



Composting Is Good for Your Garden and the Environment

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WHY COMPOST?

Composting is good for several reasons:

- It saves water by helping the soil hold moisture and reduce water runoff.
- It benefits the environment by recycling organic resources while conserving landfill space.
- It reduces the need for commercial soil conditioners and fertilizers.

Compost provides many benefits. It

- adds nutrients and beneficial microbes, holds water, and improves plant growth
- provides a supplemental amount of slow-release nutrients

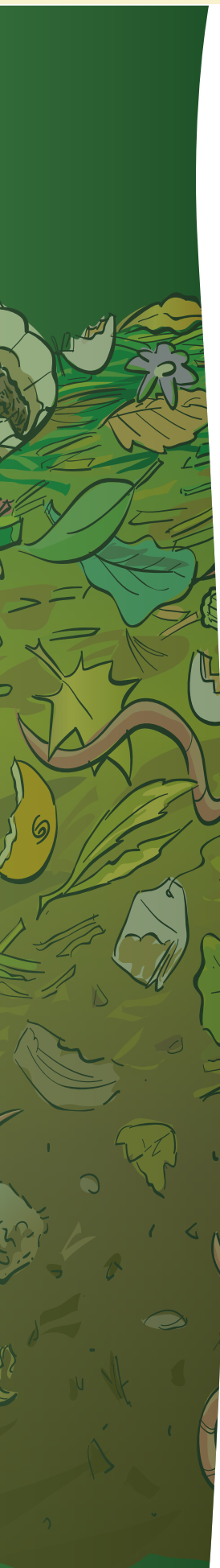


- increases soil organic matter
- encourages healthy root structure
- lightens clay soils and helps sandy soils hold water
- attracts and feeds earthworms and other beneficial soil microorganisms
- helps balance pH (acidity/alkalinity)
- helps control soil erosion
- helps protect plants from drought and freezes
- decreases use of petrochemical fertilizers
- moderates soil temperature and reduces weeds when used as a mulch

WAYS TO USE COMPOST

Different composts have different properties, and vary in their suitability for various uses. Compost can be used as mulch, topdressing, soil amendment, or as an organic fertilizer.

- Mix it into flower bed and vegetable garden planting areas to improve soil properties. Before planting, mix a 3- to 4-inch layer of compost into newly reclaimed or poor soils. Mix a ½- to 3-inch layer of compost into annual garden beds at least once a year. Do not plant trees in small holes filled with compost, as this could cause root restriction. (For equivalents between U.S. and metric systems of measurement, a conversion table is provided at the end of this publication.)



- Spread a 1- to 4-inch layer of coarse compost around flowers, shrubs, trees, and vegetables as a mulch. Composts with larger particle size are generally better for mulches.
- Apply and maintain a 3-inch layer of coarse compost around trees and shrubs, keeping it at least a foot away from tree trunks.
- Top-dress your lawn by evenly spreading a 1/8- to 1/2-inch layer of compost over established grass (high end only for cool-season species such as tall fescue that are not mowed as short as warm-season grasses).
- Use compost in potting mixes for indoor and outdoor plants. Sprinkle a thin layer of compost around houseplants. Make a potting soil by mixing one part compost with one part sand, one part ground bark, and one part peat moss.
- If you don't have a garden—use compost with house plants, give it to a friend, or donate it to a community garden.

HOW TO COMPOST

Several methods of composting can be used. Talk with your local Master Gardener to learn

- which method will work best for the time, energy, and materials you have to devote to the process
- which method will give you the amount of compost you need and in the time you need it
- the details for successfully using the method that best suits you and your gardening needs

COMPOSTING BASICS

1. Chop materials 1/2 to 1 1/2 inches for rapid composting.
2. Mix equal volumes of carbon-rich dry brown and nitrogen-rich green plant materials.
3. Keep compost only as moist as a wrung-out sponge.
4. Turn every few days to fluff the pile so air can penetrate.
5. A hot pile composts quickly, a cool pile takes much longer.
6. Finished compost should smell earthy, never rancid.

