

Dig In!

Hands on Composting Workshop

Presented by Abby Weglarz
Hosted by T.C. Community Garden
At the Historic Barns Park
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Why Compost?

If you have found yourself at a composting class or reading about composting, you probably already have some reasons to compost.

- What are your reasons for composting?
- My TOP 5 reasons for composting:
 - **Reduced waste** that goes to a landfill
 - Helps me find **interesting people** to meet. Most of the best people will turn a pile with you.
 - **Cycles nutrients** I have added to my soil (money and time spent!) *back* to my soil
 - Makes a fun microecosystem I get to manage. **Better than a game app.**
 - Turning a compost pile is **good exercise** and **stress relief**... but not necessary!

Composting is indeed cool.

- Material we could compost make up **60% of our trash**. Composting is a wonderful way to not waste valuable resources!
- Plants can get up to **96% of their nutrients from the air, the sun, and water**. Much of the air and water they access is underground, through their roots, which is why soil structure (which is improved by adding organic matter like compost) is *so important!* Soil with “good structure” will hold little pockets of air and water.
- When you compost garden waste, you are **cycling the nutrients you already have on site**.
- When you compost kitchen scraps and other “imported” materials, you are **adding nutrients to the soil that weren't there before!**

Com·post

/ˈkäm ,pōst/

noun: compost

Decayed organic material used as a plant fertilizer. A mixture of decayed organic material with loam and/or other ingredients, used as a growing medium.

Compost is the stuff we get

verb: compost

Make (vegetable matter or manure) into compost.

Compost is the thing we do

Compost is not the same thing as dirt or soil.

***Compost is organic matter, dirt and soil is mostly sand, clay, and silt.
There may be some dirt or soil in compost, and some compost in dirt or soil.***

Wait, what is composting?

Composting can look like a lot of different things.

Just like gardening, composting is a relationship with our natural environment.

Composting is an expression of our individual creativity. There is no “right” or “wrong” way to compost, so long as things break down over time (and believe me, they will) and no one gets hurt.

You may want to record stats on pH, H₂O content, temperature, weights and descriptions of materials added, and dates of turning. This would definitely help you hone in on making amazing compost. But measuring and special tools aren't necessary to make great compost. ***Nothing works like work.***

Most often in life, we spend our energy and attention building and preserving things.

Composting is speeding up the process of breaking things down!

What fun.

Ingredients and Omissions

➤ You must combine these 5 ingredients to make compost:

- **Carbon** or “Browns”
 - Straw, Hay, Dried Grass
 - Shredded Newspaper & Cardboard
 - Sawdust
 - Dried Leaves
- **Nitrogen** or “Greens”
 - Kitchen Scraps
 - “Expired” Fruits & Veggies
 - Coffee grounds
 - Safe manure (chicken & rabbit)
- **Air**
- **Water**
- **Microorganisms** (available in organic garden soil and most nitrogen sources)

➤ What to probably leave out:

- Most manure
- Greasy animal fats
- Anything unnatural (plastic, styrofoam)
- Super hard organic materials (large chunks of wood, ceramic, rocks, glass, metal)
- Dirt or soil in quantity
- Too much of any one thing

➤ What goes in your pile should depend on your comfort, knowledge, and how much monitoring and maintenance you want to invest.

Start with things you are certain of and work your way to more materials.

Question: Why can't you just add fluffy organic matter, like sawdust, straw, leaves, or shredded paper directly into the soil to improve "soil structure"?

Answer: Actually, you can. You just need to balance those heavy carbon sources with the right amount of nitrogen. Otherwise, those carbon sources will break down by taking up the nitrogen in the soil that plants need! You *can* bury the right mix of carbon and nitrogen into the soil, water as you go, and wait for it to break down before planting. This is essentially composting below ground. *Composting above ground is probably easier, doesn't put gardening "on hold", and you can easily tell when it is done!*

Personalize your Pile

- What ingredients will you use?
 - Identify what goes in your trash that could be composted, and design your compost system around that.
- Keep in mind, there may be a better use for some of your organic “waste”
 - Cardboard can be used as weed-block
 - Wood chips and straw make great mulch
- Does your pile need to be pest or pet proof?
- Have you considered vermicompost?

