

May 21, 2021

# Home Composting – Next Steps (PART 2)

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Lakes Region Planning Commission



# Meeting protocol

- Please mute your microphone
- Submit questions/comments in the chat box (bottom of Zoom screen)
  - May need to expand your Zoom screen if the chat box is not showing



# Lakes Region Planning Commission (LRPC)

The LRPC is a non-profit, voluntary association of municipalities located within one of the 9 state-defined regional planning areas. Our staff provides comprehensive planning services to meet the diverse needs of New Hampshire's Lakes Region.

- Work with municipal officials, state departments, Economic Development Councils, local organizations, etc.
- LRPC researches issues to advise/recommend next steps for municipalities
- Grant writing and administration



Lakes Region, NH  
30 municipalities

(9 RPCs cover NH)



This event is supported by:

**Tamworth Recycling Project**

**Cook Memorial Library**

(Tamworth, NH)

**Sandwich Recycling Project**

*THANK YOU!*



# Presentation Overview

Why compost?

What goes in the compost bin?

Setting up your site/equipment needs

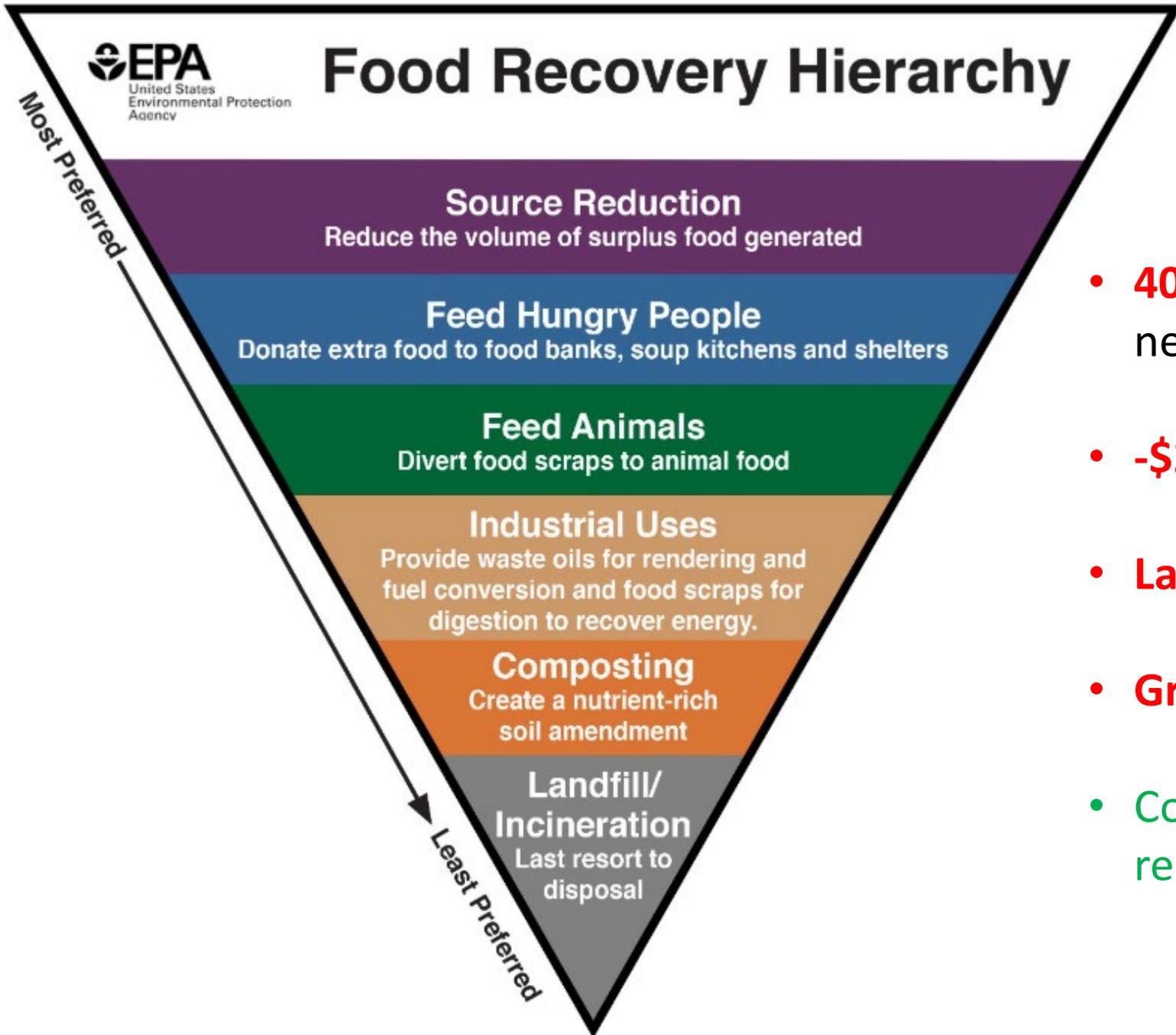
Compost management

Best Management Practices (BMPs)

- Troubleshooting – odor, inactive compost, etc.
- Animal control

Helpful resources/webinars

Q&A Discussion



## Why Compost?

- **40%** of food produced in U.S is never eaten
- **-\$218 billion lost annually**
- **Landfills** are not sustainable
- **Greenhouse gas emissions**
- Composting recycling nutrients and resources – improves soil health



# What goes in the compost bin?

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# PUT THESE IN THE COMPOST



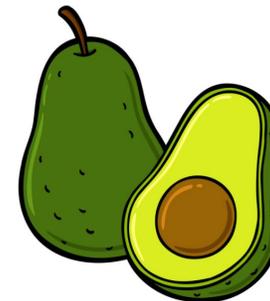
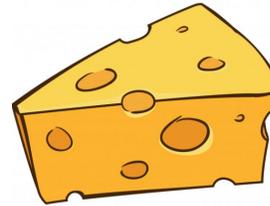
**GREENS**

**BROWNS**

	Things to consider...
<b>Fruit &amp; vegetable scraps, peels</b>	Citrus in moderation (acidic)
<b>Nuts &amp; nut shells</b>	
<b>Egg shells</b>	Crushed
<b>Coffee grounds/filters/tea bags</b>	No staples
<b>Bread/pasta/rice/beans</b>	
<b>Wood shavings/sawdust</b>	Homogenous mix
<b>Leaves/garden trimmings</b>	
<b>Livestock bedding</b>	No cat/dog waste or kitty litter
<b>Straw/hay</b>	
<b>Napkins/shredded paper</b>	Not as sole carbon source

