

BLACK GOLD

COMPOSTING WORKSHOP SERIES

Backyard Composting



Wire Compost



**Trash Can/ Bin
Composter**



Geobin



Pallet Compost System

May 19, 2020

MEET YOUR PRESENTERS



Lindsey Grimm,
Morrow County Recycling /
Keep Morrow County Beautiful
Director



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OSU Extension – Agriculture/Natural
Resource Educator / Master Gardener
Instructor

10 REASONS TO COMPOST

- 1) Improves plant growth
- 2) Reduces soil erosion
- 3) Allows soil to retain more water
- 4) Enhances soil fertility
- 5) Reduces waste landfilled & burned
- 6) Benefits soil structure
- 7) Allows soil to retain more nutrients
- 8) Stores carbon in soil to protect the climate
- 9) Builds community resilience & power
- 10) Is something everyone can do!



IISR INSTITUTE FOR
Local Self-Reliance

Learn how: ilsr.org/composting



COMPOST = BLACK GOLD

A dark, crumbly, earthy-smelling material produced by the natural decomposition of organic materials.



- compost is a living soil amendment
It is NOT SOIL
- bacteria, fungi, and microbes feed on organic matter
- Microbes use carbon and nitrogen to grow and reproduce
- several cycles of organisms are needed for decomposition.

WHAT ARE MY OPTIONS?

Backyard Composting

METHODS /TYPES

- Open Compost Pile
- Compost Bin style
- Tumblers
- Layer Composting
- Trench Composting
- Your design



OPEN COMPOST PILE OR HEAP



Compost Pile



Sheet or Lasagna Compost



**Most common, most familiar
composting system**

“Open” type of compost bin solution

COMPOST BIN STYLES



Wire Compost



**Trash Can/ Bin
Composter**



Geobin



Pallet Compost System

“Open” type of compost bin solution

Great option for composting leaves, yard clippings, and other large organic matter

While it is possible to compost food scraps, the openness of this compost system may attract more rodents and pests to your pile

TUMBLER



“In-Vessel” type of compost bin solution

Tumbling compost systems use the force of manually turning the compost bin to easily mix the contents of the composter to aid in faster decomposition.

These systems are enclosed which helps minimize the chances for animals to invade your composting material.

LAYER SYSTEM



“In-Vessel” type of compost bin solution

Layered style compost system

This bin lacks a base which makes it more susceptible to unwanted animals, rodents or pests

This bin heats material up quickly and is better for processing larger quantities of material

If you overload the composter without regularly removing finished compost, you may compromise the integrity of the plastic walls and doors

