

Fall Garden Cleanup and Backyard Compost Workshop

Fall 2020



This workshop is brought to you by Boulder County's Resource Conservation Division and taught by Master Composter, Melanie Nehls Burow, along with Master Gardeners of CSU's Extension Office.



Why Compost?

- Most efficient way to reduce food & yard waste
- Sustainably “closes the loop”, returning nutrients to the soil
- Mitigates climate change
 - *Organics in anaerobic environment of landfill → methane production*
- Reduces water pollution
 - *Landfills leak toxic leachate*
- Finished compost = gardeners’ “black gold”
 - *Reduces the need for chemical fertilizers*
 - *Suppresses plant diseases and pests*
 - *Promotes higher yield*
 - *Improves water retention in soil & reduces erosion*

Essential Habits for a Successful Backyard Compost Bin

Following these basic rules will go a long way in maintaining an effective compost pile. Most common problems – such as wildlife infestations, unpleasant odors, and slow rates of decomposition – can be avoided or remedied by adhering to these guidelines. For more information, visit www.BoulderCountyRecycles.org.

- 1) **Keep a 50/50 ratio of “browns” and “greens” by volume in your pile at all times.** If you add a handful of kitchen scraps (which are “greens”) to your pile, you’ll need to toss in a handful of “browns” (like dried leaves). This means you need to keep a stash of browns handy at all times.
- 2) **All materials going into your bin must be cut down to 1”-2” in size.** This is the ideal size – smaller isn’t better! There are some exceptions to this rule; for instance, coffee grounds are small particles, but are great for your bin in moderation.
- 3) **Feed your pile a balanced diet of greens.** In other words, no single food item should be the bulk of your bin’s “greens”. Usually this isn’t an issue, as the average household produces a variety of food scraps. This mostly applies to greens. While a variety of browns is great (dried leaves, dried grass clippings, twigs/sticks, etc.), dried leaves can be used as all your browns.
- 4) **Don’t “dump and run”.** Dumping your kitchen scraps on the top of your compost pile and walking away is the worst thing you can do, generating odors and attracting wildlife. Instead, when you head outside with your kitchen scraps, do the following:
 - a. Remove the lid of your bin
 - b. Dig a little pit in your compost pile
 - c. Empty your kitchen scraps into the pit
 - d. Add an equal volume of browns
 - e. Cover up the material you’ve just added
 - f. Put the lid back on
- 5) **Keep your pile damp as a wrung-out sponge, and turn often.**
 - a. Turning should be done once a week, or once a month *at the very least*. When you head out to turn your pile, bring the garden hose over, stick it in the pile, and soak it for a minute or so.
 - b. Then mix, mix, mix with a pitchfork.
 - c. Grab a handful of stuff from your bin. Squeeze. When you let go, it should stick to your hand a bit. If water runs down your arm, it’s too damp (but will dry out in no time!). If nothing sticks to your hand, it needs to be watered and mixed again until it is damp as a wrung-out sponge.

How to Winterize your Compost Pile

At the end of the gardening season (no later than November), you should winterize your compost pile in one of these 3 ways...

1) Put the lid on your compost pile and walk away.

Don't add any additional materials (brown or green). Don't water, don't turn it.

In spring, pull pile contents apart. The old pile is now all browns. Layer it in with fresh greens to start your pile in the spring, as early as March.

2) Pull the pile out of the bin and use it all together as partly-finished compost.

- a. Use as a mulch around well-established plants/shrubs

OR

- b. After garden beds are empty of dead plant material, spread partially-finished compost out on top of your empty garden beds. Let it sit there all winter. In early spring (mid-March), dig this weathered compost material 3-6" into the soil in a garden bed you will plant with warm weather crops (tomatoes, basil, etc).

This weathered material will finish breaking down in the soil and turn into finished compost in 1-2 months. Now finished compost is dug well into the soil right where you need it, near roots.

Plant in this bed in mid-May.

3) Hand sort out the finished compost from the partially-finished compost.

- a. Use the partially finished compost and follow step 2 above.

OR

- b. Store the finished compost until next spring under a tarp or in an old trash can or compost bin to reduce moisture loss.

Dig finished compost into garden beds 3-6" prior to planting anytime in the spring. Best to put it into the soil right before you are going to plant. No need to put finished compost into garden beds in the fall unless you are doing fall planting.

Note on Composting Year-Round:

You can compost year-round in an outdoor backyard compost pile, but you must do all the same turning and watering of your pile over the winter. Most of us don't do this (hose bib is off, etc.). If you want to compost year-round, place compost pile in a spot that gets sun in the winter. Most compost piles in Colorado are winterized by October/November and then "restarted" again in March/April.



Prepare Now for Next Year's Composting

Browns make up ½ of the compost pile but are generally only available in the fall. So, now is the time to stock up for next year's compost pile.

