

# Backyard Composting



Image Citation: ENRI Task Force



# Happy Earth Day!



# Outline

- What is composting?
- Why compost?
- How composting works
- Hot vs. cold method
- Using finished compost
- FAQs

# What is composting?

Composting is a tool that allows us to control and speed up the natural decomposition process of organic materials.

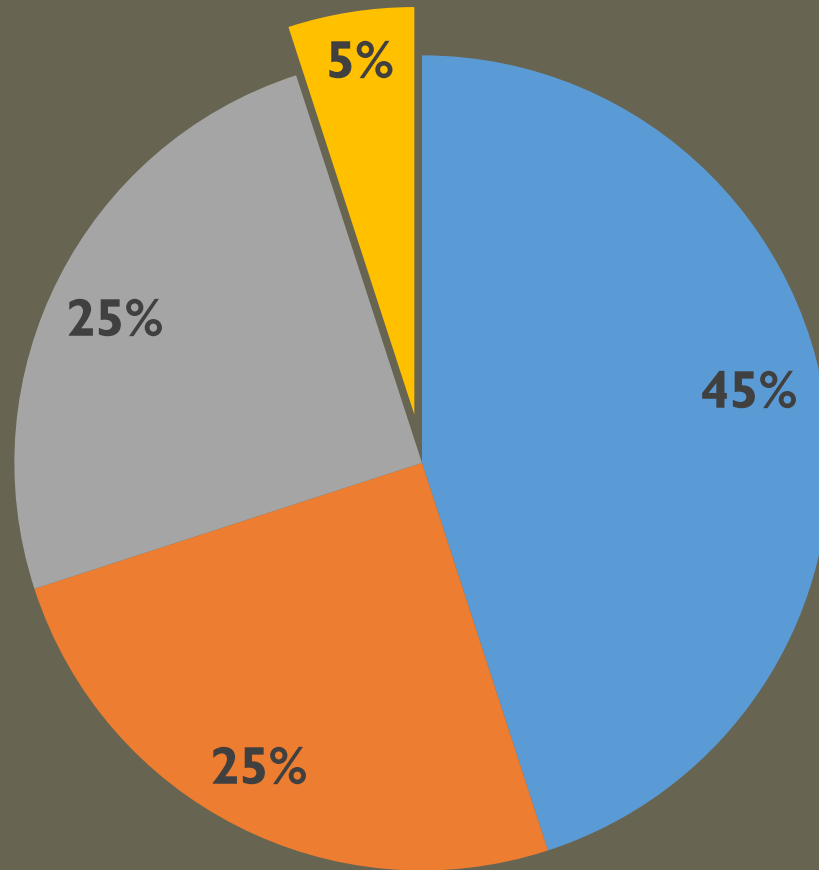


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Why  
compost?