TRENCH COMPOSTING

Trench Composting

A Simple Method To
Add Organic Matter
To Your Garden

www.ourstoneycres.com



POCKET COMPOSTING

LOCATION

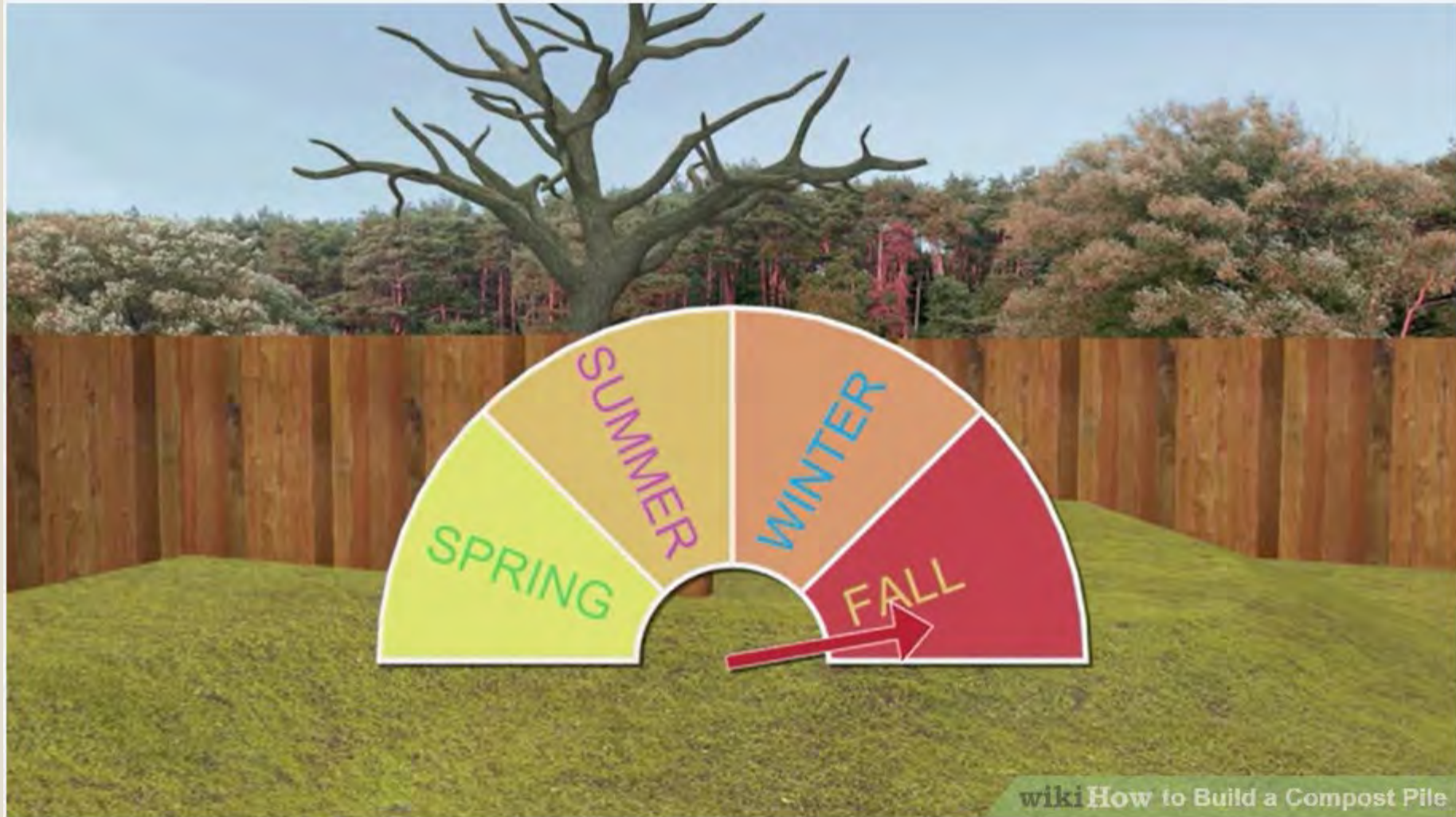
Convenience is key so that you can easily use the compost.

Part
1

Setting Up Your Compost Pile Foundation



WHEN TO BUILD A COMPOST PILE

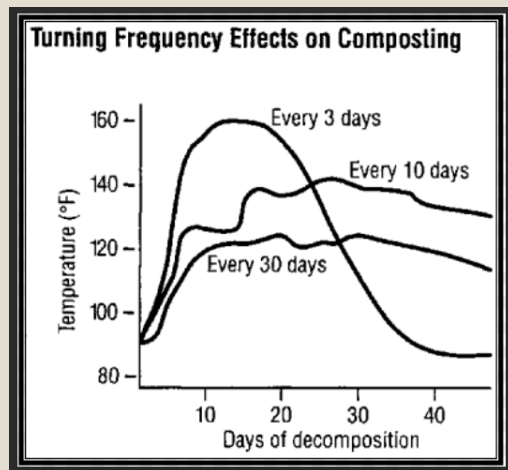


**HOW MUCH
EFFORT/LABOR
DO I HAVE TO PUT INTO
COMPOSTING IN MY
BACK YARD?**

COLD VS HOT COMPOSTING

■ Passive Composting OR COLD Composting

- Low effort
- Little attention to watering or optimizing conditions
- Slower decomposing (may take up to a year or more)
- Weed seeds may persist



■ Active Composting OR HOT Composting

- More attention
- Pile regularly turned
- Adequate volume needed
1 cubic yard
- Moisture maintenance
- Quicker decomposing (3-5 month)
- Pathogens reduced
- Weed seeds killed



