



Home Composting in the Desert

Putting Life Back Into The Earth

What is compost?

Compost is a dark, crumbly, earthy- smelling form of decomposed organic matter that can be easily made at home.

Why compost?

- ✿ Almost 30% of all refuse taken to our landfills is some type of organic waste. These materials do not decompose in landfills because air and water are excluded.
- ✿ We can create a quality soil conditioner while helping our community in its waste reduction efforts.
- ✿ Humus, a component of compost, when mixed with water, becomes Humic Acid which converts nutrients, minerals, and trace elements into a form more available to plants.
- ✿ Compost, when added to soil, retains water, adds valuable nutrients, and neutralizes the alkalinity of desert soils.

How can I use compost?

- ✿ As a soil amendment for flowers and vegetable gardens, trees, and house plants.
- ✿ As part of a seed-starting mix.
- ✿ As a liquid fertilizer by brewing a tea of compost in warm water for a day.
- ✿ Larger woody pieces can be used as a mulch. Because it is rich and holds water so well, compost should be used sparingly around native plants.

What can I compost?

Anything that was once a plant can be composted. *The key to successful composting is a mix of 4 parts carbon material to 1 part nitrogen material.* This can vary up to a 50/50 mix. DO NOT use more than 50% green materials.

Carbon-Rich

(Brown and dry)

Straw
Pine needles
Small branches
Dryer lint
Dry grass clippings
Dried plant materials
(trimmings, leaves, vines)
Sawdust
Shredded newspaper

Nitrogen-Rich

(Green and moist)

Wet grass trimmings
Fresh plant clippings
Vegetable and fruit wastes
Barnyard manures and beddings
Alfalfa pellets
Tea bags
Coffee grounds and filters
Hair, fur, feathers

Do NOT compost these things!

- ✿ Meats, grease, fats and oils
- ✿ Dairy products, especially cheese
- ✿ Dog and cat feces
- ✿ Diseased or invasive plants or roots of Bermuda grass
- ✿ Oleander, eucalyptus and tamarisk (salt cedar). These contain toxins that inhibit plant growth and should be used sparingly.
- ✿ Herbicides and pesticides are neutralized during the composting process. However, compost should be well aged.

How do I start?

First, select a place in the yard, preferably in the shade, out of the wind, and within reach of water.

Next, you'll need to assemble a bin to contain your composting organic matter. For little or no cost, a bin can be made from a ring of heavy mesh wire, old pallets, or concrete blocks.

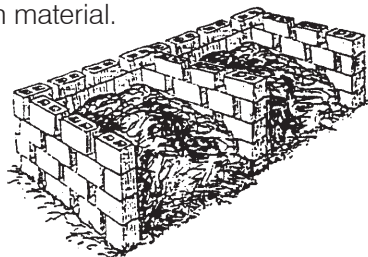
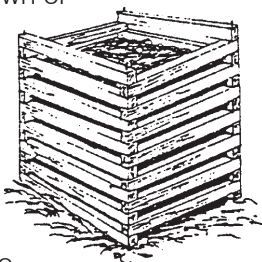
To ensure successful composting, it is a good idea to make your bin a minimum of 30 inches in each direction. This size insulates itself while allowing air to penetrate.

Should you choose not to build a bin, commercially made composting bins offer an easy and attractive way to recycle organic matter at home.

Ten steps to success

Once the bin is constructed, stockpile dry organic materials and follow these ten simple steps:

1. Shred or chop all materials into as small as possible pieces to expose the most surface area for the microbes to work on.
2. Loosen 2" of soil where the bin will stand. Add a 6-12" layer of finger-sized branches to allow air to enter from below.
3. Provide a mixture of about 4 parts brown or woody material (carbon-rich) to one part green or moist (nitrogen-rich). Up to a 50/50 mix can be used.
4. Layer green and brown materials alternately, not more than 4" thick. Occasionally sprinkle in soil and/or manure. If using food waste, be sure to cover it with plenty of carbon material.
5. Ensure pile is very wet. During periods of heavy rain, cover with a tarp or scrap of carpet.
6. Once your container is full, top off the pile with 2" of manure or carbon material.
7. As decomposition takes place, the pile will begin to heat up. Interior heat can reach 165 degrees and can be checked by inserting a metal rod or your hand into the pile.
8. Before the pile cools down to outside temperature, reactivate it by turning the material into a second bin, or use a pitchfork to thoroughly mix the pile. Water and/or green material can be added at this time. *NOTE: Step 8 ensures compost in 2 or 3 months. You can turn your pile less often, but it will take longer for finished compost.*
9. Repeat these steps as needed until the mixture is soft, dark, and crumbly.
10. To use the finished compost, sift on a 1/2" screen to remove large pieces. Return these to the bin for further breakdown.



Troubleshooting

SYMPTOM	PROBLEM	SOLUTION
Bad odors.	Not enough air or too wet. Add brown, dry materials.	Open pile or turn completely.
Not composting.	Not chopped up enough. Too dry.	Repeat Step 1. Water and turn pile.
Will not heat up.	Pile is too small. Lack of nitrogen. or fish emulsion.	3' x 3' x 3' is ideal size. Add green materials, manure, bloodmeal,
Flies or ants in pile.	Food waste not covered.	Cover with 2" layer of carbon material or manure.

Food waste composting for small spaces

Soil Incorporation: Chop kitchen waste, run through a blender or food processor with lots of water. Bury this “soup” in holes or trenches directly in garden or flower beds around plants. Fill with soil and water well. Seeds or transplants can be planted immediately.

Worm Boxes: For use on shaded balcony or carport, use a wooden or plastic box with small drainage holes in the bottom and a loose fitting lid if possible. As an example, a 2'X 2'X 12" box will compost the kitchen scraps from 4 people, about 4 pounds a week. The box should be filled with moistened bedding made from shredded newspaper, dried leaves, and/or peat moss. Add at least 100 red wiggler worms. Dig chopped or blended scraps into a different place each week. A fitted piece of carpet works well as a cover, retains moisture and helps to keep temperatures down—85 degrees is the upper limit for worms to thrive. Remove the “vermicompost” every 3 months. Refill the box and transfer the worms. A bottomless box can be placed directly on loosened soil. Fill in the same manner. After 3 months, lift the box and use the vermicompost as a fertilizer. Start again in the same place or a new one. Keep shaded and moist during extreme heat.

Take a closer look

Nature has its own composting program using millions of microorganisms (bacteria and fungi). Earthworms and grubs assist in reducing material into basic elements such as nitrogen, phosphorus, and potassium. These are the very things contained in commercial fertilizers. By composting at home, we speed up the process that nature accomplishes in a much slower way.

In order to live and work in a compost pile, microorganisms must have oxygen, water, nitrogen, and carbon. Dry, brown, woody materials are high in carbon, and supply daily energy. Green, moist, dense materials provide nitrogen. It provides the food for microorganisms building their bodies and reproduction. When the right food is provided and conditions are right, the microorganisms reproduce so much that heat is produced.

The faster these workers eat and reproduce, the hotter the pile gets. A compost bin, in effect, is a factory where a new product called humus, or compost, is produced.



More questions?

Call the Tucson Organic Gardeners Infoline at 670-9158; or surf the TOG Web site at tucsonorganicgardeners.org

A Compost Expert is available for consultation the 2nd and 4th Saturday of each month at the Home Composting Demonstration Site located at the Tucson Botanical Gardens, 2150 N. Alvernon Way, Tucson, Arizona.
Winter hours: September - May, 10 AM to 2 PM
Summer hours: June - August 8:30 AM - 10:30 AM

Composting workshops are offered periodically. Call The Tucson Organic Gardeners Infoline, 670-9158. Also available are school programs and group consultation. We will hold a workshop at your work place for a minimum fee.

Compost Education Kits for Primary and Secondary levels are available to check out for your classroom. Just call the infoline, 670-9158, to reserve one.

Attend monthly meetings of the Tucson Organic Gardeners, held the 3rd Tuesday of each month, September through April, at 7 P.M. Call 670-9158 for location.

