# Composting Protects the Climate

Food scraps in landfills generate methane, a greenhouse gas with a global warming potential 84x more potent than CO_2 in the short term.

CH_4

CO_2

N_2O

CO_2

Incinerators also emit climate pollutants

...but when converted into compost and applied to the land, compost sequesters carbon.

One research project found that ½ inch of compost applied to rangeland sequestered the equivalent of **1 metric ton of CO_2e/hectare over three years.**
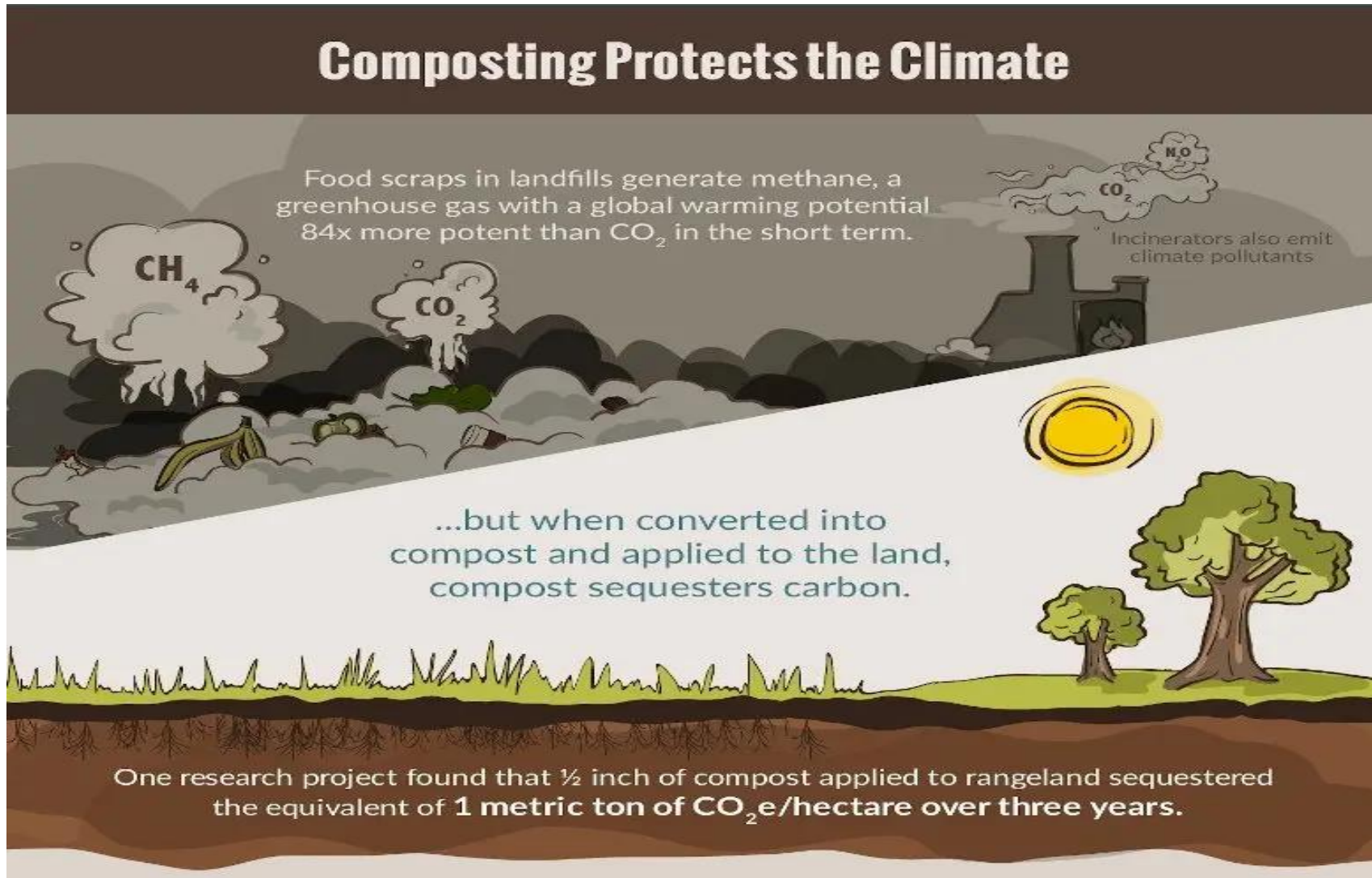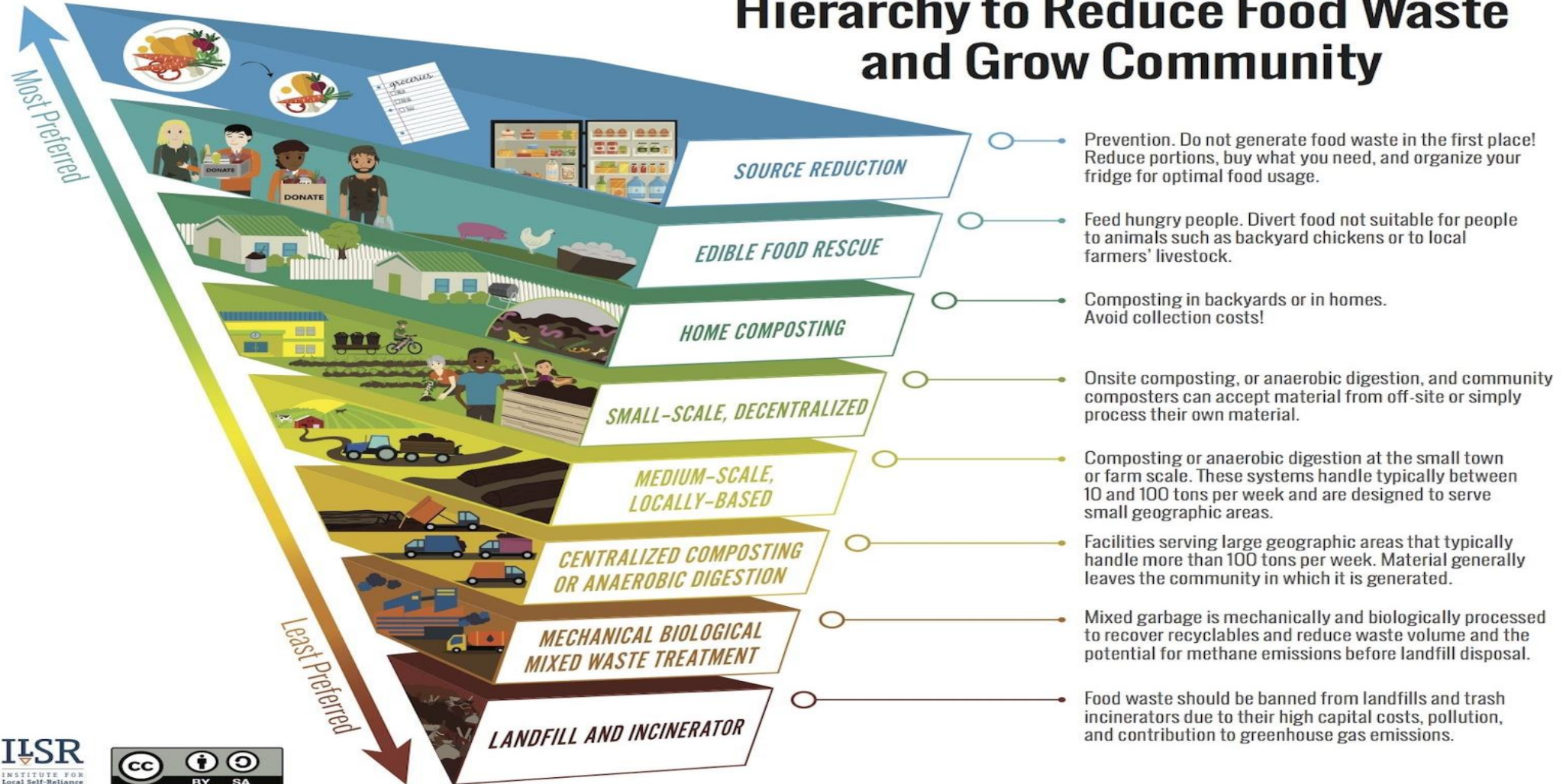
COMPOSTING
our most local Circular Economy

DEALING WITH FOOD WASTE....

