be used like spinach.
Sow thinly in spring after danger of frost has passed, covering seeds lightly in a warm sunny area. Needs plenty of space as plants will get 3- 4' tall.

Lovage:
Large, fast growing perennial, 3-6 feet in height, with celery-like leaves, stalks and flavor. A striking ornamental whose leaves and seeds are used to flavor soups and stews. The spring shoots are a special treat. Purported to lure romance. Full sun to part shade and rich soil. Easy to grow.
Sow Lovage directly outside in the spring (or in early fall for germination in the spring). Sow 1-2 seeds per inch in rows 3' apart. When 3-4" tall, thin to stand 6" apart. Lovage dies back in the winter, but comes back quickly in early spring. In the spring, it can be further thinned to stand 18-24" inches apart.

Lemon Balm:
Lemon balm is easy to grow and attracts bees to the garden. Used as an herbal tea, it has anti-viral and relaxing properties, helpful for soothing frayed nerves and calming children.
Plant lemon balm during the warm weather of late spring, once all chances of frost have passed. Space lemon balm 20 to 24 inches apart in an area with partial shade and well-drained soil, enriched with compost. Check soil moisture every few days and water when the top inch becomes dry.

Thank you to Plants of the Southwest
for generously providing the seeds for your Climate Victory Garden!

Marigold
Marigolds complement any vegetable, flower or herb garden. A companion plant for tomatoes, it deters harmful soil nematodes. Flowers are edible and impart a lovely golden color to soups and stews. Easy to grow, scatter seed around the garden, about ½ inch deep.

Okra:
Okra has a beautiful flower that develops into a slender seed pot, the okra fruit. Requires frequent harvest before it becomes tough and inedible. It is very tasty in stews and soups, for example in gumbo.
Sow okra in the garden when the soil has warmed to about 65° or 70°F—the warmer, the better. Plant okra seeds about ½ to 1 inch deep and 12 to 18 inches apart. You can soak the seeds overnight in tepid water to help speed up germination. Okra prefers well-drained, but moist soils, amended with compost. Water regularly and use mulch to maintain moisture.

PLANTING INSTRUCTIONS

	LETTUCE **Endive, Spinach, Buttery Oak, Romaine, Purple Orach etc.** Sow ¼ inch deep in early spring or fall, 6-8 inches apart. Lettuce likes mulch, shade in the summer and regular watering.
	BEANS & PEAS **Tepary Bean, Appaloosa Bean** Teparies are a traditional Native American food crop, drought-tolerant. Sow beans when danger of frost has passed in warm soil 1-2 inches deep. Eat as green beans or harvest dry beans: wait until the leaves drop and pods are dry, shake pods to free the seeds. **Peas** Soak seeds 12-24 hours before sowing. Plant in early spring 1 inch deep and 2 inches apart; add mulch. Water regularly when the weather is hot. Provide string or trellis for plants to climb on.

Thank you to Plants of the Southwest
for generously providing the seeds for your Climate Victory Garden!

	TOMATOES **Brandywine, Purple Calabash and others** Sow indoors 5-6 weeks before the last frost date, cover lightly and keep moist in a sunny area. Sow directly or transplant outside when all danger of frost has passed. Allow to grow along stakes or provide a tomato cage for support.
	CHILE **Anaheim, Habanero, Arbol, Sweet Pepper etc.** Sow ¼ inch deep indoors 5-6 weeks before the last frost date, cover lightly and keep moist in a sunny area. Sow directly or transplant outdoors when all danger of frost has passed. Needs warm soil!
	SQUASH AND PUMPKINS **Pumpkin, Spaghetti Squash, Waltham Butternut Squash, Baby Blue Hubbard** Easy to grow! Direct sow outside after the last frost about ½ inch deep. Give squashes plenty of room and mulch to keep soil moist.
	KALE AND MUSTARD GREENS Sow outside in early spring at ¼ inch deep. Thin to 1 ft apart when seedlings are about 4 inches tall, eat thinnings as baby greens! Harvest individual leaves throughout summer and fall.

Thank you to Plants of the Southwest
for generously providing the seeds for your Climate Victory Garden!

Composting 101:

What is Composting: Composting is the combining and managing of specific waste materials so that they decompose. Once the materials are mixed together, microbes in the soil will start to breakdown the waste and turn it into the nutrient-rich material that helps plants grow. By composting, you are not only creating something that helps keep plants healthy, but you are keeping compostable waste products like food scraps and yard waste out of landfills.