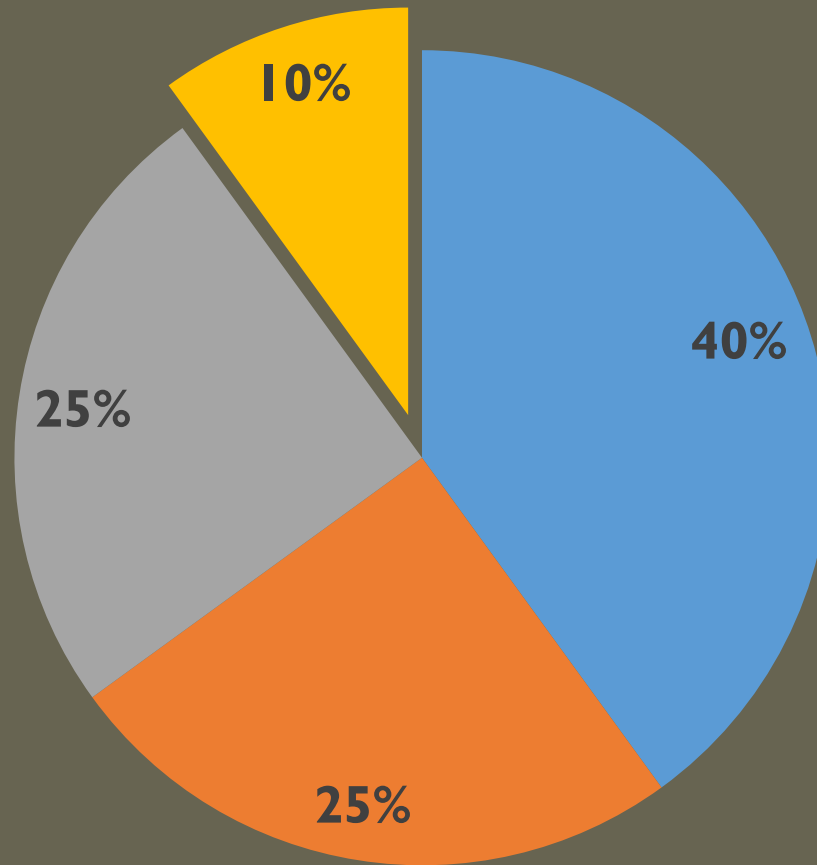
# Soil Benefits

■ Minerals    ■ Pores (Water)    ■ Pores (Air)    ■ Organic Matter



# Major Components of Soil

■ Minerals ■ Pores (Water) ■ Pores (Air) ■ Organic Matter



# Benefits of Organic Matter

- Increases soils ability to hold nutrients
- Improves soil structure
  - Improves aeration
  - Improves drainage
  - Reduces erosion
- Increases the amount of available water for plants