Hierarchy to Reduce Food Waste and Grow Community

Most Preferred → Least Preferred

SOURCE REDUCTION — Prevention. Do not generate food waste in the first place! Reduce portions, buy what you need, and organize your fridge for optimal food usage.

EDIBLE FOOD RESCUE — Feed hungry people. Divert food not suitable for people to animals such as backyard chickens or to local farmers' livestock.

HOME COMPOSTING — Composting in backyards or in homes. Avoid collection costs!

SMALL-SCALE, DECENTRALIZED — Onsite composting, or anaerobic digestion, and community composters can accept material from off-site or simply process their own material.

MEDIUM-SCALE, LOCALLY-BASED — Composting or anaerobic digestion at the small town or farm scale. These systems handle typically between 10 and 100 tons per week and are designed to serve small geographic areas.

CENTRALIZED COMPOSTING OR ANAEROBIC DIGESTION — Facilities serving large geographic areas that typically handle more than 100 tons per week. Material generally leaves the community in which it is generated.

MECHANICAL BIOLOGICAL MIXED WASTE TREATMENT — Mixed garbage is mechanically and biologically processed to recover recyclables and reduce waste volume and the potential for methane emissions before landfill disposal.

LANDFILL AND INCINERATOR — Food waste should be banned from landfills and trash incinerators due to their high capital costs, pollution, and contribution to greenhouse gas emissions.

ILSR INSTITUTE FOR Local Self-Reliance
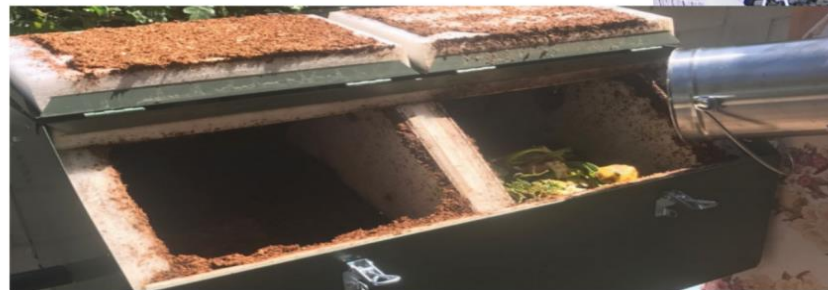
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Backyard Composters