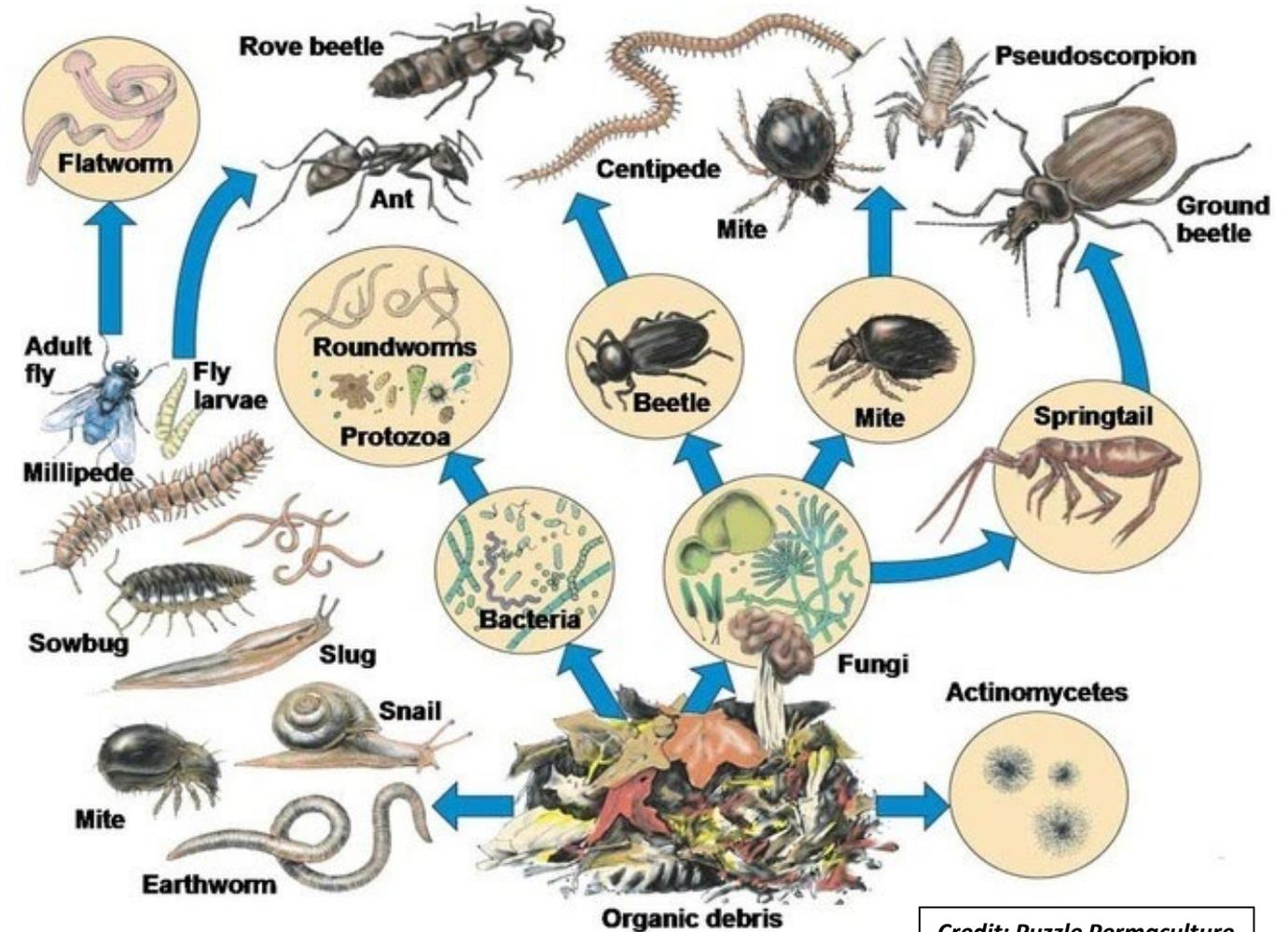
# KEEP THESE OUT OF THE COMPOST

- Meat/bones
- Dairy
- Fruit stickers!!
- Oils/fats/grease
- Seafood shells
- Cat/dog waste
- Weeds that have gone to seed
- Glossy or coated paper
- “Tough” food scraps (in moderation)



# Your compost pile is an ecosystem...

- Controlled, **aerobic** biological process
- Microorganisms are the key, keep them happy with right conditions
- Converts residue material into a valuable product rich in organic matter and organisms

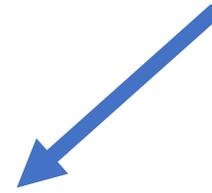
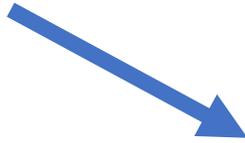