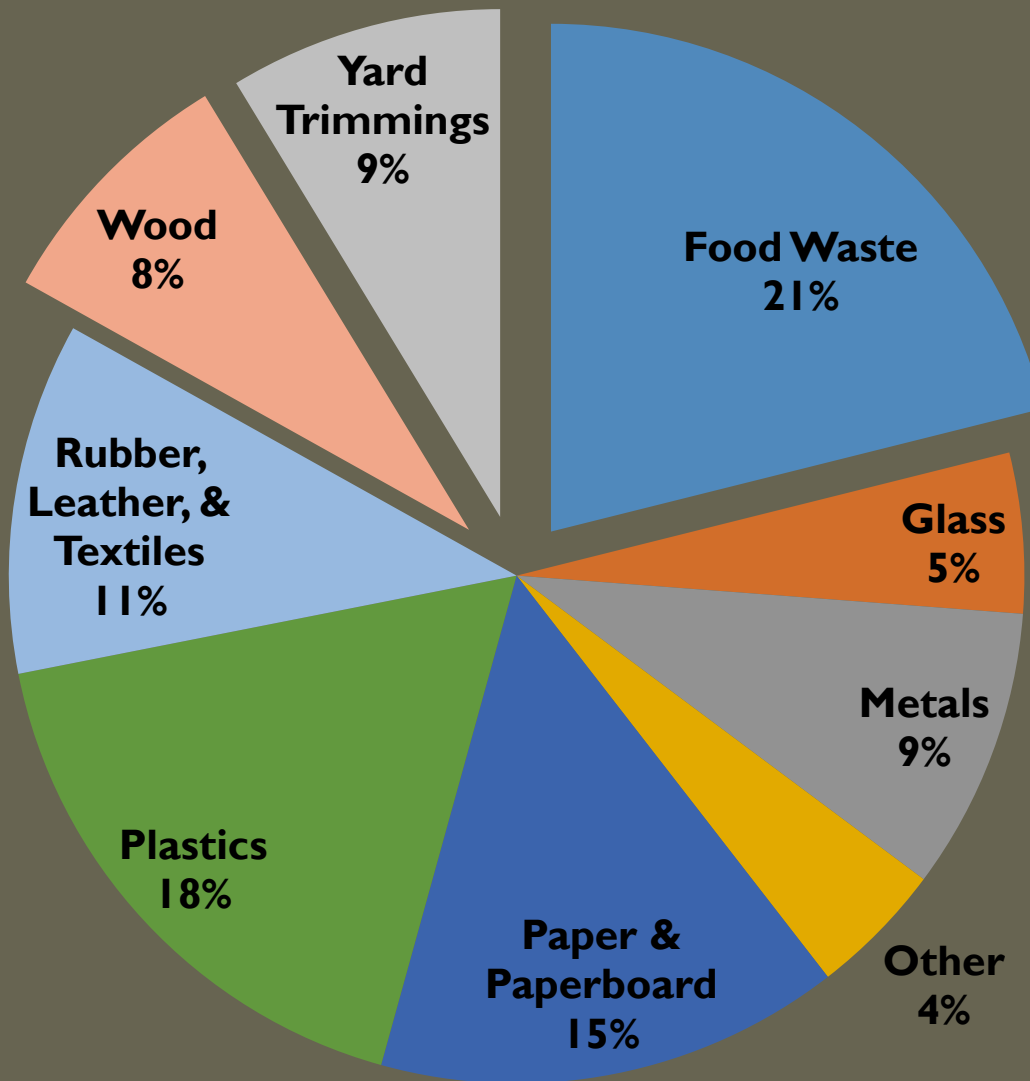
# Reduce Waste

*Composting decreases the amount of waste sent to landfills!*

On average, Americans produce over 4 pounds of waste per person per day. Roughly, 1.5 pounds is recycled and composted resulting in over 2.5 pounds being sent to landfills or incinerators.

# Total Municipal Solid Waste Discarded in 2012 (164 Million Tons Discarded After Recycling and Composting)

Source: U.S. Environmental Protection Agency



**38% is  
compostable  
at home!**

Each year in Kentucky over 600,000 tons of food waste is sent to landfills.



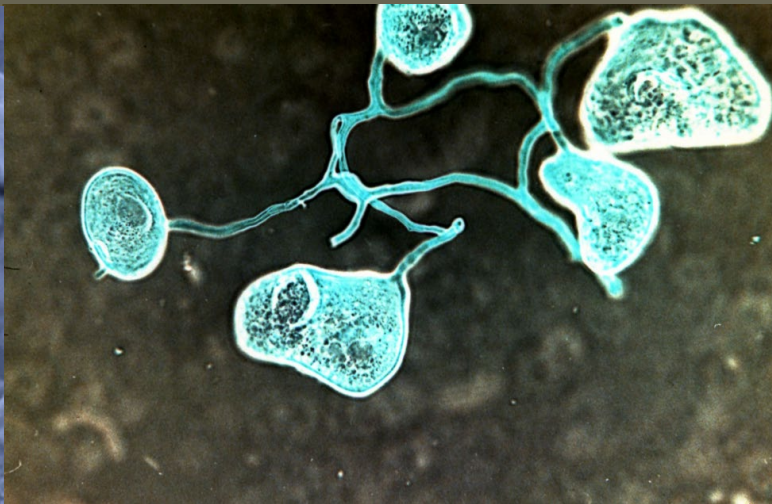
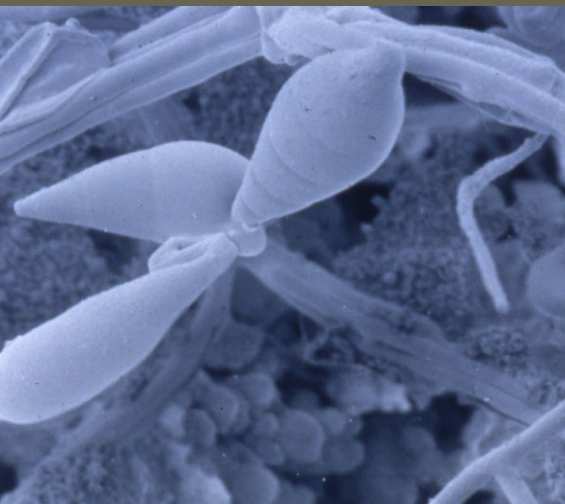
Image Citation: KY Division of Waste Management

How does  
composting  
work?



