

Composting 101

BLACK GOLD

COMPOSTING WORKSHOP SERIES



March 18, 2020

MEET YOUR PRESENTERS



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Instructor



Recycling

**Litter
Prevention**

**Education/
Outreach**

Beautification

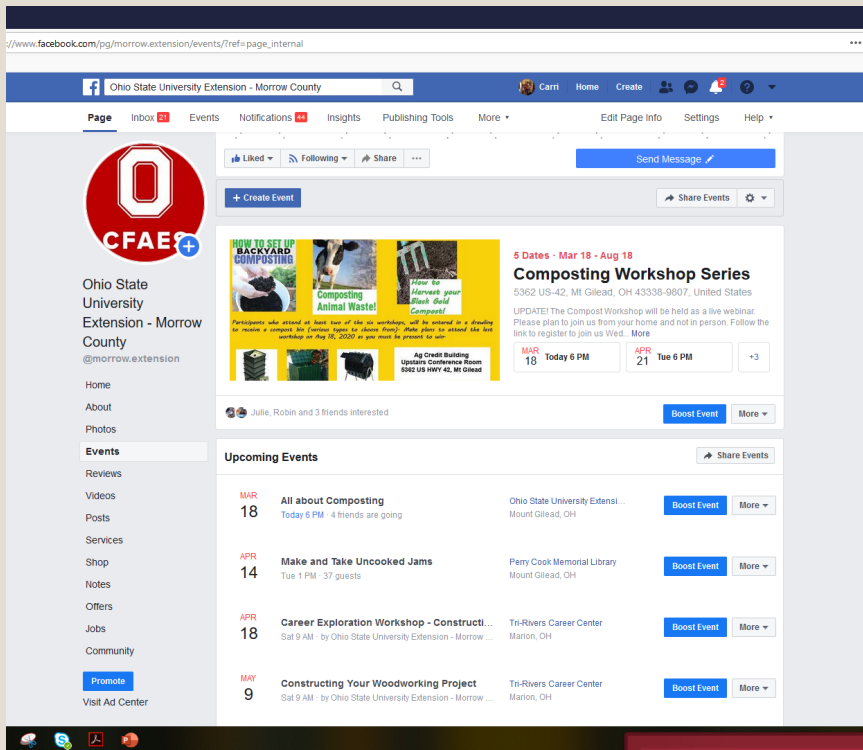
Information

Residents

Government

Industry/ Business

Youth / Schools



OSU Extension provides practical advice, scientifically based information, and realistic down-to-earth solutions to better lives, businesses and communities throughout Ohio.