- 1) **Rake up all the deciduous tree leaves in your yard** (best "brown" to use!)
 - a. Store them in a black trash bag, an old compost bin, or trash can to use for next year. Store them right next to your compost bin.
 - b. Try to tie up the black trash bags so the leaves don't blow around your yard.
 - c. Don't worry if they get wet and slimy. Once a brown, always a brown.
Any deciduous tree leaf is fine to use. Dead pine needles are NOT the same as deciduous tree leaves. A few mixed in with your leaves are fine, but they should NOT be the majority of what you rake up.

- 2) **If you don't have any leaves in your yard, go to the free fall leaf drop offs** that many communities have or go to the yard waste drop off at Western Disposal's Transfer station. Stop anyone coming in with prebagged leaves, transfer them to your car, and take them home. Store these next to your compost pile so they are ready to use next year.
Follow 1a, b, and c above.

- 3) **Store any dead plant materials from your garden as other brown materials** to use in the spring. Do not save any diseased plant material or anything that died unnaturally early. Will have to break up to 1-2" size.
Do not need to do this if you have enough leaves saved up for next year's compost piles.

Note on saving Browns: Have at least 3 black trash bags full of browns saved by end of fall for each compost pile you plan to make next year. They can sit for more than year as well. You can never have too many browns!

If you don't already have a bin, get your compost bin now and easily store until next spring!

Get the #1 recommended compost bin for Boulder County at today's workshop! Soil Saver Bins are only **\$55**, cash or check only.



How Will You Compost This Winter?

- 1) **Collect your greens (food scraps) to save for next year's compost pile.** Use a Ziploc bag or an older plastic container and store your kitchen scraps in the freezer during the winter.
Remember to chop organics into 1-2" pieces BEFORE you put them in the freezer. Next spring, you'll have 3 bags of greens ready to use when you start your pile up again.
- 2) **Use your commercial compost collection.**
 - a. If you don't already have it, ask your trash hauler about adding compost collection to your trash service.
 - b. Commercial Compost Collection is great for things you can't compost easily in your back yard, or for things only meant to be composted in commercial operations (like zero waste compostable plates, cups, etc.).
 - c. This service works well for larger items (think 6' dead tomato plants) that would be a lot of work to chop up or unwieldy in your backyard pile.
- 3) **Worm compost your food scraps by starting a worm bin.** A worm bin is a great complement to an outdoor backyard compost pile and can be used year-round.
 - a. Do Indoors, in a location 55-75 degrees. Can't be in an unheated basement or garage in winter.
 - b. Must use Red Wiggler worms
 - c. Use shredded newspaper or leaves for browns. Keep damp as a wrung out sponge.
 - d. Put in your 1-2" food scraps (coffee grounds, egg shells, fruit & veggie scraps). Nothing too pungent. Better to underfeed the worms than overfeed.
 - e. No need to turn or water.



nyc compost project tip sheet

get all the dirt at nyc.gov/wasteless/compostproject

Funded and managed by NYC Department of Sanitation's Bureau of Waste Prevention, Reuse & Recycling.

The NYC Compost Project provides compost education and outreach through host sites in all five boroughs. Educational programs include: compost-related workshops and classes, on-site composting demonstrations, compost helpline, and composting technical assistance.



Eisenia fetida: Red Wiggler Worm

There are over seven thousand species of earthworms; however, one species in particular is well suited for indoor composting: *Eisenia fetida*. *Eisenia fetida* (also called red wiggler worm, tiger worm, manure worm, brandling worm, and a range of other names) are an important macrorganism decomposer in both indoor and outdoor composting systems.

red wiggler worm basics

Red wiggler worms live in the upper layer of soil where they feed on microorganisms and decaying organic matter. However, unlike other species of earthworms, *Eisenia fetida* don't tunnel deeply or make permanent burrows. They reproduce quickly, thrive in habitats with high organic matter, can tolerate a wide range of temperatures and moisture conditions, and can live close to one another. An indoor worm bin mimics all of these natural conditions, which makes *Eisenia fetida* ideal for indoor composting.

fun worm facts

- Worms do not have eyes; they have cells in the front part of their bodies that can detect light.
- Worms do not have teeth; they grind up food by using the grit in their gizzard.
- Worms living in an indoor worm bin (*Eisenia fetida*) can eat half their body weight in food scraps every day!
- Worms have both male and female reproductive organs but still need another worm to reproduce.
- *Eisenia fetida* have 5 "heart-like" organs called *aortic arches*.
- *Eisenia fetida* start reproducing when they are about 2 months old.
- One mature worm can produce about 100 worms in a year.
- Worms live up to one year.
- Worms "breathe" through their skin, so it is very important to keep them and their environment moist, but not sopping wet as they can drown if it's too wet.
- If you hold a worm long enough, you will likely see a yellow secretion on your hand, called coelomic fluid.
- Coelomic fluid is thought to be a defense mechanism against predators as the liquid can smell bad. This bad smell is thought to be the basis of their name *fetida* or *foetida* which is the Latin scientific term used for many foul-smelling species.
- Coelomic fluid is also a way for worms to remoisten their bodies when conditions are dry.