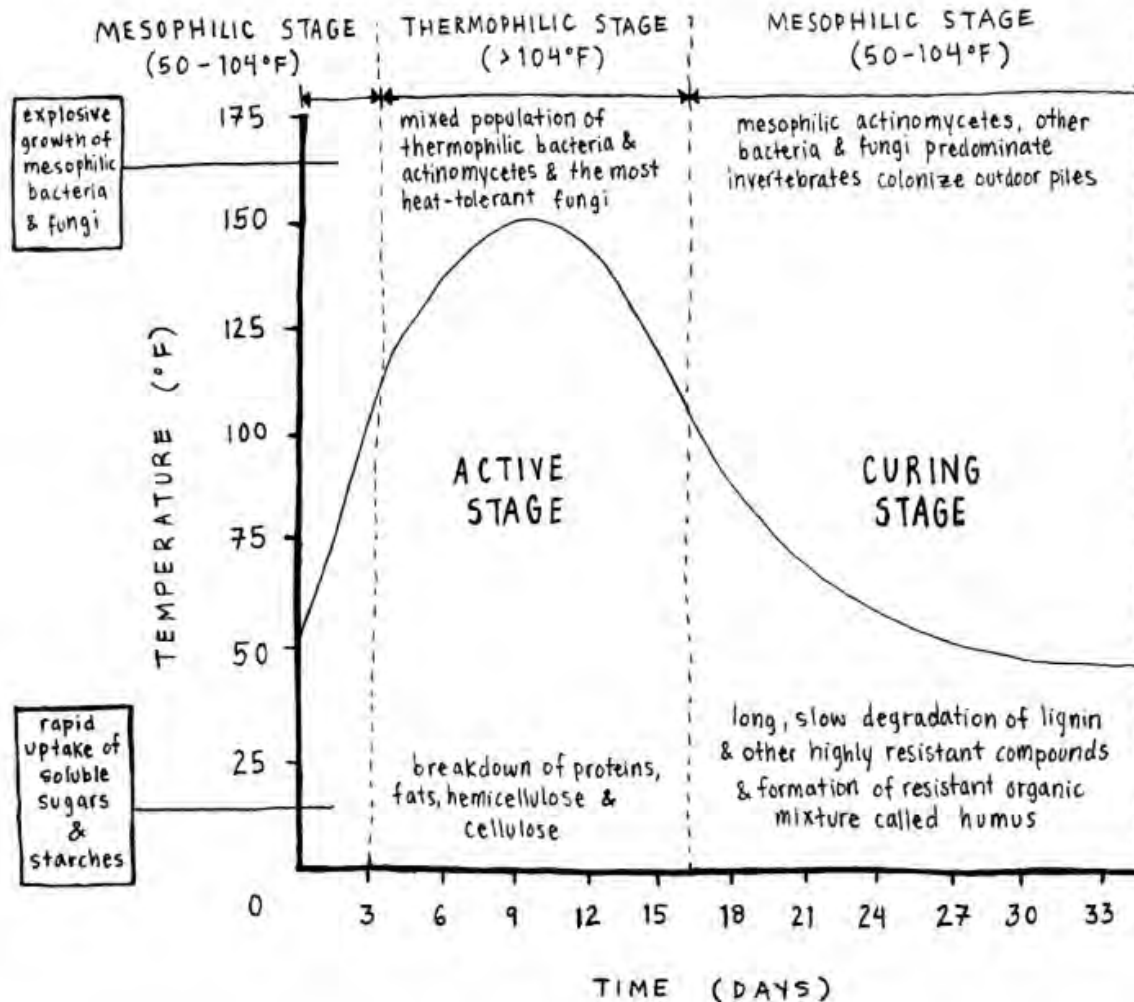
FUNDAMENTALS OF BACKYARD COMPOSTING

FUNDAMENTALS

- Six key factors that break down materials into compost:
 1. Heat
 2. Nutrient Mix
 3. Oxygen
 4. Moisture
 5. Time
 6. Decomposers

HEAT

THE PHASES OF HOT COMPOSTING



131 degrees

NUTRIENT MIX

BROWN VS GREEN

- The main ingredients to compost is:
Carbon and Nitrogen (C or N)
- Carbon material = BROWN
- Nitrogen material = GREEN

CARBON RICH MATERIAL (BROWN)

