

Starting a Backyard Compost System



Compost Happens Agenda

- Why Compost? The Many Benefits
- How is it done?
 - Building Your Pile
 - What goes in?
 - What stays out?
- Troubleshooting tips
- Harvesting and Use
- Tips and tricks from the CompostGal
- Q&A

The Many Benefits of Composting and Compost

- **Helps build healthy soil**
 - Retains water in the soil longer, reduces the need to water more often
 - Reduces plant stress from fluctuating water and temperature levels
 - Releases nutrients slowly to feed your plants longer
 - Helps to aerate clay soils and clump together sandy soils
 - Balances the pH of your soil
 - Unlocks nutrients like Nitrogen (N) & Phosphorus (P) and makes it available to plants (*Humic acid*)
 - Improves yields for flowers and fruit

The Many Benefits of Composting and Compost

- **Diverts waste from the landfill**
 - Organic wastes in landfill decompose without oxygen leading to an increase of GHG
 - You can close the loop on most of your organic wastes by composting at home
- **Reduces erosion**
 - The addition of compost to soils make it so water can pass easily (esp. clay soils), so soil stays in place and does not run off

The Many Benefits of Composting and Compost

- **Reduces GHG**
 - **Methane**-from anaerobic decomposition in the landfill
 - **Carbon Monoxide**-from transportation of organic
- **Saves \$\$**
 - The best compost is the one you make at home
 - You'll be recycling materials already on hand in your home/garden

So....how is it done?

- **Compost Recipe**
 - **Browns** + **Greens** + **Air** + **Water** + **Time** = **COMPOST**
 - 50/50 by visual inspection (30:1 C:N ratio)
 - **Water**: damp as a wrung out sponge
 - **Air**: aerate, **NOT** turn
 - **Time**: depending on the composter..."Compost Happens"

Bin Setup

- Location, location:
 - Site your bin in a shady locale if possible
- Make sure your bin has a base or make it rodent-resistant if you are incorporating food scraps
- No-fuss/yard waste only piles. No need for a bin as long as you aren't adding

Browns and Greens

(what goes in)

Carbon source-generally dry, brittle materials

- Dried leaves
- Straw
- Wood ashes (in small amounts)
- Wood (branches, sawdust, chipped wood)
- Newspaper
- Cardboard
- Pine needles
- Dryer lint

Nitrogen source-generally fresh and wet materials

- Grass clippings from untreated lawns
- Tea leaves/coffee grounds
- Egg shells
- Food scraps
- Weeds without seeds
- Herbivore manure
 - Cow, horse, guinea pig, rabbit and chicken
- Hair/fur/feathers

What stays out!!

- Treated wood (pallets, furniture, etc)
- Charcoal
- Feces from cats, dogs and tropical birds
- Meat, dairy, grains and cooked food
- Oil or grease
- Noxious weeds: Vinca, Ivy, Bermuda grass, Oxalis, blackberry
- Any toxic substance
- Glossy paper
- Diseased plants

Pile building...by the Steps

- Start with a brown (branches and large wood pieces make a great start)
- Layer greens in equal amounts
- Add water and aerate through each layer
- Finish with a brown (you should always see a brown when you open the bin)
- CHOP, MIX and MAINTAIN

Hot pile vs. cold pile

Hot piles are 3'x3'x3' or larger

- Thermophillic (104-170°) bacteria run the show for the first 1-3 days of building a hot pile
- Pathogens and weed seeds can generally be killed off in a hot pile
- Faster decomposition

Cold piles are any size

- Mesophillic (40-110 °) bacteria are your day-to-day in this pile
- You get lots of worms
- Less turning of the pile
- More effective at preventing “dampening off” disease for seedlings

Who else is invited to the party?

Fungi

- They perform the primary decomposition to the pile
- Saprophytic-living on decayed vegetable matter

Actinomycetes

- “Half-breed”: part bacteria, part fungus
- Produce grey, cobweb growth that gives compost its’ earthy smell

Who else is invited to the party?

Soldier Fly Larvae



Who else is invited to the party?

Worms

Sow bugs

- Have a mucus film that binds soil aggregates together
- Leave their wonderful castings behind to enrich your compost

Got issues? Troubleshooting

- **Smelly?** → Too wet or wrong “greens” in pile
- **Fruit flies?** → Too wet or unburied “greens”
- **Nothing is happening** → Decomposition has stalled
→ Balance of brown vs greens may be off or needs more moisture
- **Bugs!!!** → Bugs are an important part of the composting process
- **Unwanted guests?** → Remove offending materials, secure lids and under bin with mesh, bungee cords or bricks

Harvesting and your compost

- How do you know it's ready?
- What do I do with it?
 - Remove from compost bin and sift (optional)
 - Store in a dry place until ready to use
 - **Top dress:** to prep for new plantings
 - 2 inches laid on top of soil and raked in
 - **Side dress:** added around existing plants during the growing period, especially at flowering and fruiting times
 - **Backfill:** 1 part compost to 3-5 parts soil
 - Great when planting trees and shrubs
 - **Dig in:** 2-4 inches of compost mixed into top 6-12 inches of soil
 - This treatment works great after double digging
 - **Sheet Mulching:** 1-2 inches between cardboard and mulch

Tips and tricks

- “Bank” your browns in the Fall
 - Collect leaves or so
- Magic of chicken manure
- Compost Thermometers

Happy Composting!!!