Pallet Style

Backyard Composters

Tumbler ... Worm Bin ... Green Cone ... Earth Machine

Backyard Composting

Insulated Tumbler

Industrial Composting

Windrows & Machinery

Raw Waste

Pulverization

Raw Waste

Water/ Sludge

Moisture Stockpiling

Windrows processing

Screening

Rejects

Compost/ Product

Stabilization
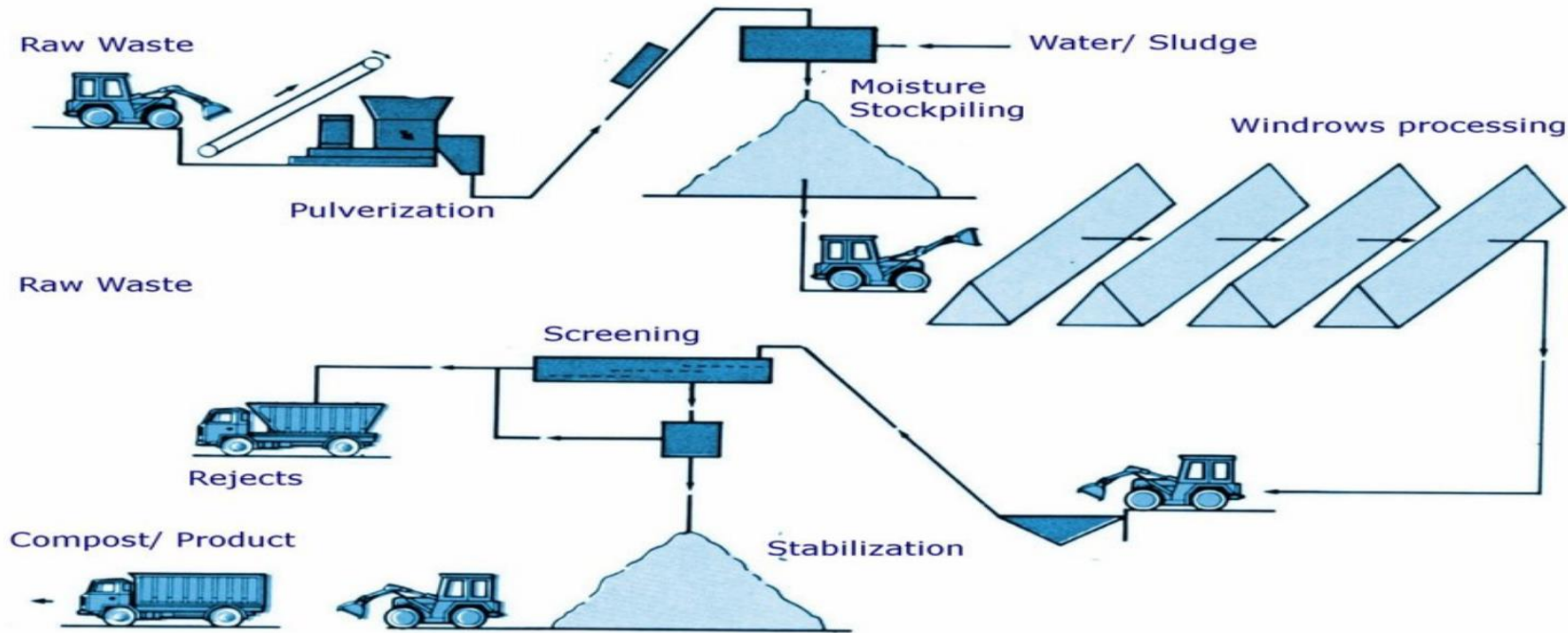
Vermicomposting

Very little citrus
No meats
No dairy
No sugars
No gluten

Worm Poo
Worm Poo Tea
10x more rich
Fun for kids
Efficient

BOKASHI COMPOSTING 'fading away'

PROS...
pre ferment
easy indoors
meat & bones ok
cheese & fats ok
quick!

NEGS...
only small items
need to bury
no mouldy food
no rotten food

Compost Piles Need 4 Things to Work Well.

Air

Water

Green Material

Brown Material

layer that stuff like lasagne

How to Compost: Browns & Greens

Browns

Fall leaves

Twigs, chipped tree branches

Sawdust

Paper

Cotton fabric

Corrugated cardboard

Greens

Grass clippings

Vegetable scraps

Fruit scraps

Eggshells

Trimmings plants

Animal manure (no pet)

C 75% Carbon

N 25% Nitrogen

Brown carbon-rich

- dry leaves
- straw and hay
- shrub prunings
- pine needles/cones
- chopped twigs/branches
- wood ash
- newspaper
- shredded paper
  (avoid glossy paper)
- cardboard (shredded)
- corn cobs, stalks
- dryer lint (from natural fibers)
- sawdust (from untreated wood)
- eggshells
- brown paper bags (shredded)

Green nitrogen-rich

- table scraps
- fruit scraps
- vegetable scraps
- fresh grass clippings
- lawn and garden weeds
  (if they have not gone to seed)
- flowers
- seaweed and kelp
- chicken manure
- coffee grounds/filters
- tea leaves (loose or in bags)
- corn cobs, stalks
- hedge clippings
- garden waste
- fresh leaves

Browns & Greens
Sources for Compost
Use only organic materials

Brown Materials
- Aged Hay
- Oat Hay
- Cardboard
- Dry, Shredded Leaves
- Sawdust
- Chipped Wood
- Cardboard Egg Cartons
- Shredded Paper
- Paper Towels
- Straw
- Toilet Paper Rolls
- Wood Ash (not coal)
- Dried Grass

Note: Small materials decompose faster. For best results, shred any paper products into strips.

