

# HANDY GUIDE TO HOME COMPOSTING



**By Gray Russell, Master Composter**

It is often said that composting is nature's way of recycling, but that's not quite right. Composting doesn't happen naturally; decomposition does. Decomposition is nature's way of reusing organic (or "once-living") materials, and when we understand and then control that process...that's composting.

I will explain how to make compost, and how to accelerate and improve the composting process by clarifying some simple tips and successful techniques. The results will provide terrific gardening benefits, help the environment, reduce waste, keep your property healthy, and lower your carbon footprint...right in your own backyard!

## **Compost Happens**

Compost is created when organic residues – materials left-over when plants are harvested or they die – such as fall leaves, grass clippings, garden trimmings, yard pruning and some kitchen scraps are combined by a homeowner or gardener and piled up into a heap. There, the organic material is decomposed by microscopic creatures – microorganisms – and transformed into humus or mulch, highly valuable soil improvers.

The microorganisms – healthy, invisible “bugs” – do most of the work for us. They are everywhere: on every leaf and blade of grass, every wilted flower, every scrap of food. Intricately complex communities of microbes live in healthy soil, and the decomposition process they cause is essential to all life on earth.

## **What is Compost?**

Compost is not soil. Soil is a very precious substance upon which all life depends... and yet we treat it like dirt!

Soil is not made from organic material, as compost is, but from minerals: sand, silt, and clay. There are good soils and poor soils, and gardeners soon become aware that we can greatly improve the quality of the soil in our yards and gardens by increasing the organic content.

Compost is a soil *amendment*, meant to be mixed in with soil to improve the structure, the texture, and the fertility of the soil, or what's known as the soil's *tilth*. “*Compost is to soil as yeast is to bread*”; it is that special ingredient that transforms the original material into a complex, vital, potent product.

## **Black Gold**

Most importantly, the addition of compost improves the ability of soil to hold moisture, which is the delivery system by which nutrients get to the roots of the plant you wish to grow, whether it is a flower, a veggie, a blade of grass, or a tree.

Sandy soils do not hold moisture well, so the best way to improve them is by adding organic material. Clayey soils can be virtually impermeable and difficult to work, and the best way to improve them is by the addition of organic material. So what is the best organic material to use? Homemade compost.

Additionally, there are fertilizing nutrients in compost, and micro-nutrients, which are necessary to make the soil healthy and loaded with vitality. Finally, compost can be used as mulch, to prevent compaction and erosion of the soil, reduce weeds, retain moisture, and insulate the soil during extreme temperatures.

**Healthy soil = healthy roots = healthy plants =  
a healthier, happier gardener: you!**



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## **Who...?**

Anyone can make compost successfully right in their own backyard. Composting is simple, it's easy, it's interesting, it's an important environmental action, and it's fun! It adds a therapeutic element to our gardening and yard care, altering it from an extractive process to a nurturing one. We return healthy organic nutrients to the soil that produced them for us, increasing the joy and the satisfaction derived from our most popular hobby.

## **When...?**

Any time is the right time to start composting, especially fall and spring. In the fall you'll want to rake, bag, and store all of your leaves since they'll be your primary feedstock throughout the year. You'll also start an autumn compost pile for the winter. In the spring you can rake out winter leaves from your shrubs and garden beds and use them to get started on a new pile.

## **Where...?**

Location of a compost pile is based on your esthetics and your backyard. Sun or shade is not a major factor, but the pile should sit on the ground not too far from the garden area. An important tip is to use a compost bin. Whether your garden or backyard is formal or funky, small or large, there is a good compost bin for you. Most backyard bins are simple holding containers, varying in size, which will contain the yard trimmings and kitchen scraps.

Home composting bins can be built out of wood, hardware mesh, chicken wire, snow-fencing, or even cinder blocks. Many people prefer to simply purchase a commercially-made bin, constructed from recycled plastic, which snaps together easily and is lightweight, pest-resistant, and relatively inexpensive. Many municipalities provide these bins to residents at cost, subsidized for discount, or even for free.

Another style is a tumbler, or barrel composter, which turns the leaves, grass, and scraps by rotating the container so that the materials inside tumble like the clothes in your dryer, rather than requiring forking or turning by hand. Larger amounts can be composted by using a series of three bins, which allows accumulated materials to be stored and turned on a regular schedule, creating a better product, faster.

## **What Goes In, What Stays Out**

Most things that grow in your backyard or garden can be composted. The two main ingredients for making compost from most suburban properties will be your leaves (the most voluminous items we produce) and grass clippings (the heaviest), and they go together perfectly.

Diseased plants or invasive weeds should be left out; a few weeds pulled from a garden are fine in the heap, but if you spend a day pulling virulent, pernicious weeds you should dispose of them. Twigs are fine in a compost pile, but branches should be chipped. Any hedge trimmings or shrub pruning, deadheading, spoiled veggies or dead flowers are all good ingredients.

From the kitchen, the main rule is: fruit and vegetable scraps only, and *no animal products*. That means no meat, chicken, fish, bones, grease, fat or dairy. Egg shells are the one exception to the rule.

Don't think so much about clearing plates at the end of the meal; think more about preparing the meal before dinner: you pull off the tips of the lettuce, chop off the celery, asparagus, and broccoli stalks, and peel potatoes, onions, and carrots. Jersey summer corn husks are great for composting, and so are the corn cobs (snap them in half first).