morrow.osu.edu

Scarlet and Gray Newsletter

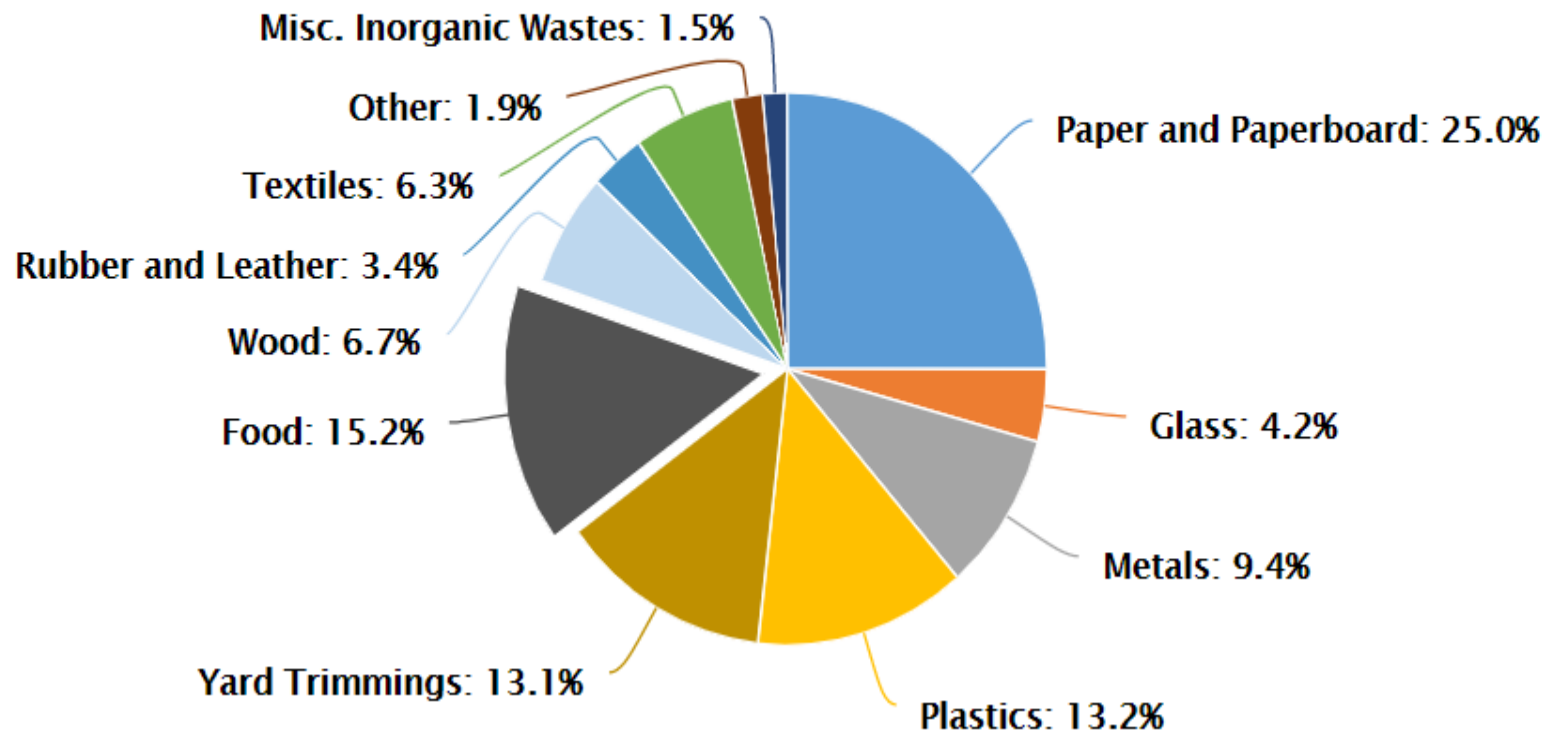


Why think about Composting?

Americans generate approximately 5 pounds of trash each and every day!