Green Materials
- Vegetable Trimmings
- Algae
- Green Leaves
- Grass Clippings
- Kelp or Seaweed
- Green Shrub Prunings
- Tea Bags
- Alfalfa Meal/Hay
- Coffee Grounds/Filter
- Animal Manure (herbivores only)
- Houseplants
- Weeds (without seed heads)
- Old Flower Bouquets
- Human/Animal Hair
- Aquarium Water (freshwater only)

What to Compost?
LAYER YOUR COMPOST PILE WITH BROWNS AND GREENS!

Browns
- NEWS / SHREDDED PAPER
- PAPER BAGS
- DRIED LEAVES
- YARD TRIMMINGS

Greens
- GRASS CLIPPINGS
- EGG SHELLS
- TEA BAGS & COFFEE GROUNDS
- VEGGIE SCRAPS

HOW TO COMPOST

Brown materials include:
- Leaves
- Pine needles
- Twigs, branches
- Straw, hay
- Paper
- Dryer lint
- Pinecones
- Napkins
- Used paper coffee filters
- Wood chips
- Cardboard

Green materials include:
- Fruit & vegetable peels
- Citrus rinds
- Coffee grounds
- Tea bags
- Grass clippings
- Eggshells
- Weeds
- Meat, bones, seafood
- Stale bread
- Cooked plain rice, pasta
- Dairy products

LAWN LOVE | lawnlove.com

YES

- bread, pasta, rice, grains
- coffee grounds & filters
- compostable serveware
- dairy products
- eggshells, seafood shells, bones
- fats, oils, greases
- fruit & veggie scraps
- meat & fish scraps
- paper napkins & wooden stirrers
- tea bags

NO

- baby & hand wipes
- cat litter, pet waste
- diapers
- glass
- medicines
- polystyrene/styrofoam
- rubber bands
- yard waste
- plastic, with exceptions*

*Food waste **may** be bagged in a clear or white plastic bag.

NO

Compost Right

Place all "COMPOST YES" items into your composting bin. Follow the chart below to compost the right way! Drop off compost at the Farmers Market or behind City Hall at no charge. Residents may also use their own composting bins.

COMPOST YES

- Nuts
- Breads, Cereals, Rice and Pasta
- Salad
- Vegetables
- Egg Shells
- Fruit
- Flowers
- Tea Bags and Loose Tea
- Coffee Grounds
- Meat, Seafood Bones
- Cheese and Dairy
- Uncoated Paper Plates
- Uncoated Paper Bags
- Paper Towels and Napkins (Kitchen Only)
- Compostable Bags
- Compostable Kitchenware

COMPOST NO

- Plastic Bags or Wrappers
- Foil
- Plastic Coated Cardboard
- Oil or Crisco
- Styrofoam

COMPOST INCLUDE THE FOOD, PLANTS AND PAPER TOO!

YES! Plant based foods (raw or cooked scraps) and plant trimmings

Leave produce bags/stickers OUT of your compost bin.

YES! Compostable paper products (paper only — no plastic)

NO!

SOIL FOOD!

We compost the following:

YES!

- ALL FOOD
- Fruits
- Vegetables
- Meat
- Dairy
- Bones
- Grains
- Eggs and shells
- Coffee grounds

SOME PAPER

- Coffee filters
- Food-soiled paper
- Uncoated paper plates
- Tea bags
- Paper towels

NO!

- NON-FOOD
- Plastic
- Metal
- Glass
- Styrofoam
- Liquids
- Coated paper
- Chemicals
- Frozen food boxes
- Produce stickers
- Staples in tea bags
- Waxed cardboard
- Grease

COMMUNITY COMPOST COMPANY

845-787-DIRT (3478)
communitycompostco.com

Compost Piles Need 4 Things to Work Well.