Credit: Puzzle Permaculture

# Basic Recipe – “Easy as 1 : 3”

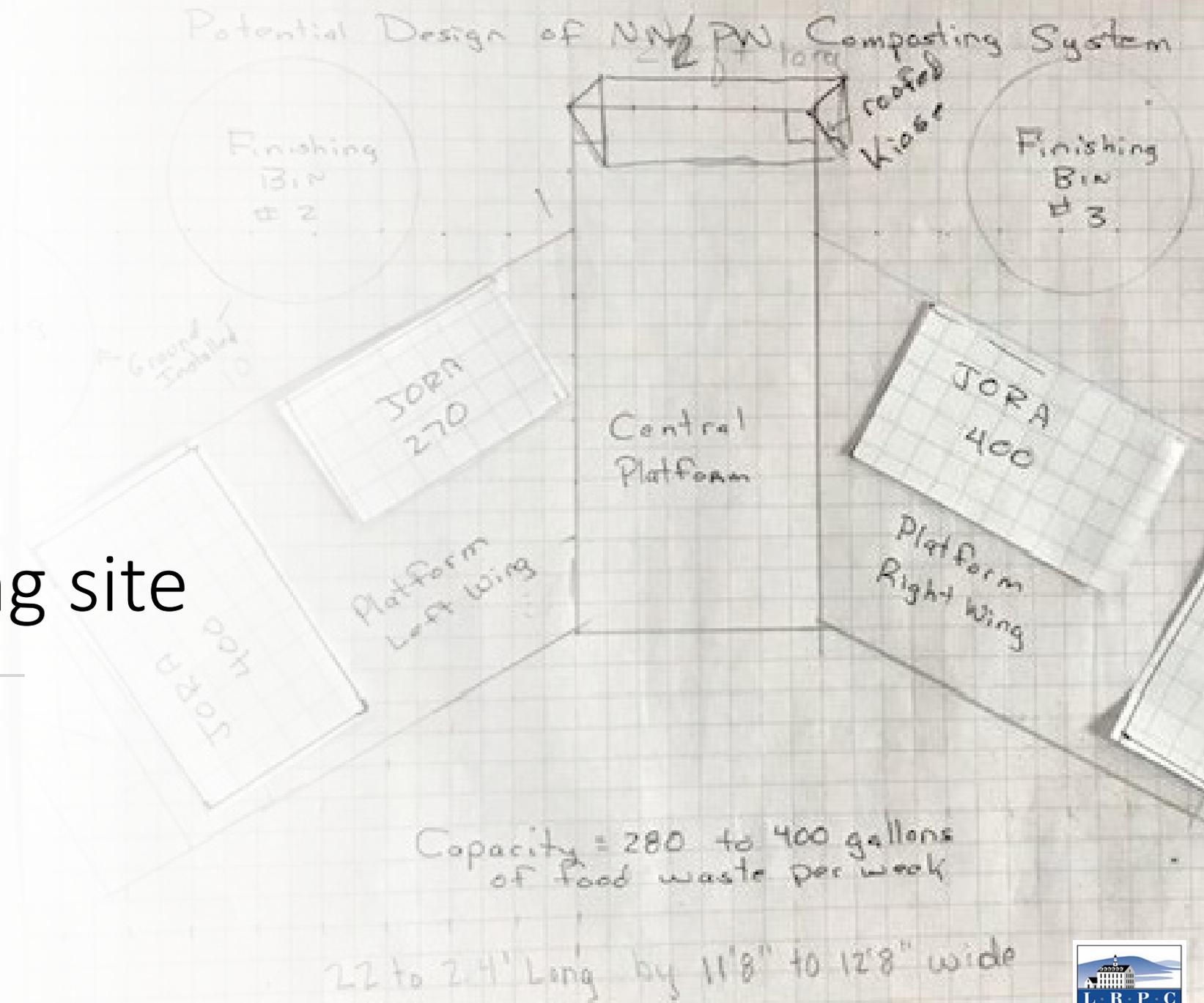
“Greens” (Nitrogen)  
1 volume

“Browns” (Carbon)  
3 volumes



# Setting up your home composting site

## METHODS/SYSTEMS



## Where should I put my composting system?

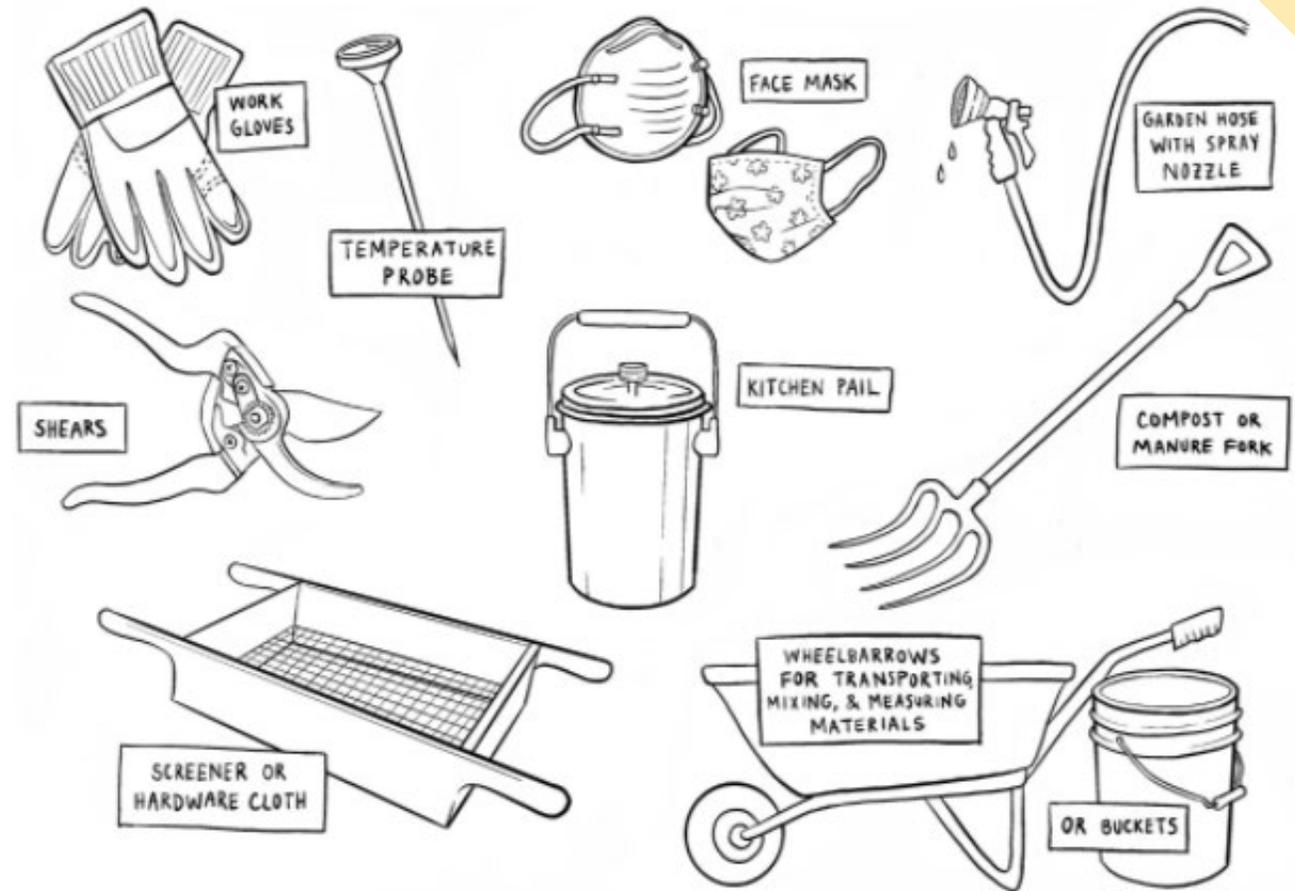
- Year-round accessibility
- Away from trash storage
- Good drainage
- Location with partial sun
- Along a tree line, the house, shrubbery
  - Reduce wind
- Near water source



# Equipment/Tools

- Collection container
- **Space** for pile, bin, tumbler
- Trowel, shovel, or pitchfork
- Storage bins for carbon (5 – 35 gallon)
- Wheelbarrow or garden cart
  
- Tarp – to cover materials or cure piles
- Screen
- Face mask – asthma? allergies?
- Temperature probe

Basic Supplies for Home Composting





Home composting example

# BINS



# Tamworth Lumber

- Free compost bin design available
- Use scrap lumber

**Contact:**

Jim Alt

(603) 651-8881

[tamworthlumbernh@gmail.com](mailto:tamworthlumbernh@gmail.com)



<https://tamworthlumber.com/>

# TUMBLERS



Hot Frog



Jora

# HEAP/PILE



# Green Cone Solar Digester



## How the Green Cone works:

The Green Cone Solar Digester is a completely natural system that reduces food waste to its natural components of water and CO<sub>2</sub>. It is \*not\* a garden compostster!

