

**ORGANIC MATERIALS, LIKE LANDSCAPE TRIMMINGS, FOOD SCRAPS, AND OTHER COMPOSTABLE MATERIALS, MAKE UP A VERY LARGE PART OF CALIFORNIA'S SOLID WASTE STREAM. THROUGH PUBLIC INFORMATION AND TECHNICAL ASSISTANCE PROGRAMS, THE BOARD SEEKS TO EDUCATE CALIFORNIANS TO MOVE AWAY FROM A "THROWAWAY" ETHIC TO ONE OF CONSERVING NATURAL RESOURCES, SAVING ENERGY, AND DIVERTING VALUABLE MATERIALS FROM LANDFILLS. WASTE PREVENTION, RECYCLING, AND COMPOSTING ARE THE BOARD'S HIGHEST PRIORITIES IN HELPING LOCAL COMMUNITIES MEET AND MAINTAIN THEIR MANDATED WASTE REDUCTION GOALS.**

**California Environmental Protection Agency**

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# WHAT IS COMPOSTING AND WHY DO IT?

**Composting, nature's way of recycling, is the controlled decomposition of organic material such as leaves, twigs, grass clippings, and vegetable food waste.**

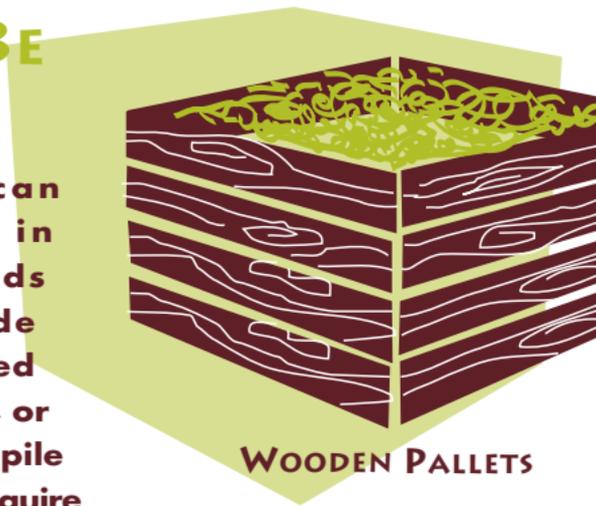
**Compost is the valuable soil product that results from proper composting.**

**Composting helps to keep the high volume of organic material out of our landfills and turns that material into a useful product. With organics making up a significant part of California's municipal waste, onsite composting reduces the cost of hauling garbage and operating landfills.**

**Compost is great for gardens and landscaping, and you can save money by buying less soil conditioner, mulch, and fertilizer.**

## IT CAN BE EASY!

**Composting can be practiced in most backyards in a homemade or manufactured composting bin, or simply an open pile (some cities do require enclosed bins). Businesses, schools, and other facilities can also easily compost. Contact your city or county government for information about free composting workshops and discounted or free composting bins.**



WOODEN PALLETS



**SNOW FENCE**



**WIRE HOOP**



**TUMBLING  
UNIT**



**CONE**

**Homemade bins can be constructed out of scrap wood, chicken wire, snow fencing, or even old garbage cans (with holes punched in the sides and bottom).**

**Manufactured bins include tumbling units, hoops, cones, and stacking bins; these can be purchased from retail or mail-order businesses. Take the time to consider your options, and then select a bin that best fits your needs.**

**To order publications on composting topics, visit the Integrated Waste Management Board Web site at: [www.ciwmb.ca.gov/Organics/](http://www.ciwmb.ca.gov/Organics/).**

## **RECIPE FOR COMPOSTING**

**There are four basic ingredients for composting: nitrogen, carbon, water, and air. The easiest compost recipe calls for:**

- **Layering or mixing roughly 1 part green material (which is high in nitrogen) and 3 parts brown or dry material (which is high in carbon) in a pile or enclosure.**
- **Watering.**
- **Turning to add air.**
- **Letting microorganisms and insects break down the material over time.**

### **NITROGEN**

**Green materials such as grass clippings, landscape trimmings, and garden waste are ideal sources of nitrogen (once they dry out they become a carbon source). Vegetable and fruit trimmings and peels can also provide nitrogen. To reduce the potential for pests or odors, it is best to avoid meat or dairy scraps and to bury other food scraps deep within the compost pile.**

## CARBON

Brown (dry) yard and garden material such as dry leaves, twigs, or hay can provide the carbon balance for a compost pile. Chop or shred large pieces to 12 inches or shorter (thick, woody branches should be chipped, ground up, or left out).

Untreated wood chips and sawdust are a powerful carbon source which may be useful if the pile contains excess nitrogen.