Total MSW Generated by Material, 2017

267.8 million tons

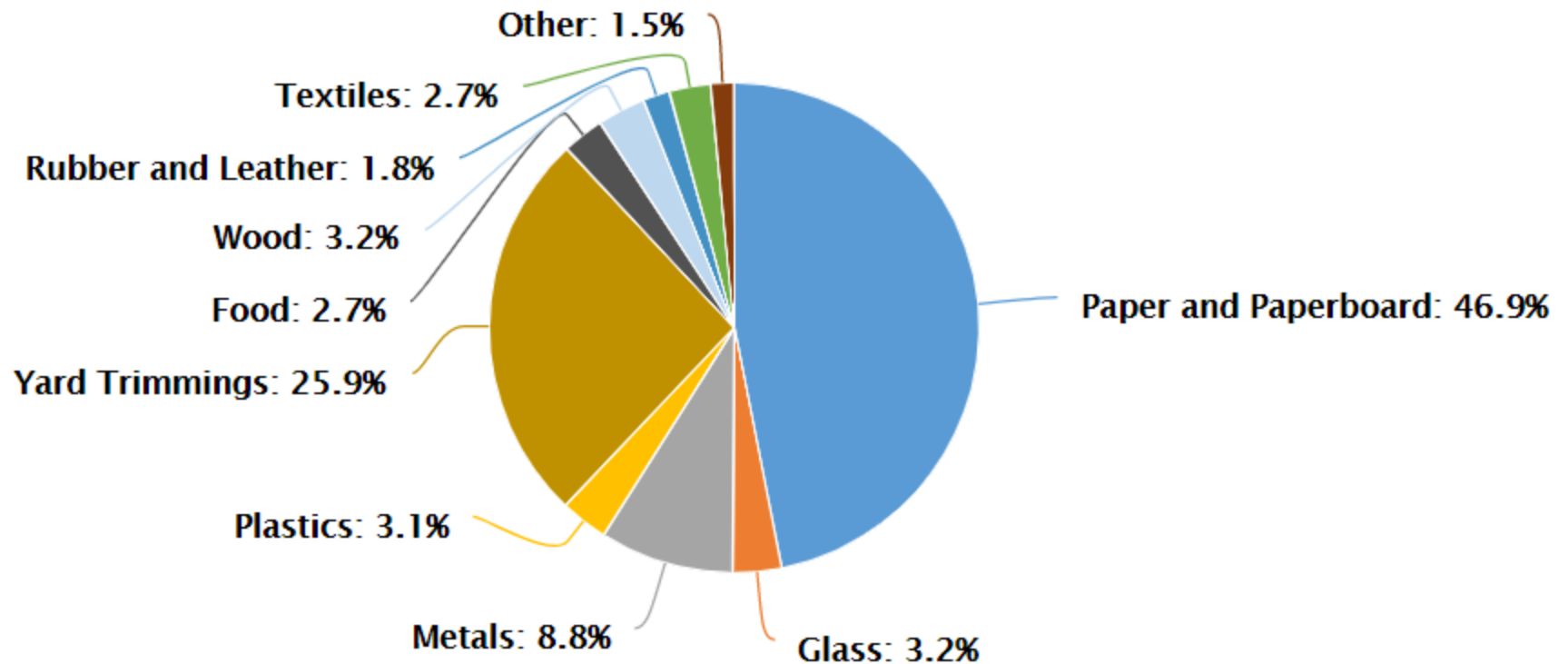


COMPOSTING RATES

Total MSW Recycling and Composting by Material, 2017



94.17 million tons



Why COMPOST



Same apple, **very** different journey.



It Saves Money

Compost is a high-quality soil amendment that can be used instead of expensive bagged products.

It's Good for the Earth

Adding compost enriches the soil, helping gardens grow without chemicals.



It Saves Money

About 30% of all our waste is compostable. Your family can save on the cost of trash tags or disposal fees.

It Reduces Carbon Footprint

Less fuel and electricity is used to transport and process waste.

It Reduces Landfill Use

Not only does it alleviate pressure on our infrastructure, it reduces outgassing into the air and leachate seeping into groundwater.

BLACK GOLD!

- Compost is often called Black Gold. If you have actually used true compost, you will know that is worth its weight plus some!

Question is:

What is Black Gold ?

COMPOST

- **Compost** (/ 'kɒmpɒst/ or / 'kɒmpoʊst/) is organic matter that has been decomposed in a process called **composting**. This process recycles various organic materials otherwise regarded as waste products and produces a soil conditioner (the **compost**). **Compost** is rich in nutrients.

[Compost – Wikipedia](#)

- Really it is nature's natural process of breaking down dead plant material and turning it back into soil.



METHODS /TYPES

- Open Compost Pile
- Compost Bin style
- Tumblers
- Layer Composting
- Vermicomposting
- Trench Composting

Others that we are not covering include:

- Windrow Composting
- Aerated Static Pile Composting
- Digesters
- Bokashi

OPEN COMPOST PILE OR HEAP



Compost Pile



Sheet or Lasagna Compost



Hot or Cold Piles



**Most common, most familiar
composting system**

“Open” type of compost bin solution

COMPOST BIN STYLES



Wire Compost



**Trash Can/ Bin
Composter**



Geobin



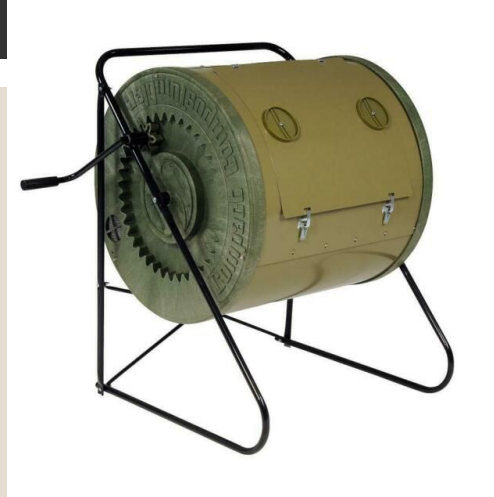
Pallet Compost System

“Open” type of compost bin solution

Great option for composting leaves, yard clippings, coffee grounds and other non-food items

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

VERMICOMPOSTING



Composting with worms!

Very efficient system with usable compost typically within 4-6 weeks

Expandable model available – will expand to a total of 8 trays for high volumes of waste

Ease way to collect compost tea!



TRENCH COMPOSTING

Trench Composting

A Simple Method To
Add Organic Matter
To Your Garden

www.ourstoneycres.com



OTHER



Windrow Composting



Aerated Static Pile Composting



Compost Digester



Bokashi



FUNDAMENTALS

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

MEET NATURE'S FBI (DECOMPOSERS)



Fungi

These decomposers break down organic waste into compost.



Bacteria



Invertebrates



BROWN VS GREEN

- The main ingredients to compost is:
Carbon and Nitrogen (C or N)
- Carbon material = BROWN
- Nitrogen material = GREEN
- The optimum mixture goal is **30: 1**
Carbon to Nitrogen ration



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!