Every banana has a peel, every orange and grapefruit has a rind, every apple and pear has a core. Coffee grounds are perfect, even the paper filter, and so are tea bags, including the string and paper. That bottom drawer of your 'fridge: take out those "science projects" and add them to the mix. Bouquets of cut flowers: once they've wilted, give them a new life!

You'll be surprised how much organic material you generate from your home. The more you cook and prepare your own food, the healthier your diet, the more food scraps you'll keep out of the garbage and save for the compost pile. And all those healthy nutrients will now be going back into your soil, instead of being wasted – along with your money – when you threw valuable food scraps away to be hauled by trucks to a landfill or incinerator.

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## ***The Greens and the Browns***

All of the organic materials from your home and garden contain two elements essential to successful composting: nitrogen and carbon. The micro-organisms responsible for decomposition require both. Anything still fresh or moist will be higher in nitrogen. Composters call these things “greens” (no matter their true colors). Older, dried-out materials are higher in carbon, and these are called “browns”.

*A key tip:* Greens – exemplified by grass clippings – break down quickly, and browns – exemplified by fall leaves – take longer.

Other greens include any fresh pruning or trimmings, wilted flowers, spoiled vegetables, weeds, or dead-heads from the garden, and, all your kitchen scraps. Other browns include wood chips, straw and hay, dried trimmings, and paper that cannot be recycled such as napkins and towels.

## ***How do I start a compost pile?***

Combine a layer of greens, such as grass clippings, with a layer of browns, such as leaves. Add more greens, such as kitchen scraps, and cover with more leaves. This creates a nutrient-rich food source for bacteria, fungi, protozoan, and invertebrates such as millipedes, mites, insects, sow bugs and worms. These healthy organisms working together cause the precise conditions for successful decomposition.

You always need leaves for successful backyard composting because they are your constant feedstock supply. That’s why it’s important for composters to save all their leaves in the fall, and during the early spring “clean-up”. Save them in a separate heap from the compost pile, or save them in bags, so they can be used for making batches of compost year-round.

“Turning” the pile periodically by mixing the materials together with a garden fork, a shovel, or an aerator tool is a very important step for successful composting. Turning adds air for the organisms; they’ll work harder, and this speeds up the process. The microbial activity will actually create heat, a sign of good compost “cooking”. If the pile seems dry, add more greens, or some water: the heap should have the consistency of a wrung-out sponge. The more an item is chopped or shredded, the more of its surface area is exposed, and the faster it will decompose into compost.

If the pile isn’t heating up or breaking down, add more greens (to add moisture and nitrogen) and turn the pile (to add air). If the pile is too moist or wet, or has an ammonia odor (from going anaerobic), add browns and turn the pile (to aerate).

## ***How long will it take to make finished compost?***

The length of time depends on several factors: the blend of greens and browns; the amount of moisture and air provided from regular turning; the exposed surface area (how chopped-up the ingredients are); and the weather (decomposition will slow down in January and February).

If you have a good blend of greens and browns, and if you turn the pile for just a few minutes once a week, you could have finished compost in 6 weeks to 2 months.

The fall is a great time to incorporate finished compost into your cultivated beds to improve the soil for next spring’s growing season. In the spring, you can use your compost as mulch around garden beds and for transplanting. At that time your grass will be growing fast, enabling you to add those clippings to your leaves to start new batches of compost.

## ***Good for our gardens and Good for the earth***

Composting is an environmentally sustainable and scientifically sound method of soil regeneration, recycling useable plant materials into a valuable resource – a healthy, nutrient-rich soil improver – the way nature intended.

## ***Good for your soil and Good for your soul***

Like gardening, composting gives both the novice and the expert a sense of accomplishment, and a glimpse of the world’s natural beauty and its intricate web, right in our own backyards.

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## **About Gray Russell**

**Gray Russell** is a co-founder of **Green Living Solutions**, and the Environmental Coordinator for the Township of Montclair, NJ. He provides information to residents about waste prevention, recycling, home composting, environmentally-friendly yard care, saving energy, and other topics of municipal and community sustainability.

For seven years Gray was the Compost Project Manager for Bronx Green-Up, the community outreach program at **The New York Botanical Garden** (NYBG). The Compost Project is part of a city-wide effort funded by the Bureau of Waste Prevention, Reuse, and Recycling at the NYC Department of Sanitation.

In addition to teaching Bronx residents – including homeowners and community gardeners – as well as students, businesses, and institutions about the many benefits of composting, Gray also oversaw: the design, construction, and operation of NYBG’s large-scale composting facility; a permanent home composting educational exhibit in NYBG’s famous Demonstration Gardens (plus another one in a community garden and a third in Van Cortlandt Park); and, the implementation of an innovative on-site, in-vessel food waste composter at NYBG’s Terrace Café and Restaurant.

Gray has been teaching people how to compost for 25 years. He continues to instruct for The New York Botanical Garden’s *Continuing Education Program*.

Gray lectures for garden clubs all around the tri-state area. He has been featured on various TV shows including “Martha Stewart *Living*” (CBS), “*LIVE!* with Regis and Kathy Lee” (ABC), the Home and Garden Network (HGTV), and *Caucus: New Jersey* (PBS).

**Upon Request, Gray Russell will show you how to get started on a successful backyard compost project at your home.**

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