nyc compost project tip sheet

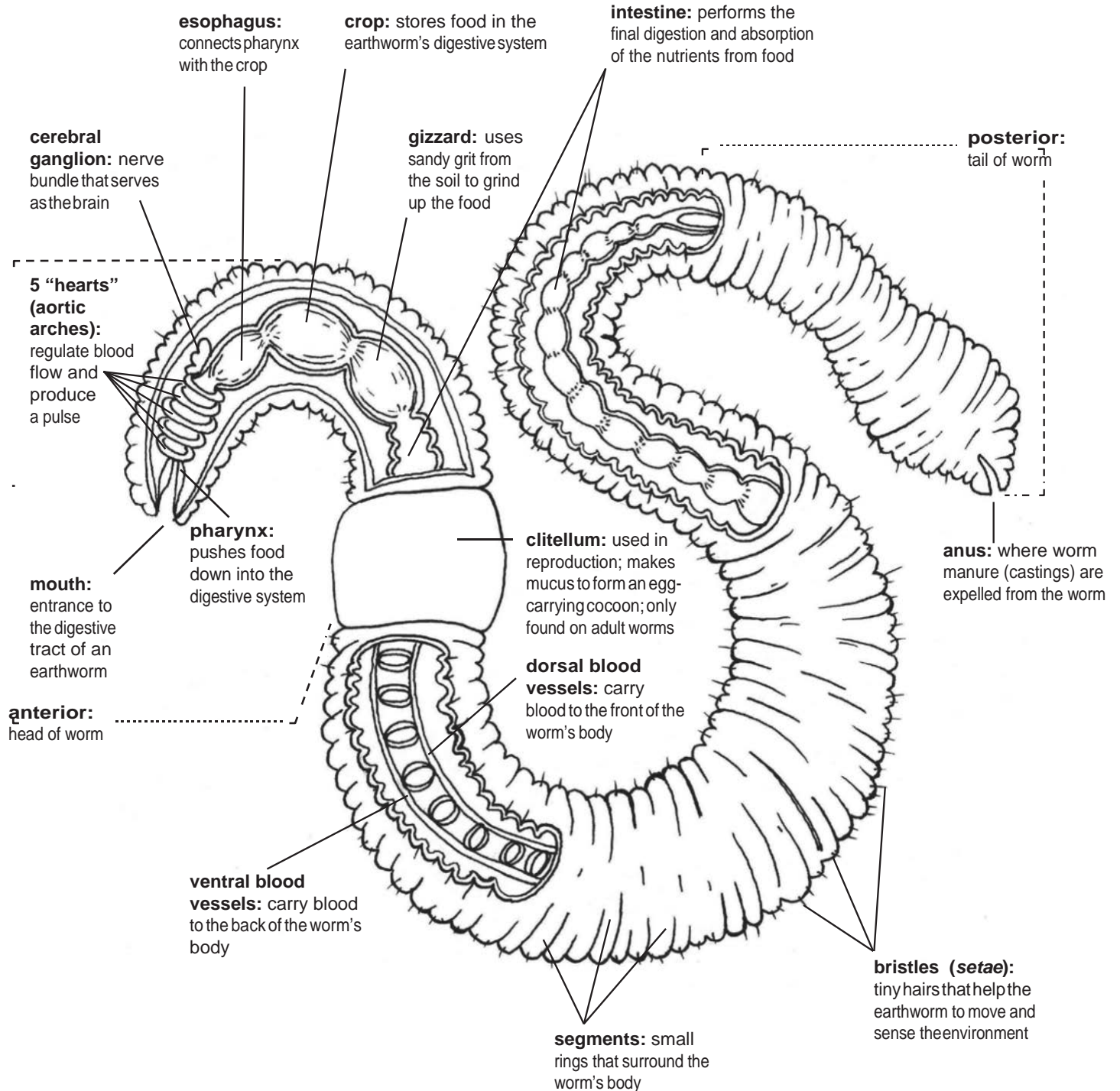
get all the dirt at nyc.gov/wasteless/compostproject

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color a wiggly worm!

Color in the *Eisenia fetida* (red worm) image below to help you to identify the various parts of the worm.



Composting Websites

Overall Composting

www.bouldercountyrecycles.org

Boulder County's website for waste reduction. Has links to all kinds of info about composting, including where to buy a bin, upcoming workshops, etc.

www.ecocycle.org

Has a step-by-step guide on how to get started composting. Boulder-based zero waste non-profit organization.

www.ext.colostate.edu

CSU Extension office website for Boulder County. Contains all types of resources, including fact sheets on soil, gardening, composting, etc.

www.compostguide.com

A complete guide to composting.

www.epa.gov/composting

EPA's website on composting.

www.planetnatural.com

A guide for the home gardener.

www.biocycle.net

Biocycle is the Journal of Composting & Organics Recycling...an industry standard.

www.gardeners.com

Great site to see all the different kinds of composting systems. Search for compost bins.

www.compostingcouncil.org

US Composting Council

Worm Composting

www.wormwoman.com

Website of Mary Appelhof, who wrote "Worms Eat My Garbage" Under construction. Check back for more.

www.redwormcomposting.com

Good overall about worm composting.

www.compost.css.cornell.edu/worms/basics.html

Good website about setting up a worm bin for a school group.