COMPOST CARBON – NITROGEN RATIOS MADE SIMPLE

- <https://www.bing.com/videos/search?q=carbon+rich+compost+material&view=detail&mid=4E390E667686433A95F94E390E667686433A95F9&FORM=VIRE>



Compost Carbon:Nitrogen Ratios Made Simple 🧐

29,775 views • Jul 3, 2018

👍 813 💬 15 ➦ SHARE ⚙️ SAVE ...

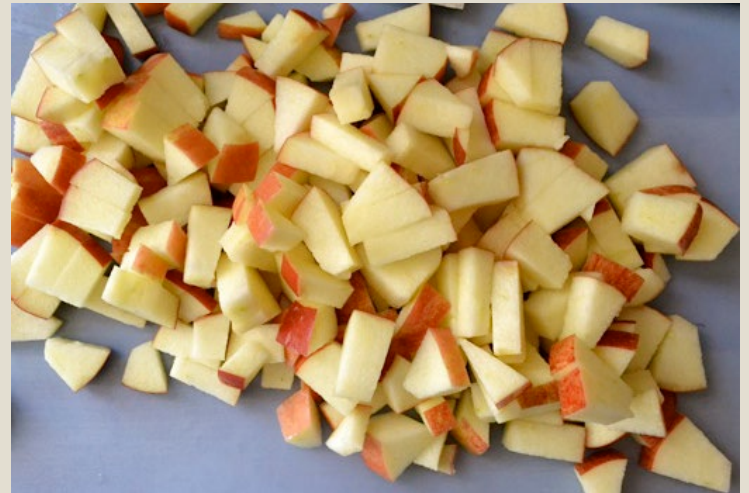
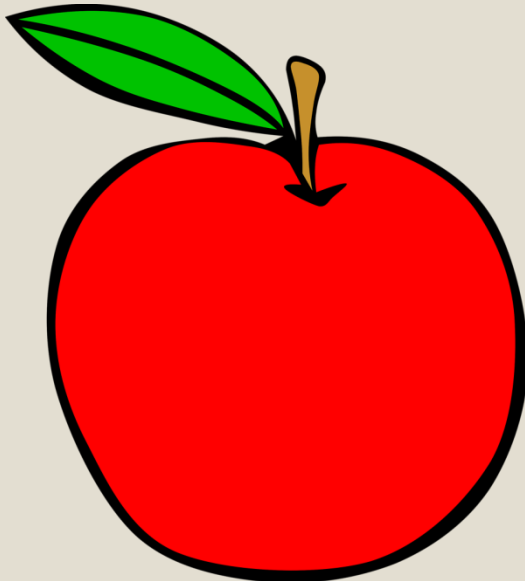
ANOTHER KEY FACT:

- The bigger the particle the longer it will take to break down

Example a whole apple

vs

chopped up apple



WHAT NOT TO COMPOST!

- The rule of thumb is anything organic can be composted.
-Use extra caution when using waste from carnivores and omnivores.

Absolutely NO

- Meat and meat-based fats
- Eggs or Dairy
- Plastic/ plastic stickers / plastic or wax coated paper
- Cooking Oils and other greasy foods
- Metals
- Glass
- Invasive weeds, weed seeds, diseased plants, or any plants that have been treated with chemicals or pesticides
- Bones (Vermicomposting system)

* *This is not an all inclusive list!*

COMPOST MANAGEMENT



Follow these simple steps (compost pile):

1. Mix together browns (carbon) and greens (nitrogen) together to obtain ideal goal of 30:1 ratio
2. Make sure to ALWAYS bury any greens that are added. This will ensure there is no odor to your compost pile.
3. The pile should be warm as material breaks down.
4. Turnover or fluff the pile often to get oxygen into the pile
5. Keep the pile moist but not too wet
6. When the material at the bottom of the pile is dark and rich in color, with no remnants of food or yard waste, your compost is ready to use!
7. Screen out large chunks and apply/incorporate into your garden or use as a soil type alternative.

HARVEST TIME!

- Is it ready yet?
Compost takes between 4-8 months and sometimes up to one year.
- Finished product should look uniformly dark with no recognizable food waste in it.
- It should smell like rich soil, nothing more
- It should feel crumbly and moist, as if you mixed damp soil and mulch.

USEFULNESS

- The compost itself is beneficial for the land in many ways, including as a soil conditioner, a fertilizer, addition of vital humus, and a natural pesticide for soil.
- In ecosystems, compost is useful for erosion control, land and stream reclamation, wetland construction, and as land fill/cover

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 WORTH IT



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



Composting
Animal Waste!

Aug 18, 2020



How to
Harvest your
Black Gold
Compost!

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.

APRIL 2020

30 DAY EARTH DAY CHALLENGE



www.MorrowCountyOhio.gov



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TAKE OUR SURVEY



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