Troubleshooting

1. **Strong Odors** – Not enough air/excess nitrogen.
   Solution: Turn compost weekly and add a carbon source (i.e., Browns).
2. **Wet & not composting** – Not enough Nitrogen.
   Solution: Add dry grass/straw and turn the compost weekly.
3. **Dry & not composting** – Not enough water.
   Solution: Add water and/or Greens.
4. **Ammonia smell** – Too much nitrogen.
   Solution: Add dry leaves/sawdust and turn compost bi-weekly.
5. **Temperature of pile too high** – Excess nitrogen.
   Solution: Turn the pile, lightly water, add Browns.
6. **Temperature of pile too low** – Pile too small.
   Solution: Make pile bigger or insulate the sides. Transition to indoor composting.
7. **Pile attracts rodents** – Inappropriate materials.
   Solution: Avoid items like dairy products, meats, bones, oils, or fats.
8. **Attracts slugs and millipedes** – This is not an issue and actually normal for composting.

Internet Resources

Search the web to find more:

www.composting101.com

www.epa.gov/compost

www.composting.org

www.stopwaste.org

Printed Material

Compost Facility Guide Manual - By John Paul and Deiter Geesing

The Real Dirt – The Complete Guide to Backyard, Balcony, and Apartment Composting – By Mark Cullen and Lorraine

California Polytechnic State University
CAFES Center For Sustainability

www.cfs.calpoly.edu

COMPOSTING

Turning Spoils Into Soils

What is Composting?

Composting is a controlled process of thorough decomposition of organic material. Naturally occurring soil organisms recycle nitrogen, calcium, carbon, and other plant essential nutrients and hormones as they convert the material into humus. Humus is a final product of organic matter decomposition that is the extremely stable and is highly resistant to further breakdown. The end result of composting will be a very dark, earthy, crumbly material that contains living organisms and nutrients perfect for plants. Composting is a way to speed up Mother Nature's decomposition process. It is a convenient, mutually beneficial, and inexpensive way to handle your organic waste and help the environment. Composting reduces the volume of garbage that requires disposal. It can save money for you and your community by diverting organic waste from landfills and producing a natural source of soil fertility. It enriches soils by adding essential plant nutrients in an available form, balances soil pH, suppresses plant diseases, eliminates the need for chemical fertilizers, improves soil structure, allows for prevalent root growth, and increases nutrient/water retention. Compost can play a vital role in promoting more sustainable agriculture and healthier communities.

The Composting Process

1. **Choosing an Area** - A 3' to 5' cubic box is ideal to allow for proper aeration. Place the pile or box in an easily accessible location on grass or soil and not in direct sunlight. It may be a good idea to drill holes near the bottom for greater aeration - compost critters need oxygen just like we do!

2. **Starting the Pile (Aerobic Process)** - Start the bottom by layering coarse woody stalks to allow for proper oxygen flow. Continue by layering the pile with 4" of brown and green materials alternately. Adding soil to the pile is essential because it contains microorganisms that work to decompose organic material; 1/2" layer of soil on top of the pile will also keep the surface from drying out. Maintain a 3:1 **Brown**:**Green** ratio. This optimizes the composting process and prevents odors resulting from too much nitrogen. Adding smaller pieces of materials increases surface area and speeds decomposition, (i.e., shredded newspaper vs. whole sheets).

3. **Watering your Pile** - The pile should be as moist as a wrung sponge, especially when starting your pile. Regulate the moisture level by adding dry straw or sawdust to a soggy pile, or water and fresh cut grass to a

dry pile.

4. **Temperature** – Ideal composting temperatures allow the pile to bake from 120 – 160 °F during the initial "hot phase" when there is the largest temperature change.

5. **Turning your Pile** - Intervals of two to four times a month is sufficient depending on the weather and climate of your area. This turning interval will allow for the pile to be ready in 3-6 months.

6. **Harvesting** - Compost is ready when it smells earthy, looks dark, feels crumbly, and the original ingredients are no longer visible.

7. To avoid fly, rodent, and other pest issues do NOT include meats, dairy products, or large quantities of cooked food. Oils, charcoal, diseased plants, and mature weeds (gone to seed) should also be avoided.

GREENS

- Eggshells
- Bananas
- Grass Clippings
- Coffee Grounds
- Tea Bags
- Vegetable and Fruit Scraps
- Plant Trimmings

BROWNS

- Paper Bags
- Twigs
- Bark
- Sawdust
- Newspaper
- Cardboard

Other Types of Compost:

1) **Outdoor Piles** - As the described in the aerobic process here
2) **Vermicomposting** (**Worms**) - Inputs are more specific, uses worms to breakdown food scraps into arguably the highest quality compost.
3) **Anaerobic digestion** - Including Bokashi method, a quick home-style system that limits oxygen. Even meats can be composted this way.
4) **Cold Composting** or **Passive Composting** – allowing piles to decompose without turning. Less maintenance, but longer time period to reach finished product.

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