Can Be Composted:

- Cardboard (uncoated, small pieces)
- Coffee grounds and filters
- Eggshells
- Fireplace ashes (from natural wood only)
- Fruits and vegetables
- Grass clippings
- Hair and fur
- Hay and straw
- Houseplants
- Leaves
- Newspapers (shredded)
- Nutshells
- Paper (uncoated, small pieces)
- Sawdust
- Tea bags
- Wood chips
- Yard trimmings

Should Not Be Composted:

- Black nut trees or twigs (release substances that may be harmful to plants)
- Coal or charcoal ash (might contain substances harmful to plants)
- Dairy products and eggs (create odor problems and attract pests such as rodents and flies)
- Diseased or insect ridden plants (diseases or insects might survive and be transferred to other plants)
- Fats, grease, lard, oils (create odor problems and attract pests such as rodents and flies)
- Meat or fish bones and scraps (create odor problems and attract pests such as rodents and flies)
- Pet feces or litter (might contain parasites, bacteria, attract pests such as rodents and flies, and carry pathogens)
- Yard trimmings treated with chemical pesticides (might kill beneficial composting organisms)

Source: U.S. Environmental Protection Agency, "Composting at Home, " www2.epa.gov/recycle/composting-home and www.pbs.org/nature

HOW TO COMPOST

Composting is the combining and managing of specific waste materials so that they decompose. Once the materials are mixed together, microbes in the soil will start to breakdown the waste and turn it into the nutrient-rich material that helps plants grow. By composting, you are not only creating something that helps keep plants healthy, but you are keeping compostable waste products like food scraps and yard waste out of landfills.

WHAT YOU WILL NEED

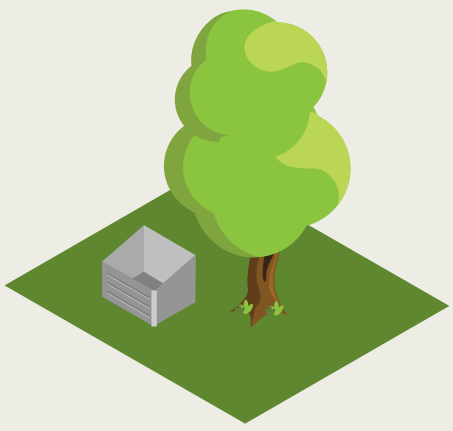
Brown material to produce carbon:
Dead leaves, branches and twigs, sawdust or wood chips, coffee filters, cotton and wool rags, shredded pieces of paper, cardboard or newspaper and shredded nut shells.

+

Green material to produce nitrogen:
Grass clippings and leaves, fruit and vegetable scraps, hair, lint, tea and coffee grounds

+

Water



1 Select a dry, shady spot near a water source.

Ideal size for your compost area is 3 feet wide by 3 feet deep by 3 feet tall (1 cubic yard). You can buy a bin, use chicken wire, or just isolate an area of ground for your compost heap.

2 Add brown and green material in alternate layers.

Try and keep the ratio roughly 3 parts browns to 1 part greens. Make sure larger pieces of material are chopped or shredded.

3 Keep the compost moist [but not too wet].

Moisture helps with the breakdown of organic matter.

4 Occasionally turn your compost mixture to provide aeration.

This helps speed up the composting process and keeps things airy, which cuts the risk of things getting smelly.

5 As materials breakdown, the pile will get warm.

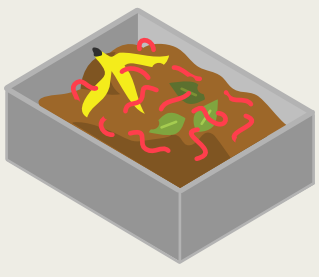
There might even be steam. Don't be alarmed. That means it's working. Now you just have to wait.

6 All done!

When material is dark with no remnants of food or waste, your compost is ready. Add it to lawns and gardens or anywhere that could benefit from some good soil.

WHAT NOT TO COMPOST

Metal, glass, and other products that do not easily breakdown, coal or charcoal ash, diseased or insect-ridden plants, black walnut tree leaves and twigs, pet waste, bones, meat, fats, oils dairy products and eggs (egg shells are OK), and yard trimmings treated with chemical pesticides.



What's vermicomposting?

Vermicomposting is a type of composting that uses red wiggler earthworms *(Elsenia fetida)* to break down organic material. Place worms in a container 8-16 inches deep, layered with dirt, newspaper, and leaves. Make sure the bin has small holes at the bottom (a quarter inch or smaller) to allow for ventilation and drainage. Fruit and vegetable waste will eventually be replaced with nutrient-rich excrement. This method requires far less space, so it's a good alternative for people who don't have enough room or the ideal conditions for a large compost pile.

NATURE®
WWW.PBS.ORG/NATURE

© 2013 THIRTEEN
ALL RIGHTS RESERVED