Air Water Green Material Brown Material

brown

leaves, stew,
woody materials...

+

green

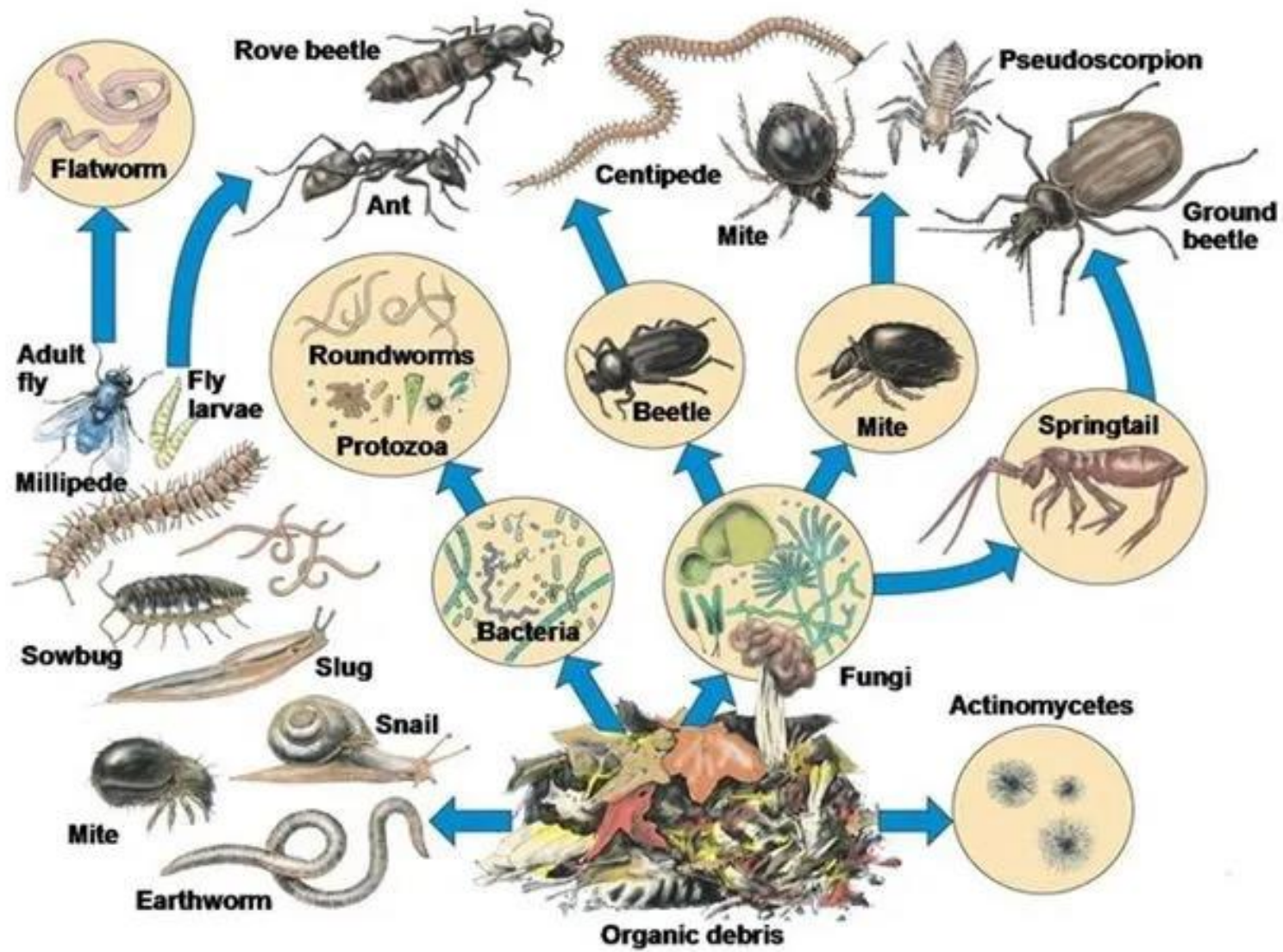grass, food scraps,