# Natural process – It's alive!

- Requires food, air, water, and temp
- **Bacteria, fungi, worms, beetles, nematodes** all work to break down the waste



# Providing the Right Food

## Browns (High in Carbon)

Dry Grass

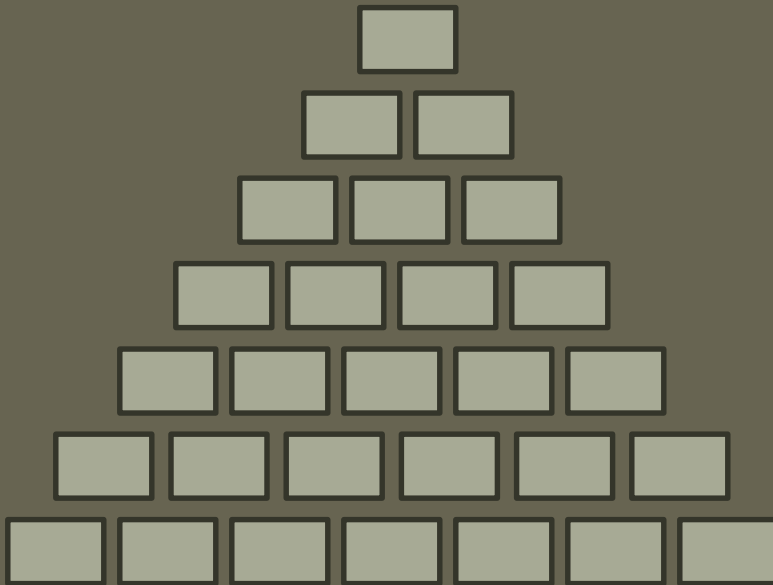
Dry Leaves

Newspaper

## Greens (High in Nitrogen)

Vegetable and Fruit Waste

Fresh-Cut Grass



25-30 Parts Brown



1 Part Green

# Providing the Right Food

Items that can be added to compost:

- Fruit and vegetable waste
- Eggshells
- Coffee grounds and tea bags
- Clothes dryer lint
- Paper and newspaper
- Hair
- Cardboard rolls
- Yard waste (such as leaves, grass clippings, etc)
- Straw and hay
- Sawdust (in small amounts)



# Providing the Right Food

Items that can NOT be added to compost:

- Meats, meat products, bones, and fish
- Fats, greases, and oils
- Baked goods (such as breads, cakes, cookies, pies)
- Dairy products (such as milk, cheeses, yogurts)
- Pet waste and kitty litter
- Hard to kill weeds and weeds that have gone to seed
- Diseased plants
- Black walnut leaves and twigs
- Yard waste treated with chemicals
- Coal and charcoal ashes



