The Baltimore Food & Faith Project of the Johns Hopkins Center for a Livable Future



Photo from <u>State of Washington</u> Department of Ecology

COMPOSTING FOR CONGREGATIONS

What is compost? Compost is a dark, crumbly, earth-smelling material produced by the natural decomposition of leaves, grass clippings, and many other organic materials. It is much like the organic matter existing on top of and in all soil and can be made by just about anyone (University of Maryland Master Gardener Handbook, 2008).

Everyone should make compost!!

- ◆ It reduces the amount of material going to landfills. Municipal waste is composed of 13% yard wastes, 12% food wastes, and 34% paper, most of which can be composted (U.S. EPA, Office of Solid Waste, 2005). Disposing of yard wastes in landfills is expensive and damaging to the climate. When organic debris decays in landfills, it releases a lot of methane, a potent greenhouse gas that is 23 times more heat trapping than carbon dioxide. Also, burning organic materials uses up fossil fuels and releases other harmful pollutants (University of Maryland Master Gardener Handbook, 2008).
- Composting saves money! It is a valuable and free soil amendment that improves soil structure, aeration, and water-holding capacity (University of MD Master Gardener Handook, 2008). Many gardeners who use compost never buy commercially-produced fertilizer again.
- Compost suppresses some soil-borne diseases. Some microbes in compost may outcompete pathogens for food and habitat while others may attack or repel plant pathogens (University of Maryland master Gardner Handbook, 2008).

Why should faith communities compost?

- ◆ To respect the cycle of life —when we use leaves, grass clippings, food scraps, and other organic matter to create compost rather than sending these things to the dump, we help nurture our soil, grow healthier foods and plants, and show our love for creation through our mindful caretaking of the earth. We also leave a more livable planet for our children when we choose to use compost instead of synthetic fertilizers which are often made from fossil fuels.
- ◆ To promote social justice—the things we throw away usually end up in landfills or incinerators, next to which people often live. These facilities are frequently built in places where the disenfranchised among us dwell—the poor and people of color. Composting to reduce our own contribution to this waste stream helps reduce the burden of living near landfills and incinerators that release pollution and toxins into the air and water for those who are often the most vulnerable among us.



How to Compost:

Where should we locate our composting system?

- On a level spot in the garden, so nutrients from the compost won't leach away in water runoff.
- Near where the raw material will be generated and the end product will be used.
- Away from wooden buildings to avoid attracting termites.
- Away from trees and shrubs which will send their roots into the pile.
- Near a source of water.
- Where you have sufficient room to stockpile ingredients, turn the pile, and store finished compost.
- A site in the full sun isn't necessary as the decomposition process is driven by the microbes, not the sun. You can choose to place your compost pile in full sun or shade, depending on what best suits your needs.

What tools will we need?

The answer to this question will depend on what and how much you're composting. Pruning shears, string trimmers, lawn mowers, machetes, and hatchets are adequate to cut up most yard waste. Always use good safety practices, no matter which tools you use. An easy way to shred fallen leaves (shredding them increases the surface area available to the microbes and helps to speed up decomposition) is to mow them before raking and collect the shredded leaves directly with a lawn mower attachment. If you don't have a mower mage, just rake the leaves to the compost area and run your lawn mower through them with the discharge shoot directed toward the pile.

What kind of compost pile or bin should we use?

The ideal size for a compost bin is 3' by 3' by 3'. You can construct a three-bin composting system, have just one pile that you work with, or purchase any number of commercially-available bins and tumblers. Before buying a bin, ask the following:

- Can it handle our volume of waste?
- Is it attractive and non-obtrusive?
- Is it rodent-proof? Can you use it for food scraps?
- Is it durable?
- Can you easily turn the ingredients and remove the finished compost?

3. Bio System

Three-bin composting system.

For a comparison of different composting systems, visit <u>VegWeb.com</u>.

Building the Pile!

There are several different ways to make compost. The most important aspect of composting is to ensure the **correct ratio of brown materials to green materials** go into the pile.

Brown materials include fallen leaves, straw, wood chips, paper, and sawdust. **Green materials include** fresh grass clippings, kitchen scraps, and coffee grounds.

The correct ratio is attained when the weight of the browns and greens are about equal.

Here are a few composting methods that we think are easiest and most effective:

Cool / Passive Composting is not labor intensive, but requires patience. Simply add the right ratio of browns and greens to a pile sized 3' by 3' by 3' and let it set, turning it once or twice a year to speed up the process and create a more uniform product. If you constantly add fresh materials to your pile, the materials on top of the pile will be in the early stages of decomposition when the material at the bottom is ready to use. Remove the top of the pile and harvest the compost at the bottom annually, or start a new pile when the first pile is full.

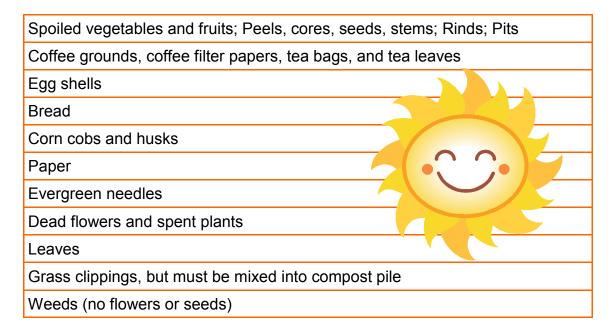
Hot / Active Composting produces a compost harvest in just 6 to 8 weeks but requires more careful attention and periodic labor. Fill a bin or pile all at one time with the necessary ingredients, and do not add more raw materials later. A 3'x3'x3' heap involves a broad range of microorganisms and generates significant heat. Once triggered into action and provided with the appropriate mixture of browns and greens, water, and air, the heat loving bacteria will generate temperatures of 130-170° F. The temperature will typically rise within 24 hours after the bin is filled. As the bacteria consume nutrients and oxygen, they produce enough heat to evaporate some of the moisture. The temperature will decrease as they begin to die. Before the temperature drops below 100° F., turn the materials so that fresh materials, air and, if necessary, water are available at the core of the bin.

