



CROWN CITY COMPOSTERS

Where learning about food waste reduction is a pile of fun!

WELCOME ABOARD!

If you are reading this, you are probably curious about how you can reduce your food waste through composting. We are so glad you are here! This guide will help you understand what food waste is and how you can begin your own composting journey.

YOU CAN DO THIS! AND WE CAN HELP!

Have you thought about composting but are not sure where to start? We have been there ourselves, so you are not alone! With this guide, you'll find that composting can be fun and easy. And sure, while composting is a science, it is NOT rocket science. We are here to help you personalize a strategy that will reduce your food waste and recycle your food scraps, all while making free fertilizer for your yard or garden! Let's dig in together and begin to help our home, community, health, and environment!

A BRIEF HISTORY CROWN CITY COMPOSTERS

A project of Seven Valleys Health Coalition, Crown City Composters aims to educate and promote food waste reduction and at-home composting within our community. If you hang out with Crown City Composters, you will learn tips and tricks to reduce your amount of food scraps going into the municipal stream, meet local composters, gain access to educational videos, and more! This project is funded and supported by the New York State Department of Environmental Conservation (NYSDEC), Health Foundation of Western and Central New York (HFWCNY), and the City of Cortland. For more info on Crown City Composters, you can find us at www.sevenvalleyshealth.org/crowncitycomposters or on Facebook!



DID YOU KNOW?

For over twenty years, Seven Valleys Health Coalition has had a mission to cultivate local solutions and collaborative actions that advance the health and well-being of the Cortland community.

Don't forget to like us on
FACEBOOK
to get the latest updates!
@CROWNCITYCOMPOSTERS

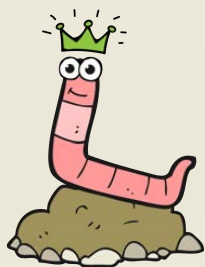


FOOD WASTE

WHAT IS IT AND WHY DO I WANT TO REDUCE IT?

According to the EPA, the term "food waste" or "wasted food" describes food that was not used for its intended purpose and is managed in a variety of ways, such as through a donation to feed people, creation of animal feed, disposal through composting or anaerobic digestion, or by sending to landfills or combustion facilities. It is estimated that one-third of all food produced for human consumption worldwide ends up in a landfill. To help reduce the impact that wasted food has on our

wallets, the environment, and our local food system, the EPA has created the Food Recovery Hierarchy to guide community members through the best practices of reducing the amount of food one throws in the trash bin. In short, we should all begin to view wasted food as wasted opportunity. The good news is that this growing problem of misused resources in our modern society is one that can be fixed, but it all starts at home and starts with YOU!



FOOD WASTE CAN BE...

- Vegetable and fruit peels, rinds, and ends.
- Uneaten leftovers.
- Expired, spoiled, or stale food items.
- Food items past "use by" dates.
- Any discarded food item that is or once was consumable.



ACTION STEP: A PERSONAL HIERARCHY

How can you create your own personal food recovery hierarchy? See Page 10 for a printable worksheet to help personalize your own food waste reduction plan!



WHAT IS COMPOST?

GIVE ME THE DIRT.

Compost is the final result of the composting process and is decomposed organic material that can be added to the soil to help restore the soil's nutrients. Composting is a natural recycling process that turns organic waste, often destined for a landfill, into a life-giving and usable product. During this process, organic material -- those carbon-based compounds that are found in our environment, such as plants, animals, and items like food scraps -- are broken down by naturally occurring microorganisms to produce humus, a nutrient-dense soil conditioner that looks like soil.

WHY COMPOST?

GIVE IT TO ME STRAIGHT.

Composting is an easy and accessible way to make a positive impact on your local environment. By establishing a compost system at home, you can reduce your contribution to greenhouse gas emissions, lower your waste disposal cost, slow the filling of landfills with useful organic materials, and support the ecological system found around your home. With the tips and tricks that we will share in this guide, deciding what composting system you'd like to use will be the hardest part of the whole process, we promise!

THE PROCESS.

BECAUSE...SCIENCE!

At the foundation of creating compost is a natural decomposition and recycling process driven by microorganisms, such as bacteria, fungi, and insects. These microorganisms are found in our natural environment and "eat" the items placed in your compost pile. Through this microbial digestion, food and yard waste is turned into a useable soil-like byproduct. You may notice that your compost pile feels warm or is radiating heat! This is because the microorganisms in the compost pile are creating energy (heat) as they break large particles down into smaller ones. A happy compost pile is one with temperatures warm enough to sustain microbial life but not too hot to impede activity -- between 60F and 160F.

TOP REASONS TO START COMPOSTING!

- Great way to recycle at home.
- Offsets greenhouse gases.
- Builds soil structure.
- Saves you money.
- Slows erosion rates.
- Promotes microbial diversity and increases garden health.
- Holds water and reduces water use.
- Helps to eliminate unwanted toxins in the soil.