# Providing the Right Amount of Moisture

***Compost with the correct amount of moisture (~50-60%) should have the consistency of a wrung-out, damp sponge.***

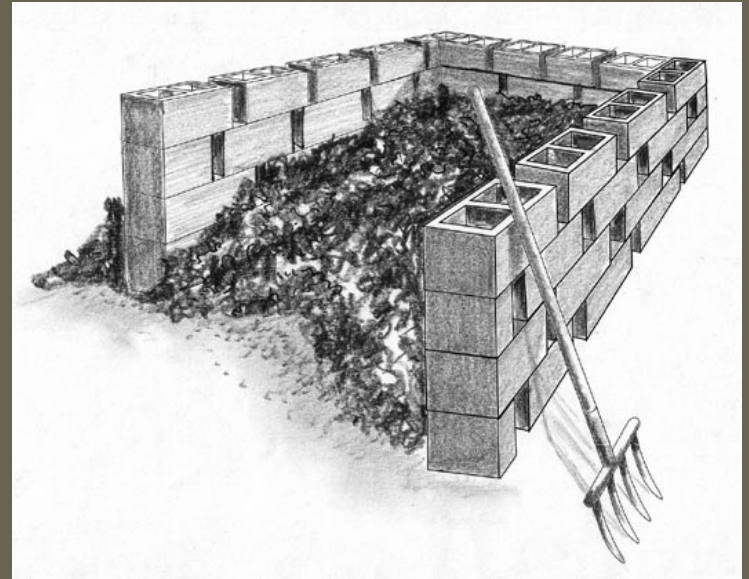
- Add water if the compost is too dry.
- If the compost is too wet, turn it more frequently until it air-dries to the proper moisture content.

# Keeping Microbes Warm



3 feet per side

# Composting Bins



**Wood Compost Unit**



# Composting Bins



**Closed Composter**



**Tumblers**



# Composting Bins



**Three Bin Compost Unit  
Made From Pallets**



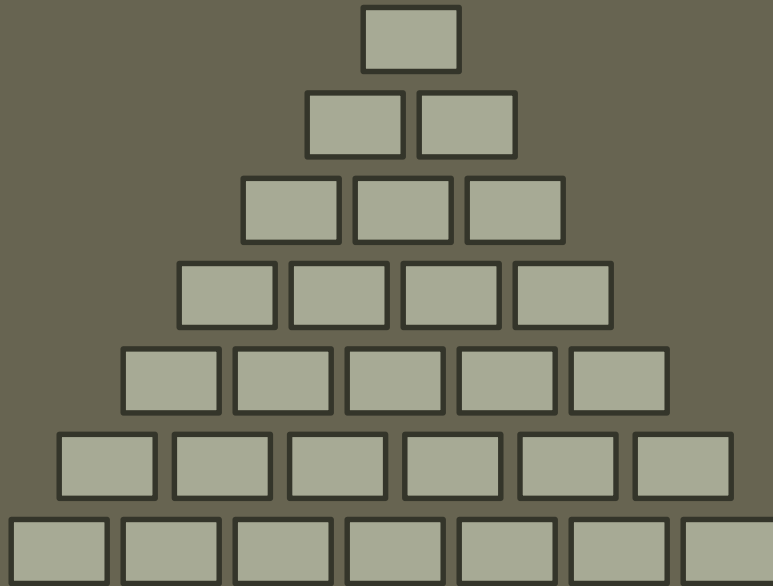
**Wood and Wire  
Three Bin Compost Unit**

Image Citation: ENRI Task Force

# Hot (Fast) vs. Cold (Slow) Method

Hot (Fast)	Cold (Slow)
Produces high temperatures	Produces cooler temperatures
Takes least amount of time	Takes longer
Requires the most labor	Requires the least effort
Good at killing weed seeds and pathogens	Poor at killing weed seeds and pathogens