manures...
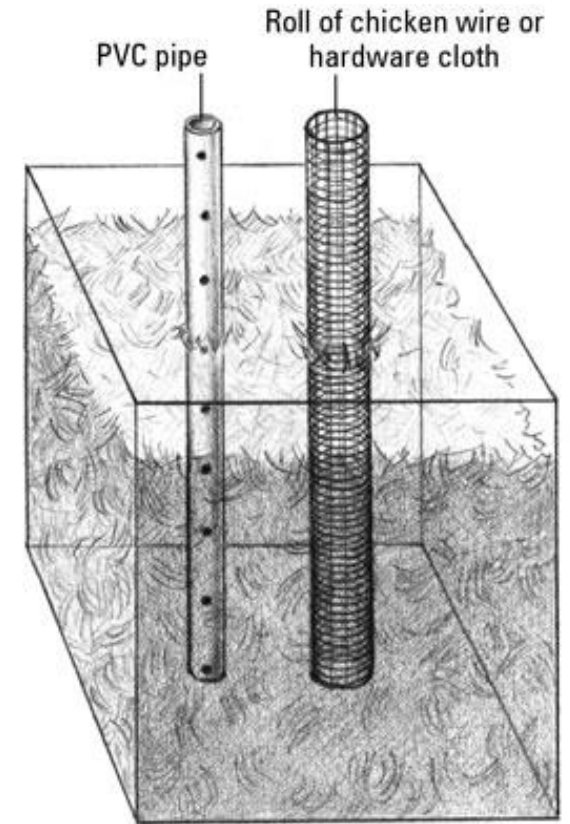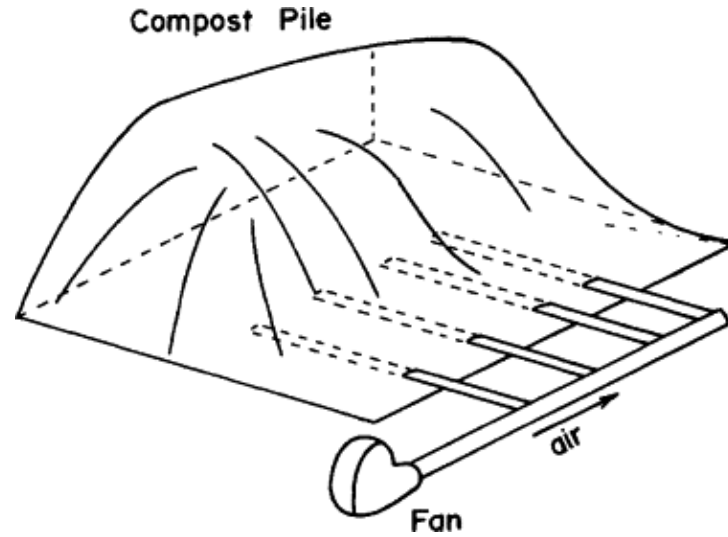
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compost