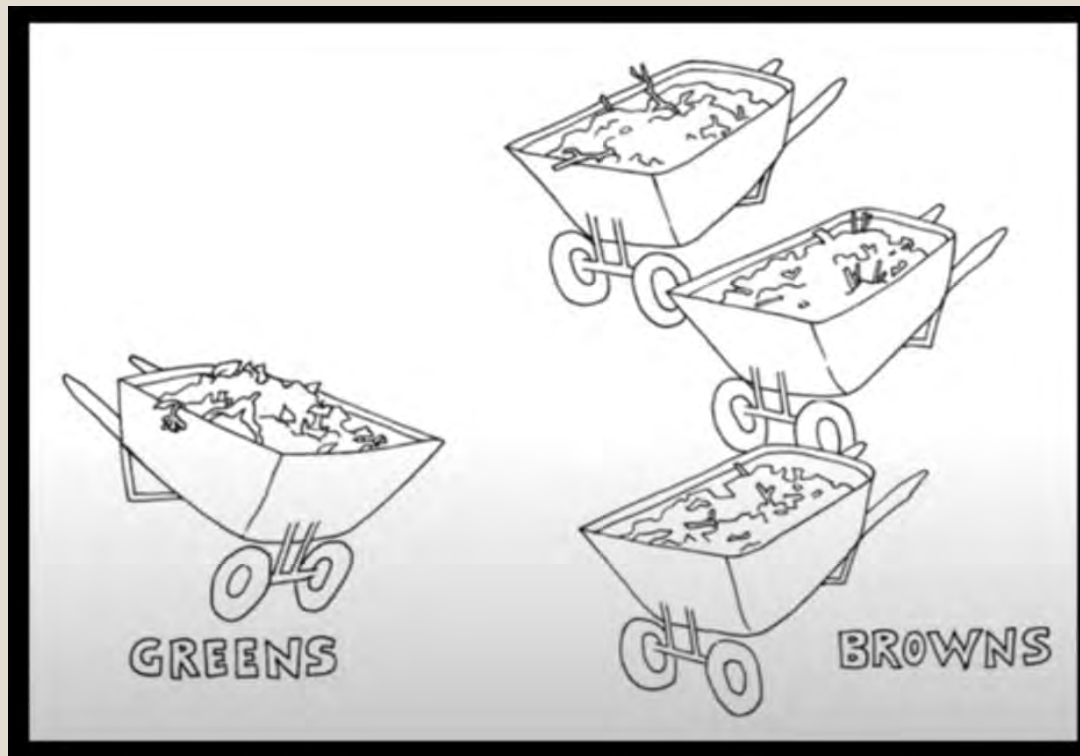
- Dead leaves and plant trimmings
- Straw
- Newspaper / shredded paper/tissues/napkins
- Wood / sawdust
- Coconut fiber
- Carbon rich material is slow-burning food
- Too much brown, carbon rich material will slow down the composting process significantly, because the nitrogen rich green materials are necessary to speed things up.

NITROGEN RICH MATERIAL (GREEN)

- Grass clippings
- Kitchen scraps
- Coffee grounds
- Manure
- Too much green, nitrogen rich material and you will get a sticky, wet mess!

RULE OF THUMB

The optimum mixture goal is **30: 1** Carbon to Nitrogen ratio



2-3 parts **BROWN** (Carbon) to 1 part **GREEN** Nitrogen
(by volume)

YES! ✓

COMPOST ...

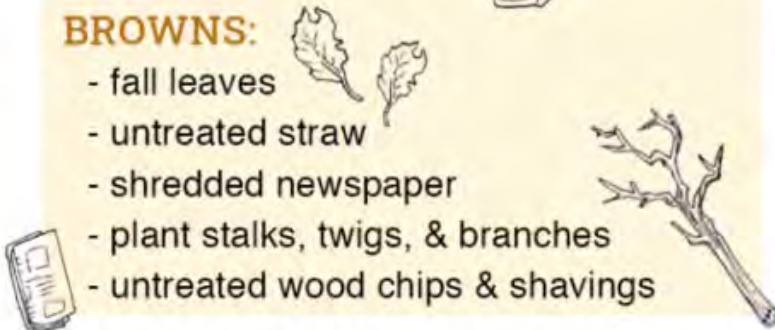
GREENS:

- fresh vegetable & fruit scraps
- egg shells (crushed!)
- cut flowers & green plants
- most garden & grass clippings
- coffee grounds & filters
- tea bags (no staples!)



