The Green Homeowner's Guide to Composting

SAN BERNARDINO COUNTY
PUBLIC WORKS

Solid Waste Management Division
1-800-722-8004
www.sbcounty.gov/dpw/solidwaste

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What is composting?

THE ESSENTIALS OF COMPOSTING…..

With these principles in mind, everyone can make compost.

BIOLOGICAL PROCESS

The compost pile is really a teeming microbial farm. Bacteria, the most numerous and effective composters, are the first to break down plant tissue. Fungi and protozoans soon join the bacteria and, somewhat later in the cycle, centipedes, millipedes, beetles and earthworms all do their parts.

MATERIALS

Anything growing in your yard is potential food for these tiny decomposers. Microorganisms use the CARBON in the leaves or woodier waste as an energy source. NITROGEN from grass or "green materials" provides the microbes with the proteins needed to build their bodies and multiply. (The more decomposers there are, the faster the compost pile will break down.)

Materials with a higher carbon content include "brown materials" like dried leaves, dried weeds, straw, sawdust, wood chips, or sticks/branches. Materials that have a high nitrogen content include "green" items like fresh grass clippings, green weeds, cow or horse manures, and fruit and vegetable trimmings from the kitchen.

What is the "best recipe for compost? It depends! But a good rule of thumb is to build a pile that has about 50% green materials and 50% brown materials.

SURFACE AREA

The more surface area the microorganisms have to work on, the faster the materials will decompose. Chopping, shredding, or chipping garden wastes before adding them to your compost pile will help speed up the decomposition process.

MOISTURE AND AIR

All living things on Earth, including the microbes in a compost pile, need a certain amount of water and air to sustain themselves. Microbes function best and composting happens the fastest when the compost heap is about as moist as a wrung out sponge. It is usually necessary to add water to the compost pile to keep the decomposition process going. The pile also needs to be turned periodically to get more air into the center of the pile.

VOLUME

A large compost pile will insulate itself and hold the heat given off by decomposers. The pile's center will be warmer than its edges. The ideaL compost pile size is 3' x 3' x 3' (one cubic yard). Piles smaller than this will have trouble holding this heat, while piles larger than 5 feet on a side doesn't allow enough air to reach the decomposers (microbes) at the center.

Note: The proportions are only important if your goal is to make compost quickly. Slower composting requires no exact proportions.

What to compost

Greens (Nitrogen Based):

Fresh plant material and prunings

Lawn clippings

Manure or animal cage cleanings (horse, cow rabbit, chicken *

Fruit and vegetable trimmings from the kitchen or garden

Coffee Grounds and Tea Bags

Egg shells

*This material should not be used in a compost bin that will be used for food gardening.

Browns (Carbon Based):

Dry leaves

Dry weeds, grass

Chopped prunings, twigs

Wood chips

Hay or straw, sawdust

Wood ashes (cold)

Newspaper, shredded

What not to compost

To avoid problems with odors, pests, reseeding, or slowing down the compost process, don't put any of these items in your pile:

- ♠ Invasive weeds that spread by roots/runners—e.g. crabgrass, bamboo
- ♠ Meat, fish, dairy products, bones, fats, bread
- ♠ Large branches or pieces of wood
- ♠ Pressure treated wood
- ♠ Barbeque or coal ashes
- ♠ Dog or cat wastes
- ♠ Materials with thorns or spines—e.g. rose bushes, cactus
- ♠ Pine needles and palm frons

For more information please call the County of San Bernardino, Department of Public Works, Solid Waste Management Division at 1-800-722-8004 or visit www.sbcounty.gov/dpw/solidwaste

BACKYARD COMPOSTING RECIPES

G = GREENS **B= BROWNS**

Recipe One

3 parts fresh grass clippings	G
3 parts fruit & veggie scraps	G
6 parts dry leaves	B

Recipe Two

3 parts dry grass clippings	B
3 parts garden pruning's	G

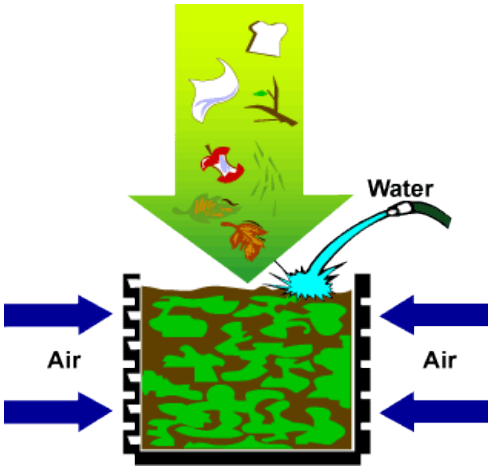
Recipe Three

3 parts wood shavings	B
3 parts fresh grass clippings	G

Add water and air (mix the pile) to all recipes

Preparation

Your compost pile should be a 50/50 mix of **browns** (avoid pine needs and palm frons) & **green** materials. Composting works best with at least one cubic yard of material. Remember to mix in some water and keep the pile moist (like a damp sponge). Fluff up your pile once a week. In a month or two, your compost will be ready.