Over 90% of the waste will be absorbed as water by the soil

### Removable Lid

This is where food scraps are placed to enter the digestion chamber

### Double-walled solar cone

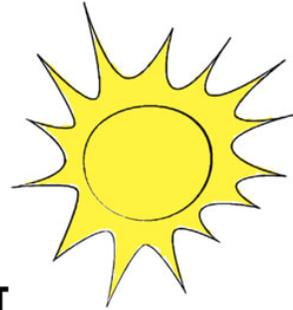
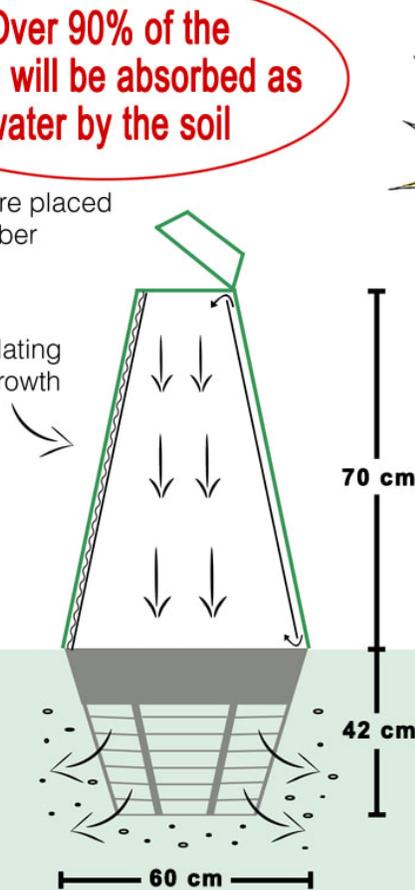
Creates a heat trap of circulating air to encourage bacteria growth and insulates in the winter

Water evaporates and percolates into ground

Soil filters out odors and prevents access by flies

### Natural microorganisms and worms

Migrate freely in and out of the basket and break down the waste.



### Sunlight

Provides energy source for the cone

### Digestion Chamber

Aerobic conditions reduce methane production

Nutrient-rich soil conditioner seeps into the surrounding ground



[www.greenconeusa.com/green-cone-solar-food-waste-digester.html](http://www.greenconeusa.com/green-cone-solar-food-waste-digester.html)



# Compost management

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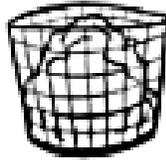


## GETTING STARTED

- 1** Locate bin (good drainage; convenient to kitchen and water source; need room to move around)



- 2** Set up storage for browns (carbon source or bulking materials)



- 3** Have tools accessible (pitch fork, bucket, temperature probe)



- 4** Decide on kitchen pail for food scraps



- 5** Create a 4- to 6-inch base of browns, such as twigs or wood chips, in the bottom of the bin for aeration



- 6** Build a pile (either layer browns and greens, or add greens to a big pile of browns)



- 7** Aerate and mix as needed (e.g., aim for weekly for first few weeks, or based on temperature or odor)



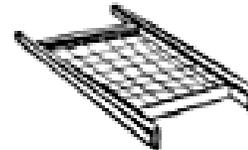
- 8** Check and adjust moisture as needed