Continue checking the temperature, turning, adding moisture, etc., until the volume of the material is about 50% of the original. The temperature will not rise again. The compost should be dark brown and should not resemble the original materials. Let the pile sit for two weeks, allowing it to cure and stabilize the nutrients.

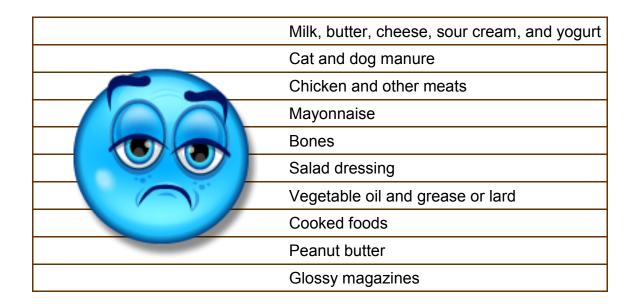
Trench Composting offers the small-plot vegetable gardener an opportunity to improve the soil continuously. After fall harvest, dig a trench in the walking or gardening space, about 8 to 12 inches deep. Begin burying your kitchen waste and other raw organic materials in the trench, covering the material as you go with chopped leaves, grass clippings, straw or soil. Each year or season, you can alternate the location of trenches. You can bury a broad range of organic materials without the fear of attracting animals or creating bad odors. Plus, you can continue to compost all winter!

What to Compost!

Goodies—These can be added to the pile...



Baddies—These should <u>not</u> be added to the pile...



Ideas for Congregational Composting Projects:

- Mulch! Use your yard clippings and fallen leaves as mulch around trees and flower beds on congregational grounds. This saves money and helps to return valuable nutrients to the soil.
- Donate the best, compost the rest! Many soup kitchens and food pantries are happy to accept food that faith communities don't use. Donate any good leftover foods to them, and put the rest in your compost pile.



- Coffee grounds galore! Pretty much all congregations have some sort of coffee hour at least once a week, resulting in a whole lot of coffee grounds with usually no where good to go but the garbage can. Have no fear! Coffee grounds are an excellent addition to any compost heap, and can even be sprinkled under acid-loving plants like azaleas and blueberries to help them stay happy.
- Celebrate Earth Day with a Crazy Cool Compost Saturday or Sunday. Adults and children can learn how composting helps to protect our planet by reducing air pollution, greenhouse gas emissions, and fossil fuel usage. They can then get their hands dirty by building a bin, adding some scraps, and getting their first compost going.
- Teach kids in religious education about why composting is good for the earth and people, and then teach them how much fun it is by getting a three-foot diameter *Roly Poly Compost Ball* in which one can place compostable materials. Children can take turns rolling the ball across the yard each week, watching as the organic materials inside slowly turn to compost. Children and youth might also designed to mix compostable items together as it is rolled across a yard. For even more fun and to further the lesson, set up some garbage can "pins" that can be bowled down by the compost ball.
- ◆ The Compost Constable is in Town! Encourage members of the congregation to bring their leftover kitchen scraps in a clear plastic bag each week to your church/ synagogue/mosque. Designate a Compost Constable to look at each bag of compost to make sure it contains only goodies for the pile, and then dump it into the compost bin. Bring the bag home to wash and reuse the next week.
- For the very ambitious, start a *Community Composting Project*. Recruit volunteers to go around to area residents and local restaurants to pick up buckets of kitchen scraps, bring them to the composting site, dump the buckets, clean them, and return them to the residents and restaurants for use the next week. Use the finished compost to help create vegetable gardens and beautify your community.
- If you still have more to compost than you have space for composting, <u>Real Food</u>
 <u>Farm</u> in Baltimore welcomes your composting donations at their site in Clifton Park.
 Visit their website for more information.

Selected Faith-Based Composting Resources:

<u>Earth Ministry Recycling & Composting</u> has a short list of ways to that congregations can recycle and compost as part of their larger list of Sustainable Lifestyle Choices.

<u>Greenfaith Waste Audit</u> provides waste audit tools to congregations that allow them to conduct waste audits in order to identify what sorts of and how much waste they generate, so as to better reduce the amount of garbage generated, create a recycling program, etc. There is nothing specific included about composting, but in doing the audit a congregation will likely see how much waste is food scraps that could be composted.

Interfaith Power and Light's **Cool Congregations Program**

has an on-line calculator to help congregations measure their carbon footprint, and identify the best places to become more energy smart. Faith communities (and households) can find out how much waste they're sending to landfills and what percentage of their total energy use comes from waste emissions. (See also IPL Cool Congregations Carbon Checklist and Action Menu)



Photo from <u>Ferry Beach Ecology</u> School

Unitarian Universalist Ethical Eating, Food and Environmental Justice Resource Guide contains all sorts of ideas about how to eat in more environmentally-friendly and just ways, including starting a compost pile (end of page 2).

Web of Creation Environmental Guide: Buildings, Grounds, and Practices.

This comprehensive (and lengthy!) document covers a wide variety of ways that congregations can green their facilities and grounds. Search for "compost" to find the different areas throughout the document that mention ideas for when and how to compost. Please note, though, that the suggestion to compost your pet waste shouldn't be followed as it smells bad and can spread diseases to the garden.