How To Compost At Home

50% Greens + 50% Browns + Air + Water + Time = Compost






Composting is easy to do: Put equal amounts of greens and browns into a pile or a composting bin. Once you have at least one cubic yard of material, add enough water to make the material moist and mix. Keep the material moist and mixed weekly. In as little as 8-10 weeks, compost will be ready to use in your garden or yard. Using a compost bin helps keep the pile neat, retain moisture and heat.

When is it Done?

Finished compost is a dark brown, uniform, crumbly product with a pleasant, earthy aroma. There may be a few woody pieces that aren't completely composted—just toss them back into your new pile.

Location, Location, Location

Place your compost pile in a convenient place close to a water source. Don't put piles under the eaves of your house—when it rains, you'll drown your pile.

Grass Clippings

Take care with fresh grass clippings. Add them in thin layers, or mix them with brown material when adding to the pile. Or dry them before adding.

Feast of Famine?

In the fall, homeowners have a lot of leaves (browns), but little green material. And in the summer, there is a lot of grass, but few brown materials. Many people start a pile for just leaves in the fall. They will start to decompose slowly. Then in the spring and summer months, the partly composted leaves are gradually mixed in with the grass clippings.

Chopping and chipping

It helps speed up the composting process if you can shred, chop, or chip materials – especially woody items, before adding to the pile.

Use of Compost

Compost can be used as a soil conditioner when dug into the soil in flower beds or vegetable gardens. It can also be used as top soil. Make sure to avoid using manure in compost that will be used for food gardens.

Benefits of Composting

Composting involves biological decomposition of organic materials to produce a stable, weed-free, pathogen-free, humus-like product. Using compost benefits the environment in a number of ways:

- Diverts yard trimmings, leaves, and other valuable organic materials from landfills, saving landfill space.
- Adds organic matter and nutrients to soil.
- Reduces the need for fertilizers.
- Increases biological activity in the soil.
- Prevents soil erosion.
- Reduces requirements for irrigation.
- Reduces the need for pesticides.
- Increase porosity of heavy clay soils.

Troubleshooting

Symptom	Problem	Solution
Compost Uses	What do I do with the compost?	Compost is used to enrich the soil and as a mulch to retain moisture and protect plants
Bad Odor (rotten or ammonia smell)	Not enough air in the center of the pile, or too much green material/moisture	Mix the pile, or add in more brown material. Add greens in a thin layer
Composts too slowly	Not enough water	Moisten and mix the pile
Pile is damp and warm only in the center	Pile is too small	Collect more material and mix it into the pile
Pile is damp and sweet smelling, no heat and not decomposing	Lack of green material, pile too dry	Mix in more green material like fresh lawn clippings and yard trimmings or add more water
Critters and/or fruit flies	Fruit and vegetable trimmings are too close to the surface	Make sure to bury these materials deep into the pile, and cover with other yard wastes

Grasscycling

Grasscycling is the practice of slowing down the growth rate of your lawn and leaving the grass clippings on your yard when you mow. These clippings decompose in your lawn and release nutrients back into the soil. Grasscycling eliminates the need to bag and dispose of your clippings, thereby saving you time and energy. Though a "mulching mower" makes this process easier, you can practice grasscycling with your existing mower.

FACTS ABOUT GRASSCYCLING

- Proper mowing is required for successful Grasscycling. Cut the top 1/3 of the grass when the surface is dry. Raising the mowing height in the summer encourages deeper roots and protects grass from drought and heat damage.
- The best time to water is early morning, as less water is lost due to evaporation. Try to avoid watering in the evening because it may encourage disease development.
- Proper fertilization is essential in maintain a healthy lawn. Grasscycling can reduce the amount of fertilizer needed by 15-20% because grass clippings return nitrogen to the soil.
- Grasscycling eliminates raking, bagging and dumping grass clippings. Saves time, money and is environmentally friendly. Stop sending your grass to landfills. Mow down pollution naturally.