- 9** After 8 to 12 weeks, harvest finished compost



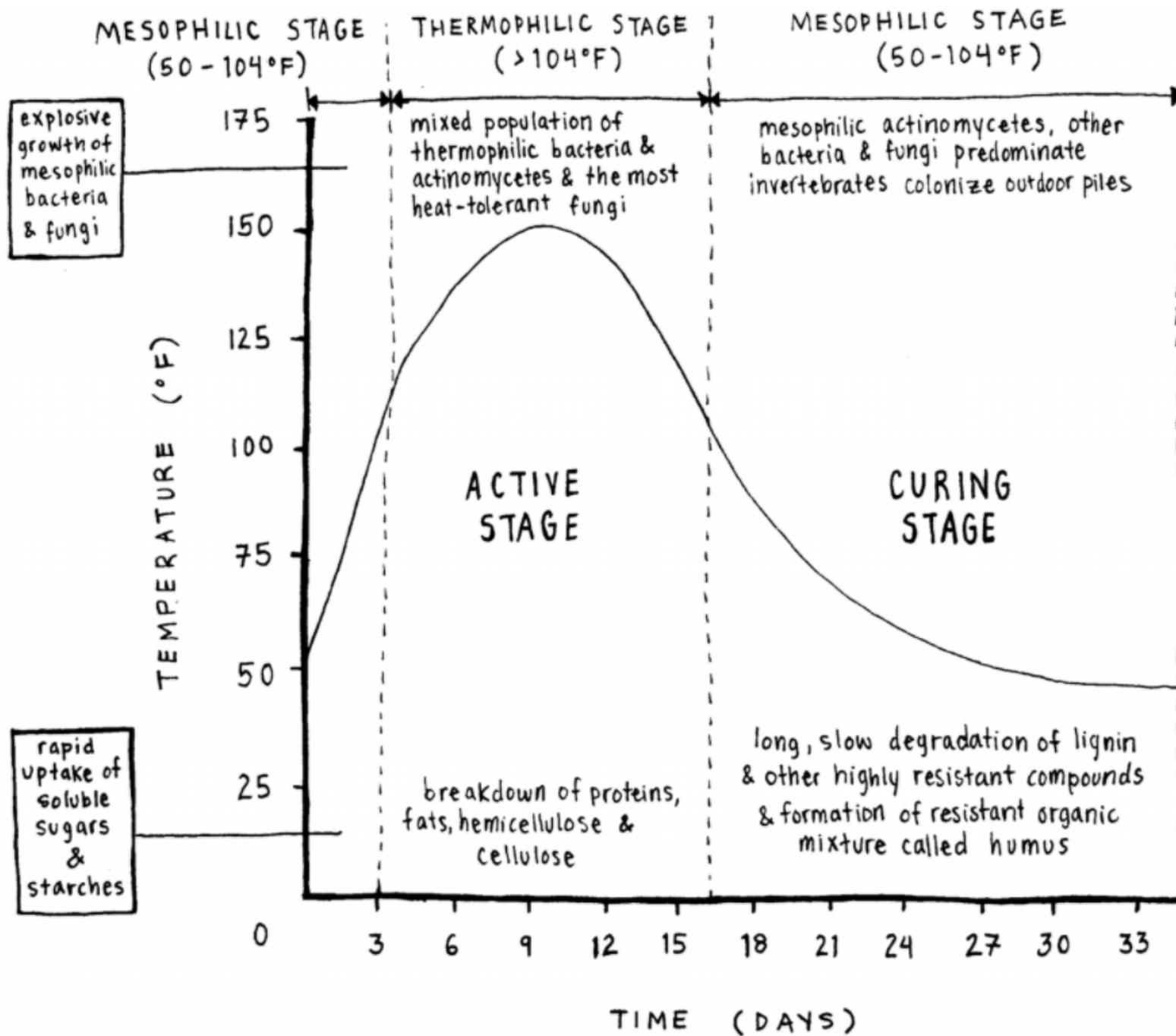
- 10** Screen (optional)



- 11** When bin is full, empty and move, and start a new pile



Repeat steps 6 – 8 to process food scraps into compost



## Composting stages

Temperature

Bacteria

Invertebrates

# Monitor moisture

Too dry



Too wet



*Should be uniformly moist, like a damp sponge*

# 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.



# Temperature





# Best Management Practice (BMPs)

- Troubleshooting
- Animal control

**Store food scraps in fridge or freezer!**



Create space/different surface areas



# What Went Wrong? – Ask Questions, Use Your Senses!

My pile is inactive...

