Composting 101: How to Go from Garbage to Gold

What is Composting?

Composting is the process of turning food waste into organic fertilizer. This helps divert methane emissions that food waste would typically emit when sent to a landfill from decomposing without oxygen as well as all the emissions associated with transporting and processing the wasted food. So by composting you're helping the planet and your plants!

Step 1: Assess your situation

Before getting started on your composting journey take one week to analyze your food waste and capacity to do certain compost methods. Throughout the week keep the following questions in mind:

- How much food do I throw away? Is my garbage can filled mostly with compostable foods or do I produce less than 5 pounds?
- Do I have a use for compost? Do I have plants or a garden?
- How much space do I have?
- How much time and effort am I willing to spend composting?
- What is my budget for this?

Your Compost Bin - With this information look at the following table to determine which method of composting method works best for you:

Method	Cost	Time	Food Waste	Resources
Drop-off Areas	**None**	**Low:** Transportation Time	**Small amount** of food waste so you can transport Low space needed	https://www.letsspeakgreen.org/composting

Trash Can Bin 	**Low**	**Medium:** Need to drill holes in the trash can for aeration and need to maintain by turning	**Medium to Large** amount dependent on trash can size	https://pallensmith.com/2014/02/27/trash-can-compost-bin/
Wire Bin 	**Low** - DIY **High** - Buy	**Medium:** Need to maintain by turning with a rake- unlike trash can that you can roll around	**Medium to Large** amount dependent on wire bin size	DIY here Buy here
Block or Brick or Stone Bin 	**Medium-** DIY	**High:** Need to build but afterward, maintenance is the same as wire bin or trash can bin	**Medium to Large** amount dependent on size	https://www.youtube.com/watch?v=JtPqiqy1QSg
Tumbling or Rotating Bins 	**Medium-High**	**Low:** Rotate weekly	**All Dependent on size**	https://nymag.com/strategist/article/best-compost-tumblers.html
Plastic Stationary Bin 	**Medium-High**	**Medium:** Need to turn weekly with rake	**Medium to Large** amount dependent on size	https://www.nbcnews.com/shopping/eco-friendly/best-compost-bins-n1188966
Vermicomposting 	**Medium-** DIY **High-** Buy	**Medium:** Ensuring worms are alive and well and managing	**Small to Medium** amount dependent on size Low space needed	DIY here Basics here Buy here

Compostable Food Waste

While deciding how much you need to compost keep in mind what you can and can't compost.

YES	NO
• Fruit and vegetable kitchen scraps • Coffee grounds and tea bags • Green garden cuttings • Fresh leaves and flowers • Grass clippings • Dried leaves • Sawdust and woodchips (make sure these are from untreated wood) • Shredded black and white newspaper • Egg cartons • Cardboard • Dead, dried-out plants (disease-free) • Tree bark • Straw • Peanut shells	• Meats • Seafood • Greasy food • Fats or oils • Dairy products • Highly processed food • Plastic

Step 2: Set up your Compost Bin or System

The Carbon/Nitrogen Ratio

When you compost you have carbon-rich brown material and nitrogen-rich green material. You need to have the correct ratio to ensure that it doesn't compost too slow (too many browns) or it doesn't get stinky (too many greens)! The ideal ratio for browns to greens is 2:1.

Browns Carbon-Rich:

- Dried leaves
- Sawdust and woodchips (make sure these are from untreated wood)
- Shredded black and white newspaper
- Egg cartons

- Cardboard
- Dead, dried-out plants (disease-free)
- Tree bark
- Straw
- Peanut shells

Greens Nitrogen-Rich:

- Fruit and vegetable kitchen scraps
- Coffee grounds and tea bags
- Green garden cuttings
- Fresh leaves and flowers
- Grass clippings

Adding Material to Your Compost

So that your composting happens as fast as possible, shred or chop your food scraps prior to putting them in your bin so they can decompose easily. For example, crush egg shells and chop up veggie scraps, fruit cores and peels.

Make sure to always rip any paper, cardboard, or egg cartons you add so it evenly distributes the carbon-rich materials.

Everytime you add your green nitrogen-rich materials or food scraps you also must add browns to maintain that 2:1 ratio.

Turning Your Compost and Maintenance

Once every week or bi-weekly turn the pile so the new content ends up in the middle or warm area of your compost pile. This allows your pile to be “aerated” where oxygen enters the pile allowing aerobic bacteria to break down all the material to make fertilizer.

If your pile gets dry, you can water it with a hose so 50% moisture is maintained for the composting microbes.

Step 3: Troubleshooting

Problem	Cause	Solution
Compost pile contains earwigs, slugs and/or other insects	Pile is composting correctly	Insects are a good sign of a productive compost pile!
Compost pile is attracting raccoons, dogs, flies or other pests	- Amount or type of greens incorrect - Exposed food scraps - Compost bin needs repair	- Avoid meats, bones, oils - Place food scraps in center of pile and cover completely with browns - Keep the bin well maintained
Compost isn't heating up	- If it seems damp and sweet-smelling, it may be a lack of nitrogen - Not enough moisture - Not enough oxygen - Pile may be too small (less than a cubic yard)	- Mix in food scraps or other materials high in nitrogen - Add water - Turn or fluff the pile - Build the pile up to 3' x 3' x 3'
Temperature levels off	- More food scraps needed - Composting is finished	- Add more greens - If it looks dark and crumbly and smells earthy, it is time to remove compost and let it cure. Begin a new pile.
Matted, under composed layers of leaves or food scraps	Compaction, poor aeration	Break up layers with garden fork, or shred them, them re-layer or turn the pile Avoid adding thick layers of bulking materials
Large, undecomposed materials	Size and composition of materials	Screen out undecomposed items, shred and reuse in new pile Reduce particle size by shredding
Compost pile has a bad odor like a mixture of rancid butter, vinegar and rotten eggs	- Not enough oxygen, compaction - Not enough oxygen, too	- Turn the pile and shake materials to loosen and aerate

	wet	- Turn the pile and add coarse dry materials such as leaves, wood shavings, sawdust, straw or shredded newspaper to soak up excess moisture
Compost has a bad odor like ammonia	Pile may have too much nitrogen	Add materials high in carbon such as leaves, wood shavings, sawdust, straw or shredded newspaper Mix in to aerate

References and Other Resources to Check Out

How to Compost:

https://foodprint.org/eating-sustainably/composting-and-food-waste/compost-101/

https://www.lakemt.gov/solidwaste/PDF/Composting1.pdf

https://www.youtube.com/watch?v=bMq_hfhXnBc

Compost Drop-Off Sites in Miami

https://www.letsspeakgreen.org/composting

Plastic Stationary Bin

https://www.nbcnews.com/shopping/eco-friendly/best-compost-bins-n1188966

Tumbling or Rotating Bins

https://www.gardeners.com/how-to/video-dual-batch-composter/8667.html

Wire Bin

https://www.youtube.com/watch?v=IZUiLPBxytk

https://unclejimswormfarm.com/how-make-chicken-wire-composter/

Trash Can Bin

https://pallensmith.com/2014/02/27/trash-can-compost-bin/

https://www.thespruce.com/how-to-make-trash-can-compost-2539476

Block or Brick or Stone Bin

https://www.youtube.com/watch?v=JtPqiqy1QSg