## WATER

Your compost pile should be “moist as a wrung-out sponge.” A moisture content of 40 to 60 percent is preferable. To test for adequate moisture, reach into your compost pile, grab a handful of material, and squeeze it; if a few drops of water come out, the pile probably has enough moisture; if not, add water.

When you water, it is best to put a hose into the pile so that you aren’t just wetting the top. You can also water as you are turning the pile. During dry weather, you may have to add water regularly. During wet weather, you may need to cover your pile. A properly constructed compost pile will drain excess water and not become soggy.



STACKING BIN



PLASTIC HOOP

## AIR

The bacteria and fungi that are in your compost pile need oxygen to live and work. If your pile is too dense or becomes too wet, the air supply to the inside is cut off and the beneficial organisms die. Decomposition will slow and an offensive odor may arise. To avoid this and speed the process, turn and fluff the pile with a pitch fork. You can also turn the pile by just repiling it into a new pile. Many compost bins come apart to make repiling easier. You simply move the bin and repile your material back into it.

## SIZE

Ideally, the compost pile should be at least three feet wide by three feet deep by three feet tall (one cubic yard). This size provides enough food and insulation to keep the organisms warm and happy and working hard. However, piles can be larger or a little smaller and work just fine if managed well.



## GETTING TO COMPOST

### TIME, TEMPERATURE, AND STYLE

Composting can be done “gourmet” style, requiring more effort, with quick results—or it can be done more casually. Both ways will have a positive effect on the environment and produce usable compost. It just depends on how much time you want to spend with your compost pile and how fast you want the compost.

“Gourmet” compost piles that have the right blend of nitrogen (greens) and carbon (browns) and are kept moist and fluffed regularly, will heat up to temperatures of 120 to 140 degrees Fahrenheit. The high temperature will kill most weed seeds and speed up the decomposition process so that the compost may be ready in 2 to 3 months or less.

**“Casual” compost piles are also quite workable since compost will “happen” even if you just pile on yard and food waste, water sporadically, and wait. The pile won’t get as hot, so it won’t decompose as quickly and may not kill weed seeds. Casual composting can take several months.**

## **HOW TO TELL WHEN IT’S DONE**

**Your compost is finished when the original material has been transformed into a uniform, dark brown, crumbly product with a pleasant, earthy aroma. It should no longer heat up when turned. There may be a few chunks of woody material left; these can be screened out and put back into a new pile.**

**You may want to stop adding to your compost pile after it gets to optimal size (see page 5) and start a new pile so that your first pile can finish decomposing (during which time the temperature will drop).**

## **GIVE IT A TRY!**

**Home composting is best learned by doing. Through practice and observation, you will find what works best for your home situation, and you can modify the process to suit your needs. There are also a number of books written on backyard composting; check your local library or bookstore. Also check with your local government for workshops, handouts, guides on composting, or discounted bins.**



## OTHER WAYS TO REDUCE ORGANIC WASTE

**In addition to composting, you can also help reduce organic waste by vermicomposting (composting with worms) and using resource-efficient turf and landscape management practices. These include grasscycling (leaving grass clippings on the lawn), controlled irrigation, precise fertilization usage, selective pruning, selecting plants to match your climate, and onsite mulching of woody prunings.**

**For additional information about these and other organics topics, please visit the Board's landscaping and organics website at [www.ciwmb.ca.gov/Organics/](http://www.ciwmb.ca.gov/Organics/).**

# TROUBLESHOOTING GUIDE FOR HOME COMPOSTING

<b>SYMPTOM</b>	<b>PROBLEMS</b>	<b>SOLUTION</b>
<b>The pile smells bad</b>	<b>Not enough air</b>	<b>Turn the pile</b>
	<b>Too much moisture</b>	<b>Add dry materials</b>
<b>The pile will not heat up</b>	<b>Not enough moisture</b>	<b>Add water</b>
	<b>Pile size is too small</b>	<b>Collect more materials and build to at least 3' x 3' x 3'</b>
	<b>Lack of nitrogen-rich material</b>	<b>Mix in fresh manure, grass clippings, or fruit/vegetable scraps</b>
	<b>Particle size is too big</b>	<b>Chop or grind materials</b>
<b>The pile attracts flies, rodents, or pets</b>	<b>Pile contains bones, meat, fatty, or starchy foods</b>	<b>Alter materials added to pile</b>
	<b>Food scraps are not buried</b>	<b>Bury fruit/vegetable scraps in the middle of the pile</b>

# Zero waste CALIFORNIA

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# COMPOSTING



**NATURE'S WAY**

**TO RECYCLE**