DO Compost

Browns	Greens
most sawdust	tea bags
chopped woody prunings	citrus rinds
pine needles	coffee grounds
fallen/dried leaves	coffee filters
dried grass	shrub and grass clippings
straw	fruit waste
shredded paper	vegetable waste
shredded cardboard	wilted flowers
shredded newspaper	young weeds
old potting mix	

Do NOT Compost

dirt/soil
ashes from a stove, fireplace, or barbecue
animal products (meat, bones, fish, grease/fat)
dairy products
sawdust from plywood/treated wood
diseased plants
seed-bearing weeds (e.g., Bermuda grass, ivy, oxalis bulbs, burr clover)
manure or human waste

Note that adding manure to compost piles from any animal should be avoided because there is a potential risk of disease-producing bacterial contamination that may be harmful to humans. Commercial composting operations effectively control pathogens. Backyard piles may not, however, because they are smaller and may not maintain sufficient heat.

Compost is generated when organic matter is consumed and decomposed by microorganisms under favorable environmental conditions. Key management factors for the compost process include maintaining a good nutrient balance, correct moisture content and temperatures, and adequate aeration. Composting is a managed process for accelerating the decomposition of organic matter while improving its characteristics.

The majority of compost formation should occur when temperatures range from 100° to 150°F (38° to 66°C). At these temperatures the rate of organic matter decomposition is maximized and indicator species of pathogens are reduced to non-detectable levels. The Environmental Protection Agency (EPA) has found that decomposing organic

matter in aerated static piles exposed to 131°F (55°C) for 3 days is enough to eliminate parasites, fecal bacteria, and plant pathogens as well as inactivate most weed seeds. However, piles need to be turned 5 times and maintained at 131°F (55°C) for 3 consecutive days between turnings. Turning the pile regularly to allow cooler surface zones to mix with hot center areas is recommended to maintain 131°F (55°C).

Please contact your local Master Gardener for more information or go online to <http://camastergardeners.ucdavis.edu>.

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Poster design and illustrations: Will Suckow Illustration.

RESOURCES ACCESSIBLE ONLINE

Web Sites

California Master Gardeners

<http://camastergardeners.ucdavis.edu/>

UCCE Placer/Nevada Counties Composting Education Project

http://ceplacer.ucdavis.edu/Master_Gardener252/

Publications/Brochures

California Master Gardener Handbook

ANR Publication 3382

<http://anrcatalog.ucdavis.edu/InOrder/Shop/ItemDetails.asp?ItemNo=3382>

Compost in a Hurry

ANR Publication 8037

<http://anrcatalog.ucdavis.edu/InOrder/Shop/ItemDetails.asp?ItemNo=8037>

Compost Use for Landscape and Environmental Enhancement

<http://www.ciwmb.ca.gov/Publications/Organics/44207002.pdf>

Key Points of Control and Management for Microbial Food Safety: Edible Landscape Plants and Home Garden Produce

ANR Publication 8101

<http://anrcatalog.ucdavis.edu/InOrder/Shop/ItemDetails.asp?ItemNo=8101>

Water Conservation Tips for the Home Lawn and Garden

ANR Publication 8036

<http://anrcatalog.ucdavis.edu/InOrder/Shop/ItemDetails.asp?ItemNo=8036>

METRIC CONVERSIONS

English	Conversion factor for English to metric	Conversion factor for metric to English	Metric
inch (in)	2.54	0.394	centimeter (cm)
foot (ft)	0.3048	3.28	meter (m)

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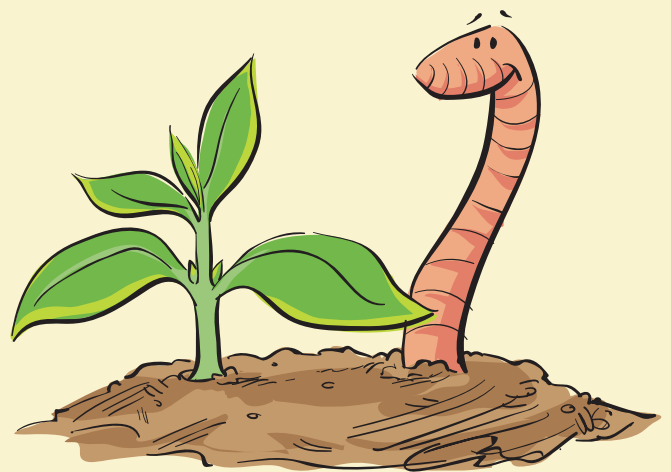
Ask a UC Master Gardener



Composting is Good for Your Garden and the Environment

Using compost helps

- grow healthier plants
- reduce landfill
- save water
- improve soil properties
- decrease need for chemical fertilizers



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