➤ Structural Design

- **Shape options**
 - Square
 - Round
 - 1, 2, or 3 bins
- **Container Materials**
 - Wood (not treated with chemicals!)
 - Free-Form organic “container”
 - Chicken Wire & Posts
 - Plastic Tub
 - Cardboard boxes
- **Time Span of Pile Building**
 - You can gather and build your pile in the span of a day
 - You can add to your pile as you find or accumulate materials

Location and Size

- Out of direct sun
- Access to but not uncontrollable water
- Doesn't offend neighbors (sight or smell)
- Close and easy for the users to get to
- Enough space to turn the pile
- Room to expand as needed
- 3 foot by 3 foot by 3 foot minimum size
- Can be larger, as long as it is manageable!
- Worm bins can be smaller
- From gallon size worm bins to municipal scale, anything is possible with compost.

Design your compost system by thinking about location, size, materials, structure, and ingredients.

Compost Directions or “The Rules”

- 25-30 parts Carbon to 1 part Nitrogen
 - Too much carbon slows a pile down
 - Too much nitrogen can stink
- 3'x3'x3' size
- Add only “manageable” sized material:
 - No longer than 6”
 - No wider than your thumb
- Mix it up. When you add things to the pile, you want the nitrogen to touch the carbon and the water and the air to get in everywhere.
 - Starting with “manageable” sized materials makes mixing easier!
- Turn the pile (if you can and want to)
 - Turning the pile will speed things up!
 - If you want your compost to get hot (120-170 degrees fahrenheit), turning it will really help! When compost gets hot, it kills weed seeds and pathogens.
 - Can't turn your pile? No problem, it will just take longer to break down.
- At some point, you will need to stop adding new material to your compost pile to let it “cure” for a month or more.

Ways to use organic matter that is “too big” to compost:

- Use to make a retaining wall
- Use at the bottom of piles to aerate
- Create a “slow pile”
- Bury it, try some Hugelkultur. Always add nitrogen to balance carbon!

Understanding Carbon to Nitrogen Ratios

- Microorganisms that make compost happen need more carbon than nitrogen, about 25-30 C for every 1 N
- No material is all Carbon or all Nitrogen!
 - Carbon Heavy: Sawdust is 300:1; Straw is 75:1
 - Nitrogen Heavy: Manure is 15:1; Food waste is 20:1
- You don't need to get the C:N Ratio perfect right off the bat; just know the signs of too much of either and how to remedy it!
- Remember that the C:N ratio is only *one element* of successful composting! It is not the whole picture.

How to Fix Problems

- **Most compost problems can be fixed by:**
 - Changing the **size** of the pile
 - Adding **water** or letting the pile dry out
 - Mixing **air** into the pile
 - Adding more **carbon** or **nitrogen** to the pile

When is your Compost Done?

Your compost is probably done when:

- You can no longer recognize the materials you used to build the pile
 - It doesn't stink, it smells earthy
 - It resembles fluffy, dark soil
- If parts of your compost pile seem ready, but there are still bigger chunks, try screening your compost. The size of the screen will depend on where you want to use your compost, and what screens you have available that you don't mind trashing.
 - Add the chunks to your new pile! The pieces that aren't fully broken down are covered in the microbes and even larger living life that will start breaking down newly added material right away!

Using your Compost

When is compost done?

- You can no longer recognize what you used to build the pile
- It doesn't stink, it smells earthy
- It resembles fluffy, dark soil

What to use compost for:

- Mix it into soil before planting seeds or transplanting
- Side-dress plants throughout the growing season
- Put a layer underneath mulch to put garden beds to rest over winter
- Fine sift it and use to start seeds

When buying bagged compost, make sure it is OMRI listed. This means it is actually organic. Some garden products say they are “organic,” but are not certified by anyone! This is the only kind of bagged compost allowed at the TC Community Garden

The most important part...

You need to actually do it!

Don't get too hung up on knowing everything before you get started.

It is an ongoing process, not something you think about once and are done with.

Check your pile often to stop any problems you have from getting out of hand.