BROWNS:

- fall leaves
- untreated straw
- shredded newspaper
- plant stalks, twigs, & branches
- untreated wood chips & shavings

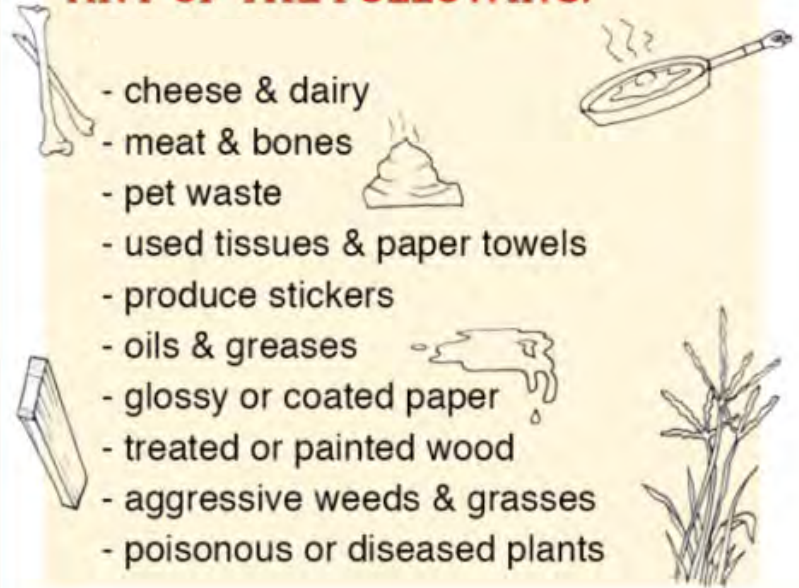


NO! X

DO NOT COMPOST ...

ANY OF THE FOLLOWING:

- cheese & dairy
- meat & bones
- pet waste
- used tissues & paper towels
- produce stickers
- oils & greases
- glossy or coated paper
- treated or painted wood
- aggressive weeds & grasses
- poisonous or diseased plants



CAUTION: remove Plastic/ plastic stickers / plastic or wax coated paper and metals that are on product packaging

OXYGEN



AIR

Just like us,
decomposer microbes
"breathe."

Composting is an
aerobic, or oxygen-
requiring process.

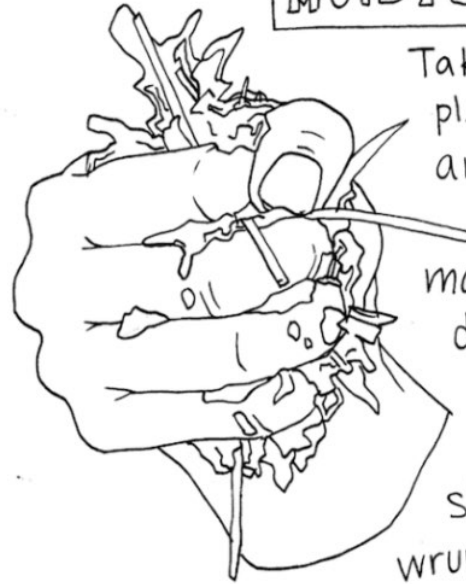


MOISTURE

WATER

Decomposer microbes require a layer of water on organic particles to move around and metabolize dissolved nutrients

THE "HAND SQUEEZE" MOISTURE TEST



Take handfuls from different places in your compost pile and give them a squeeze!

At the ideal moisture level, a few drops of water should appear between your knuckles and it should feel like a wrung-out sponge.

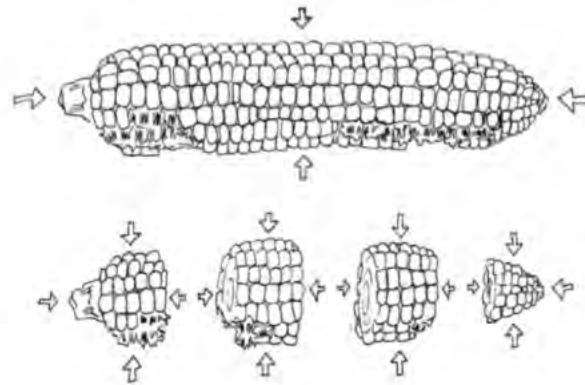
TIME

TIME

- The bigger the particle the longer it will take to break down
SIZE DOES MATTER!

