

COMPOSTING: The Berkeley Method.

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A faster method of composting was introduced by Robert D Raabe, a professor of plant pathology at the University of California, Berkeley. Commonly known as the "Berkeley method" or "fast composting", this method produces finished compost in as little as 14 to 21 days.

Let's look at some advantages and disadvantages of fast composting.

Advantages of fast composting:

- Finished compost in a few weeks
- Higher nutrient content due to less leaching of nutrients
- Fewer viable weeds and weed seeds

Disadvantages of fast composting:

- Additional effort required
- Large amounts of materials are required at one time

How to Shred the Compost Materials

If there is one secret to making fast compost, it is finely shredding the carbon rich ingredients such as fallen leaves, hay, straw, paper and cardboard. Shredding increases the surface area that the compost microbes have to work on and provides a more even distribution of air and moisture among the materials. The type of chipper or shredder used is not important, provided it can handle the materials. Rotary lawn mowers can also be used by for shredding leaves by running the mower back and forth over a pile a few times although this method is not quite as good as using a shredder.

Nitrogen rich green materials such as manure (we have sufficient Nitrogenous material to avoid using manure at MCG), vegetable wastes and green plant prunings can also be shredded. Soft succulent materials do not need to be shredded because they break down very quickly in the compost pile.

If you don't have a chipper or shredder you can chop your materials into ½" to 1½" pieces with pruning shears. It takes a fair amount of effort but the results will be worthwhile.

How to Get the Balance Right for Really Fast Compost

It's important to have the right balance of materials in our fast compost so that it breaks down as quickly and efficiently as possible. The bacteria in our compost need both carbon and nitrogen to function; carbon for energy and nitrogen for protein synthesis. For every one unit of nitrogen used by the bacteria they also consume about 30 units of carbon. Therefore, in order to keep the bacteria working efficiently we need to create a compost pile that is about 30 parts carbon to 1 part nitrogen.

Since most compost materials don't have a carbon to nitrogen (C:N) ratio of 30:1 we need to combine our materials so that the total mixture will be as close as possible to 30:1. This equates to 70% C: 30% N.

How to Make a Fast Compost Pile

The original Berkeley method involved the layering of carbon and nitrogen materials but today, many composters mix all the materials together into one large fast compost pile.

The jury is out on which of these options helps the pile to heat up faster. Choose whichever option you feel most comfortable with. For the purposes of this article we will mix all of the material together. If you choose to layer your materials the [making a compost pile](#) section of the site will be helpful.

Once your compost materials are shredded, mix everything together into one pile. If the pile feels dry add moisture and mix thoroughly and evenly. If you are unsure of how moist your fast compost pile should be check out the [measuring compost moisture](#) area of the site.

The minimum size of your pile should three feet wide and three feet high. For best results, try to make your pile 4 or 5 feet on each dimension. Place a piece of carpet or plastic over the top of the pile to help trap the heat produced by the pile. If the fast compost pile was made correctly the internal temperature should rise within the first 24 hours. Dig into the pile and remove a handful of material from the centre. The material should be warmer and darker than the material at the outer edges of the pile.

Within two days the compost pile should be ready to be turned for the first time. Compost bacteria need plenty of air to survive so it's best to turn more rather than less frequently. Move the material from the outer edges of the pile into the middle. The pile should be ready for a second turning after another day or so. At this stage the material should start to look like a bit like finished compost.

At the two week mark if everything went as planned the fast compost should be nearly ready for use. It may not be entirely finished heating but it should be nearly finished. It should be safe to use once the temperature has fallen below 100° F.

How can I tell if my compost is ready to use?

The point at which the compost is ready varies depending on how the compost will be used. In general, though, compost is ready when it's dark and crumbly and mostly broken down with a pleasant, earthy, soil-like smell to it.

Unfinished Compost

For most uses it is acceptable to have some recognizable pieces of leaves or straw remaining in your compost. However, you should not use partly finished compost either as a seed starter mix or in areas where heavy nitrogen feeding plants are to be grown. Because unfinished compost is still actively breaking down, organisms in the material continue to take nitrogen from their surroundings. When mixed with the soil, the organisms will begin to draw the

nitrogen from the soil in order to have the energy to continue the decomposition process. The result is a nitrogen deficit in the soil to the detriment of the plants in the area. Signs of nitrogen deficiency are stunted plant growth, yellowing leaves often near the bottom of the plant, light green or yellow foliage and weak stems.

Unfinished compost has also been known to damage or "burn" some plants and plant roots. This is a result of the heat given off by the decomposition process. When using unfinished compost it is a good idea to leave a few inches between the material and the stems of plants.

Unfinished compost has also been shown to inhibit the germination of seeds. If unfinished compost is to be applied to areas where seeds will be sown it should be done six to eight weeks before seeding begins. Ideally, compost should be applied in the fall for an area that will be seeded the following spring.

Compost is unparalleled as a soil conditioner for:

- house plants
- lawns
- trees & shrubs
- annuals
- perennials
- bulb plantings
- flower beds
- vegetable beds
- potted plants / container plantings

Indoor Plants

Wait until your compost is completely finished before you use it for indoor plants. Established house plants will benefit from an inch of compost mixed into the top inch or two of soil.

Potted Plants / Container Plantings

Container plantings will benefit enormously from the addition of compost to the potting soil. Ensure that you use only mature compost in your containers to avoid burning any tender stems or roots.

Here is a good recipe for a compost based potting mix suitable for containers:

- 1 part compost
- 1 part sharp sand
- 1 part perlite
- 1 part peat or good soil

New planting areas

Give new planting areas a boost by digging in as much compost as you can spare (up to four inches) into the top six to twelve inches of garden soil.

Established planting areas

Established plantings will benefit from an inch or two of compost worked into the top few inches of soil. Be sure to leave a gap between the compost and the base of the plant to avoid burning the stems. The nutrients will find their way down to the plant roots.

Top dressing an Established Lawn

Spread up to ½" of finished compost over an established lawn. Compost used as a top dressing for lawns should be fully broken down. Running the compost through a fine compost screen is a good idea to keep out any chunky bits. Large areas should be covered with a fertilizer spreader but smaller areas may be spread by hand or with a shovel. Aerating your lawn prior to spreading compost will be of additional benefit, enabling the compost to filter down under the sod more easily.

For new lawns

Starting a new lawn is often challenging, particularly in areas with new homes where the builders have removed the original topsoil. The addition of compost to the existing soil can greatly improve the chance that a new lawn will take hold and thrive. Up to three inches of compost worked into the top six inches of soil will give the new lawn an excellent start. Either sod or grass seed can be placed on top of the amended soil.

Around trees and Shrubs

Spread a one to two inch layer over the soil surface starting from six inches from the trunk out to the edge of the drip-line of the tree or shrub.