# Hot (Fast) Method

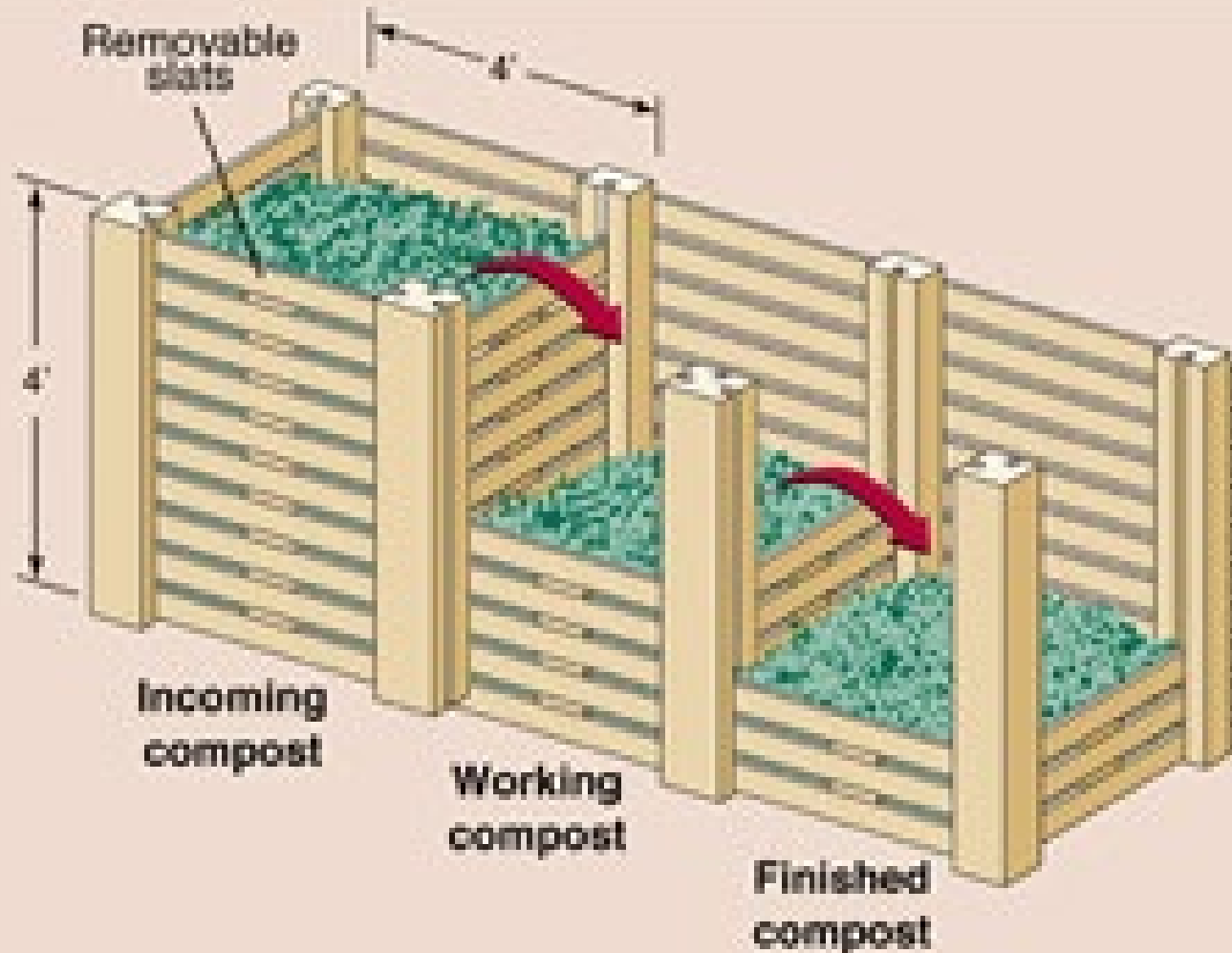


25-30 Parts Brown



1 Part Green

# Curing Compost



**Three Bin Compost Unit**



# Cold (Slow) Method



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*Composting can be as hands-off  
as you want.*

# Using Compost

Compost 2% N, 2% P<sub>2</sub>O<sub>5</sub>, 1% K<sub>2</sub>O  
*(Fertilizer equivalent 2–2–1)*

*½ - 1 inch layer is sufficient for most flower and vegetable gardens*

*Releases all of nutrients slowly over 5 years*

# Questions?

## **Other UK Resources**

HO-75 Home Composting: A Guide to Managing Yard Waste

ENRI-311 Constructing a Garbage Can Compost Bin

ENRI-307 Constructing a Wire-Mesh Compost Bin

ENRI-141 How to Build a Vermicompost Bin