Americans throw out

7 LBS

of materials per person every day. That's **2,555 pounds** of materials per person every year!



TYPES OF COMPOSTING BINS

SO MANY KINDS, SO LITTLE TIME!

Composting bins can be a designated pile in your back yard, a DIY bin, or prefabricated container. Below you will find the pros and cons of the most popular at-home composting bin styles. You should pick a bin that works for your space and the amount of waste you create while considering your neighbors and potential pests.

PASSIVE OR STATIC BINS

Passive composting, often called static composting, is an accessible way to compost for most homes and is characterized by putting compostable items into a heap or container and turning as needed. Static bins are often low cost to create and require minimal attention, but produce compost more slowly.



THE PILE

Pros:

- No-cost
- Unlimited volume
- Easy turnability
- Durable

Cons:

- Not critter- or weather-proof
- Can take up larger amount of space
- Can become unruly



WIRE BINS

Pros:

- Low cost and efficient
- Customizable size, shape, and look
- Durable

Cons:

- Not critter- or weather-proof
- Slower compost process
- Can be hard to turn



STATIC BINS

Pros:

- Space-friendly
- Discrete
- Critter- and weather-proof

Cons:

- Cost
- Slower compost process
- Hard to turn
- Limited volume



BLOCK / BRICK BINS

Pros:

- Low cost
- Customizable size, shape, and look
- Durable

Cons:

- May not be critter- or weather-proof
- May have a slower compost process
- Can be hard to turn



PALLET BINS

Pros:

- Low cost
- Discrete
- Self-select size of bin
- Easy to assemble

Cons:

- Not critter- or weather-proof
- Takes up larger amount of space
- Pallets need to be replaced often

ACTIVE OR DYNAMIC BINS

Active composting, also known as dynamic or hot composting, may require a higher investment of money, space, and time (effort), but can produce compost at a faster rate due to the activity level of the composting process.



TUMBLER BINS

Pros:

- Easy to access and turn
- Creates compost at a faster rate
- Critter- and weather-proof

Cons:

- Cost
- Effort (needs regular tumbling)
- Limited volume



3-BIN SYSTEM

Pros:

- Supports the natural stages of composting
- Creates compost at a faster rate
- Customizable size, shape, and look

Cons:

- Cost to set up
- Effort (needs regular attention)
- Limited volume
- May not be critter- or weather-proof



VERMICOMPOSTING BINS

Pros:

- Clean and kid-friendly
- Creates compost at a faster rate
- Is done indoors (apartment friendly!)

Cons:

- Cost of setup/worm purchase
- Limited volume

VERMICOMPOSTING VERMI...WHAT?!

Vermicomposting, or worm composting, is another method of composting using worms to breakdown food waste and other compostable material. Vermicomposting creates some of the highest quality compost as the digestion process of the worms create a nutritionally dense by-product that is perfect for gardening or increasing the nutrients of any soil. While it would seem that any type of earthworm could be used for this type of composting, Red Wigglers are the best choice as they have a faster digestion rate than your usual "garden" earthworm.

Did you know that vermicomposting is one of the few types of composting that you can do indoors? If managed properly, there should not be any odors coming from the bin. This key element makes it an accessible way for anyone to reduce their food waste! For more info on beginning vermicomposting, please visit: www.epa.gov/recycle/how-create-and-maintain-indoor-worm-composting-bin



KEEPING YOUR COMPOST HAPPY!

WHAT GOES INTO MY COMPOST BIN OR PILE?

Feedstocks, or the items you put into your composting bin or pile, can come from a variety of places. Items that contain higher levels of nitrogen are often called "greens" and help to provide food and energy to the microorganisms in your compost pile. "Browns", or items that are carbon-heavy, help to provide structure and airflow to your compost. Maintaining the correct balance of both nitrogen and carbon is important for good compost production.

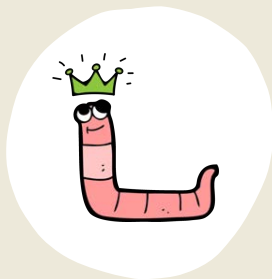
With your "greens" and "browns" mingling happily together, the next item to keep an eye out for is the moisture level. You can achieve this through the "squeeze" test where you take a handful of compost and squeeze it. Properly watered compost is moist enough to clump together but not so wet that you can squeeze water from it.

"GREENS"

- Veggie and fruit waste (peels, scraps, etc.)
- Coffee grounds and tea bags
- Egg shells
- Outdated dry goods
- Leftovers (no meat or dairy!)

"BROWNS"

- Leaves
- Dried grass clippings
- Wood chips and sticks
- Uncoated paper and cardboard
- Drier lint



PRO TIP: STOCKPILE BROWNS!

To help keep the balance of carbon to nitrogen, you should add a shovelful of "browns" per a handful of "greens". To help with this, you can keep a pile of wood chips, leaves, shredded cardboard, egg carton containers, etc., stockpiled in a waterproof container beside your compost or in a garage.



