Healthy Gardens, Safe Food

Composting Tips for School and Community Gardens

Composting organic materials such as dried leaves, grass and garden clippings can be an effective way to minimize waste and improve soil at school and community gardens. During composting, organic materials are rapidly broken down through a process of decomposition by microorganisms. Several factors contribute to the success and safety of composting activities.

Composting Basics:

1. Pile Size:
   - The pile of materials to be composted should be at least three feet wide by three feet deep by three feet tall (one cubic yard) to compost adequately.
   - Remember, piles will shrink as they progress.

2. Importance of Air:
   - Air is needed for the microorganisms to do their job.
   - Ensure adequate aeration of piles by turning, and having appropriate particle size.

3. Moisture Content: Keep compost only as moist as a wrung out sponge.
   - Microorganisms require the right level of moisture. Locate pile near a water source so water can be easily added, if needed.
   - If it is too dry, the microbial processes will stop, and no decomposition will occur.
   - If it is too wet, the pile will become anaerobic, or without air, and will not decompose adequately (and it will smell!).

4. Particle Size: Chop materials to ½ to 1 ½ inches.
   - If particle size too small (fine) the pile will hold too much moisture and not enough air.
   - If particle size is too large, it may not hold enough moisture and will take longer to decompose.

5. Temperature:
   - Internal temperature of the pile is very important. Use a compost thermometer to check temperatures.
   - With the right blend of "greens" and "browns" (nitrogen and carbon sources), moisture and air, the temperature of a cubic yard pile should heat up to about 120-140 degrees Fahrenheit. This temperature will speed up the composting process.
   - Please note, home or garden compost piles may not maintain high enough temperatures to ensure consistent pathogen reduction, which is why the composting of animal waste (including manure) is not recommended for small operations.

6. Set-up and Management:
   - Mix equal volumes of carbon-rich browns (dry leaves, twigs or hay) and nitrogen-rich green plant materials (grass clippings, garden waste and vegetable trimmings). Keep layering like a lasagna!
   - Add water as needed as you mix.
   - Turn every few days to fluff the pile so air can penetrate.
   - Use the thermometer to check the progress.
   - Finished compost should smell earthy, never rancid.

Please note: Solid waste facility permits may apply for school or community gardens composting food waste or importing compostable materials from off-site sources.

Healthy Gardens, Safe Food

Composting Basics (continued):

Please contact the County of San Diego Solid Waste Local Enforcement Agency at 858-694-2888 for additional information.

Activities which do not require a solid waste facility permit include:

- Vermicomposting – Using worms to breakdown food scraps.
- Non-commercial composting with less than one (1) cubic yard of food material (at any one time) if all wastes are generated and used onsite.
- Within-vessel composting activities with less than 50 cubic yards capacity.
  (California Code of Regulations, Title 14, Section 17855(a))

Schools and Community Gardens may also consider sending food scraps and other compostable materials to a commercial composting facility if available. It is recommended that manure to be used on a culinary garden is commercially processed.

Guidelines for Use of Manure at School and Community Gardens

Bacteria and other microorganisms that cause diseases such as Salmonella and E. Coli can be transferred from animal manures to humans when used on food crops. To reduce the risk of human disease, the following precautions are suggested:

1. If using manure on vegetable gardens, use only "hot-composted," commercially processed manure.
2. Do not use manure from cats, dogs or pigs in gardens or compost piles. Some of the parasites which can be found in these manures may survive composting and remain infectious for people.
3. Never apply fresh manure after the garden is planted.
4. Document any manure use in compost or garden applications to ensure a record of application time and source.
5. People who are especially susceptible to foodborne illnesses should avoid eating uncooked vegetables from garden soil amended with manure that has not been commercially composted. Those who face special risks from foodborne illness include pregnant women, very young children, and persons with chronic diseases, such as cancer, kidney failure, liver disease, diabetes or AIDS.
6. Wash hands with soap and water after handling manure or compost.
7. More information on food safety at community gardens is available at:
   www.sdcounty.ca.gov/deh/food/pdf/Community_Garden_Guideline.pdf.
   It is recommended that manure to be used on a culinary garden is commercially processed.

Some information for this handout was adapted with permission from University of California Master Gardener Tip Sheets:
Composting is Good for Your Garden and the Environment (#8367)
http://ucanr.org/freepubs/docs/8367.pdf
Food Safety in Your Home Vegetable Garden (#8366)
http://ucanr.org/freepubs/docs/8366.pdf

Additional Resources:
County of San Diego Farm & Home Advisor:
www.sdcounty.ca.gov/fha/index.html; www.cesandiego.ucdavis.edu

County of San Diego Department of Public Works, Recycling:
www.sdcounty.ca.gov/dpw/recycling/composting.html

California Department of Resources Recycling and Recovery (CalRecycle) Organic Materials Management
www.calrecycle.ca.gov/Organics

Composting Criteria for Animal Manure:
www.pewhealth.org/uploadedFiles/PHG/Content_Level_Pages/Issue_Briefs/PSP_PEW-PSP-Composting-Manure-Narrative-v4-2.pdf