Size Matters!

- Chop as needed
- Aim for 2 to 6 inches
- Increases surface area



On average, in 8 to 12 weeks you will want to harvest the oldest compost from your composting bin.

DECOMPOSERS

MEET NATURE'S FBI (DECOMPOSERS)



Fungi

These decomposers break down organic waste into compost.



Bacteria



Invertebrates

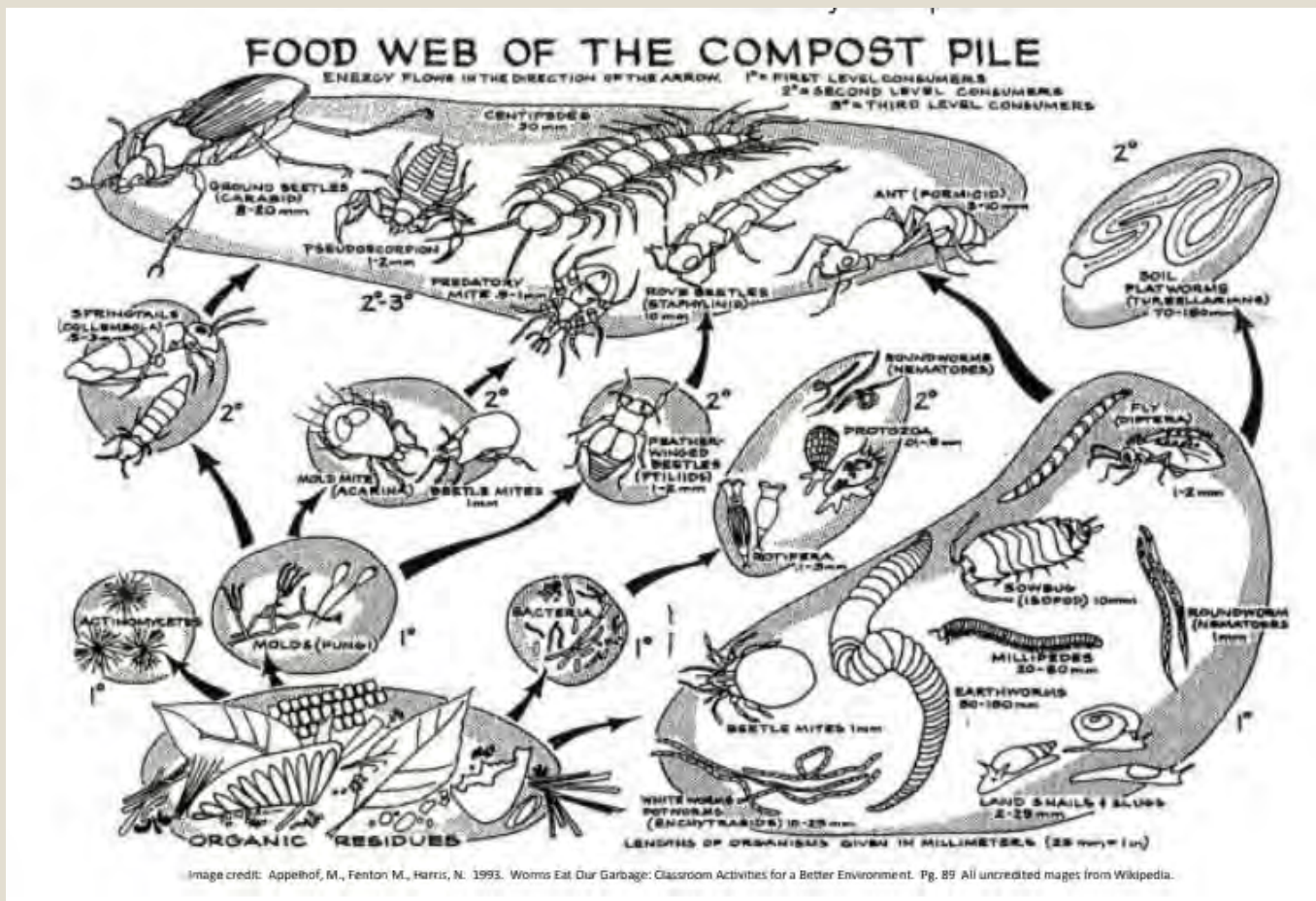


Image credit: Appelhof, M., Fenton M., Harris, N. 1993. Worms Eat Our Garbage: Classroom Activities for a Better Environment. Pg. 89 All uncredited images from Wikipedia.