- **New pile?** Add a few scoops of finished compost/forest soil\* to kickstart bacteria
- **Too dry?** Add greens and mix well to aerate
- **Pile is damp and warm only in middle.**  
Pile is too small – collect/mix more material

I smell a bad odor (anaerobic)...

- **Too wet?** Add browns
- **Compacted material?** Fluff for more air space



Actinomycetes (*uhk-ti-nuh-muh-seets*)



Active compost



Maturing compost



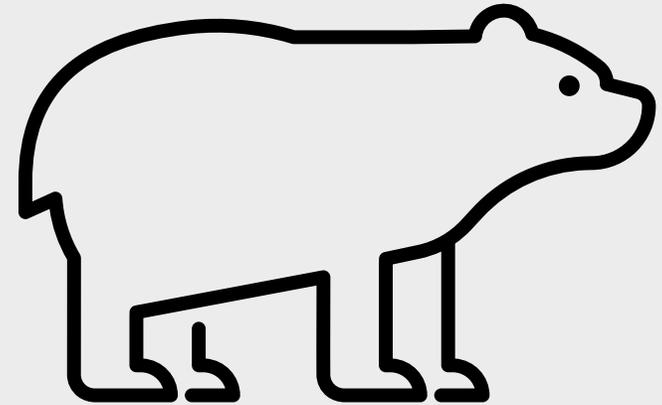


# Animal Management (bears, skunks, racoons, rodents, etc.)

- Contain your materials
- **Cover pile with carbon layer**
- Wire mesh ( $\frac{1}{4}$  inch)
- Avoid adding material on a windy day
- Lock/enclose/cover with tarp
- Noise repellent – tin cans
- Stop adding food scraps

“We had a bear visit our yard a few times and you could see his paw prints walk right around the compost pile...he never touched it because our food scraps were covered...the way you manage your compost really does matter.”

- Tara Albert, NHDES



## When is my compost ready to use?

- No visible food scraps
- No longer heats up after mixing
- Cure for 4 weeks
  - Separate or stop all together
- Materials will shrink 1/3 in volume



- Crumbly, loose, and humus-like structure
- Dark brown color
- Earthy smell

# Test Your Compost at Home!

## 1) Compost respiration test (test compost maturity)

- Add handful of moist compost to a Ziplock bag – press out air and seal
- Store out of the sun for 3 days
- Open – smell ammonia? Compost longer.

## 2) Seed germination test (test compost quality)

- Put handful of compost on a plate and moisten
- Add 50-100 seeds
- Keep compost moist and warm
- Compare # of sprouts to the germination rate on seed packet
- Good germination likely means good compost!



# HELPFUL LINKS/RESOURCES

- LRPC Solid Waste Webpage – [www.lakesrpc.org/service/solidwaste.asp](http://www.lakesrpc.org/service/solidwaste.asp)
- [HB 617](#); *Committee to Study Recycling Streams and Solid Waste in NH* – 2019 Report
- NHDES ([des.nh.gov/](http://des.nh.gov/)) – Oct. 2019 Biennial State Report
- UNH Cooperative Extension – <https://extension.unh.edu/>
  
- Institute for Local Self-Reliance (<https://ilsr.org/home-composting-basics/>)
- Composting Association of Vermont ([www.compostingvermont.org/](http://www.compostingvermont.org/))
- ReFED – Rethink Food Waste ([refed.com](http://refed.com))

# Webinars/Events

- [USDA Food Loss and Waste Innovation Fair](#) (May 26<sup>th</sup> ; 12 – 4pm)
  - 50 virtual booths with live chats, publications, videos.
- Northeast Recycling Council ([nerc.org/](http://nerc.org/)) – tip sheets and webinar archive  
*\*Community Composting\**
- NRRA “Recycling with Results” 2021 Conference – webinar recordings  
[www.nrrarecycles.org/resource-library/nrra-recycling-results-2021-conference-day-one](http://www.nrrarecycles.org/resource-library/nrra-recycling-results-2021-conference-day-one)

# Questions/Comments?

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# USDA Rural Development - Disclaimer

## *Lakes Region Planning Commission*

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