UNWELCOMED ADDITIONS WELCOME TO THE NAUGHTY LIST!

There are a handful of items that should not go into a composting bin, as these products can promote unwanted microbes and critters. These items include:

- Meat
- Fat or oil
- Citrus skins
- Walnuts
- Charcoal or fire ash
- Dairy
- Pet waste
- Fish or fish waste
- Treated lumber
- Diseased plants

HOW DO I KNOW MY COMPOST IS READY? IS IT DONE YET?

The initial breakdown in your compost pile takes place rather quickly (a few months) but needs to finish breaking down, or cure, for 6 months or more after the pile cools down. These signs can help to know when your compost has reached maturity and is ready to harvest:

- Your compost pile has shrunk to half its original size.
- Most of the products that were put into the bin are unrecognizable.
- It smells pleasantly earthy, not odorous.
- It looks dark and crumbly, like topsoil.
- No longer hot to the touch.

WHAT DO I DO WITH MY FINISHED COMPOST? JUST SPREAD IT AROUND?

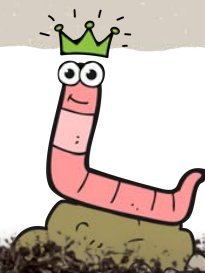
When your compost is ready, here are a few ideas of how you can use it:

- Mulching – place around trees or bushes.
- Topsoil amendment – add to areas that need extra soil.
- Gardening – add to your garden or flower beds to increase soil nutrients.
- Container addition – add it to container plants or window boxes.
- Lawncare – use it in areas of your lawn that need a little TLC.



ACTION STEP: MATURITY TEST

To reliably test your compost maturity, you can also do a "germination test" by placing a shovelful of your compost into a pot and planting a few seeds in the composted product. If your seeds germinate, your compost is ready to use! If not, consider letting your compost mature for a longer period of time, allowing the bacterial content to equalize.



COMPOSTING OVERVIEW: EASY AS PIE!

1. PICK
A BIN

2. SET UP
YOUR BIN

3. COLLECT
FEEDSTOCKS

4. ACTIVELY
MAKE
COMPOST

5. WATER
AND TURN

6. WAIT FOR
MATURITY

7. USE YOUR
COMPOST

8. REPEAT!

COMMON PROBLEMS: UH-OHS! + OH-NOS!

MY COMPOST IS TAKING A LONG TIME TO BREAKDOWN!

Check your moisture level. A dry compost pile will take a longer time to breakdown. The microbes in the pile are alive and need water, like us!

MY COMPOST IS STINKY!

The tell-tale smell of ammonia means there is not enough air or browns in your compost pile. Add browns and turn or stir your pile. Make sure you aren't placing any "no-nos" in your compost like meat or oil.

MY COMPOST PILE ISN'T WARM.

Try adding more greens and turning the pile. Nitrogen is an energy source that bacteria will devour, heating up their environment and your compost pile.

MY COMPOST PILE IS VERY WET!

Add browns--like leaves, newspaper, or uncoated shredded cardboard--and turn or stir your pile.

MY COMPOST PILE SEEMS DENSE AND MATTED!

Add browns--like wood chips and small sticks--and turn or stir your pile to add oxygen to the pile.

MY COMPOST PILE SEEMS TO BE ATTRACTING CRITTERS!

Make sure greens are covered every time you add them to the pile to reduce scent of food or waste items.



ACTION STEP: TURNING YOUR PILE

The act of turning or stirring your pile helps add pockets of oxygen and evenly distribute greens and browns that may have clumped together so they break down. Turning your pile a once a month can help to keep the microbes in your compost pile happy. This action also helps to avoid the many composting pitfalls mentioned above. You can rotate your pile (from bottom to top) using a pitchfork, shovel, turning crank, or even a large stick!

RESOURCES

LOCAL COMPOSTING HELP:

Crown City Composters

www.sevenvalleyshealth.org/crowncitycomposters
www.facebook.com/crowncitycomposters

Cortland County Cooperative Extension

<http://cortland.cce.cornell.edu/gardening/compost-resources>

Cortland County Soil and Water Conservation District

www.cortlandswcd.org

COMPOSTING ACTIVITIES FOR KIDS:

Do the Rot Thing. A composting curriculum for teachers and parents.

www.cvsamd.org/uploads/6/1/2/6/6126179/do_the_rot_thing_cvsamd1.pdf

Make a Mini Composter! Plastic bottle composting activity instruction.

www.pbs.org/parents/crafts-and-experiments/make-a-composter

Decomposer Food Chain. Learn about the bugs and bacteria in your compost pile!

www.earthmatter.org/wp-content/uploads/2016/08/tip-sheet-decomposer-id-cpts-id-f.pdf

This guide was created by Seven Valleys Health Coalition with insight from Cortland County Soil and Water Conservation District.



CROWN CITY COMPOSTERS

is a project of



seven valleys
HEALTH
COALITION



MY FOOD WASTE HIERARCHY



ORIGINAL EPA HIERARCHY