COMPOST MANAGEMENT



Follow these simple steps (compost pile):

1. Make sure to ALWAYS bury any greens that are added. This will ensure there is no odor to your compost pile.
2. When possible add a ¼-inch wire and a floor (hardware cloth) to your compost pile to help reduce pesky critters being attracted to your pile.
3. Obtain the proper mix of browns (carbon) and greens (nitrogen)
4. Turnover or fluff the pile often to get oxygen into the pile
5. Keep the pile moist but not too wet
6. Make sure your pile reaches the correct temperature to help produce the quality of compost you are looking for in the desired time.

TROUBLESHOOTING

Compost Troubleshooting

Symptom	Problem	Solution
Compost has bad odor	Too much nitrogen or not enough air	Add high carbon material and turn pile
Center of pile is dry	Not enough water	Moisten and turn pile
Pile is damp and warm only in middle	Pile is too small	Collect more material and mix into new pile
Pile is damp but will still not heat up	Lack of nitrogen	Mix in nitrogen source like grass clippings

WINTERIZING YOUR COMPOST PILE

Like us, the microorganisms in your compost pile need winter shelter.



Do not turn your pile in winter.

Simply layer your food scraps (once a week) and leaves until the spring thaw.

Add a blanket or protective layer.

LOCAL OPTIONS TO COMPOST OUTSIDE OF YOUR HOME.



Mount Gilead Yard Waste Facility
273 South Street
Mount Gilead, Ohio 43338
419-946-9101

HOURS OF OPERATION
Mon-Fri 9am-3pm, Sat 8am-10am
(weather permitting)

Yard Waste

Morrow County offers local residents to utilize the Yard Waste Compost Facility located next to the Mt. Gilead Water Treatment Plant located near the back entrance of the fairgrounds.

The facility accommodates all yard waste: leaves, grass clippings, trees, shrubs and branches.

Self-service and no machines on site

No commercial use allowed.

NO TRASH! No food scraps, barn or animal waste, or household items are to be dropped off.

Violators will be prosecuted.

Check each spring for free mulch!



4838 Warrensburg Rd. Delaware, Ohio 43015

phone: 740-369-1000 email: pfo@pricefarms.org

- **Encouraging residential food scrap composting** at our site.
- **Small fee associated with drop-off.**
The cost is \$2.00 per 5 gallon bucket or equivalent (buckets may also be purchased for \$2). The charge is for processing.
- **Your items will be sorted on site, violators will be turned away.**
We have to make sure the program is not bringing in trash or non-compostable material, so we have to sort through everything that is brought in.
- **Accepting any sort of food scraps including fruits, vegetables. and even meat.**
- **Avoid any type of trash including the compostable bags, plates, silverware etc.**
Even though many of those products compost great, it is very difficult to differentiate compostable material from plastic.

March 18, 2020

COMPOSTING 101

COMPOSTING MADE EASY AND FUN! 4 PM



April 21, 2020



Black Gold:

*Composting Series
2020*

All workshops will start
at 6:00 PM

Cost is **FREE**

May 19, 2020

HOW TO SET UP BACKYARD COMPOSTING



July 7, 2020



Aug 18, 2020



Participants who attend at least two of the six workshops, will be entered in a drawing to receive a compost bin (various types to choose from). Make plans to attend the last workshop on Aug 18, 2020 as you must be present to win.



Lindsey Grimm

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Keep Morrow County Beautiful
419-947-6400**

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Carri Jagger-Murphy

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Agriculture & Natural Resources
Master Gardener Program**

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Follow us both on Facebook!

RESOURCE INFORMATION



**A simple guide to
Composting
in your backyard**



Recycle your yard trimmings and food scraps into a nutrient-rich compost.

Compost your kitchen scraps using an unlikely eating machine—worms!

Reduce food waste, plus save money and resources.

Put an end to the hassles and costs of bagging your grass clippings.

ohioline.ag.ohio-state.edu -- your Link to Information, News, and Education



FactSheet **Extension**

TAKE OUR SURVEY



Thank you for helping us continue to obtain funding in the future!