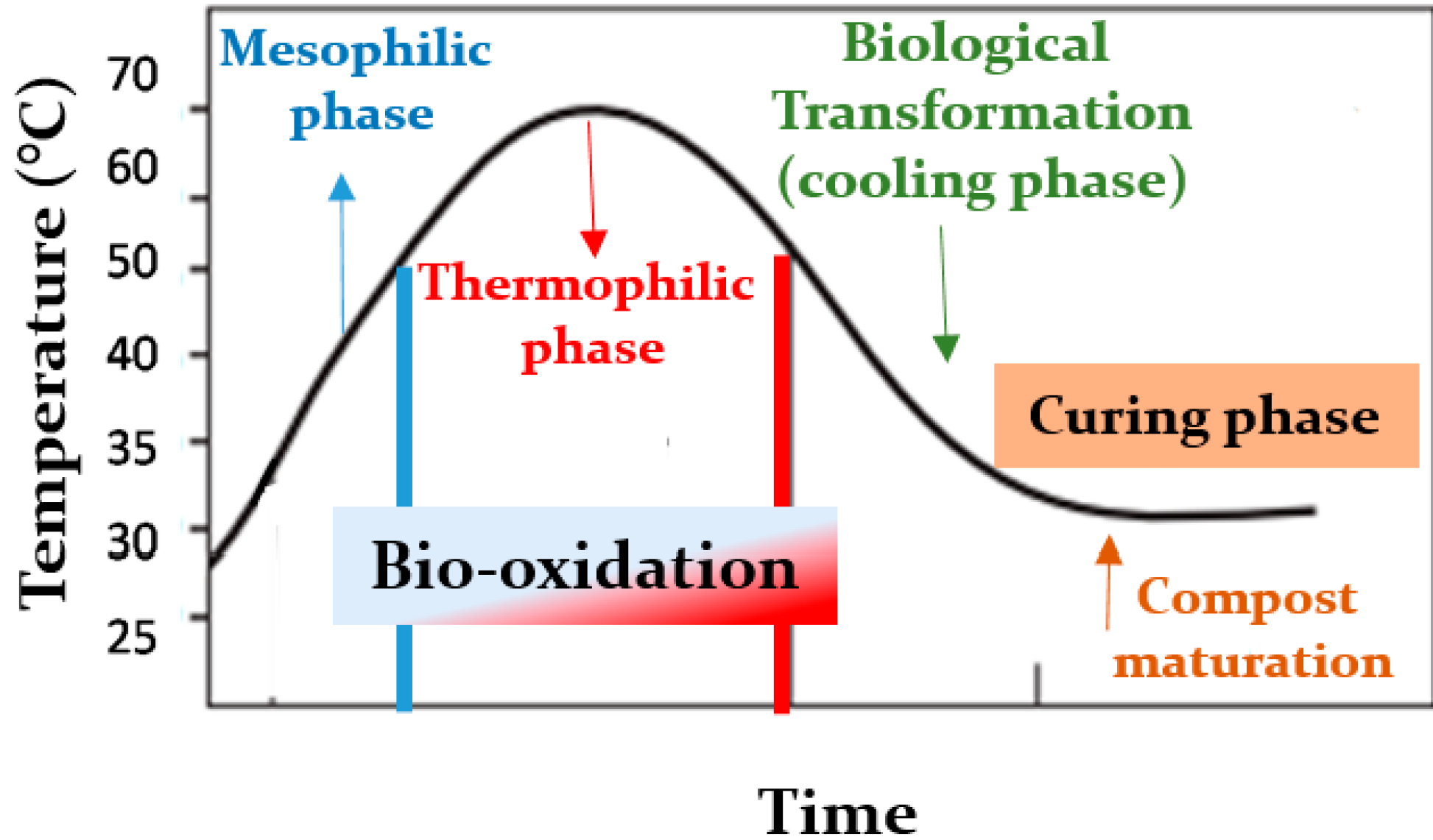**water — COMPOST HAPPENS — air**

macro-organisms

earthworms, Insects, etc.

micro-organisms

Bacteria, fungi, microbes

Compost Pile

air

Fan

PVC pipe

Roll of chicken wire or hardware cloth

AIR ➔ aerating your composting pile

Benefits of Composting

RETAINS MORE WATER
Compost helps strengthens soil's ability to retain water. This causes plants to not need to be watered as frequently.

REDUCES SOIL EROSION
Erosion occurs when top soil is blown or washed away causing infertile topsoil. Compost can restore topsoil and build stable soil structure.

HELPS CARBON SEQUESTRATION
Carbon is stored in the top 3 feet of soil and is released into the atmosphere when soil structure is poor. Applied compost helps improve soil structure to combat against this.

REDUCES LANDFILL WASTE
Composting helps divert materials from going to the landfills, minimizing the amount of greenhouse gas emissions released into the atmosphere and lengthening the capacity of landfills.
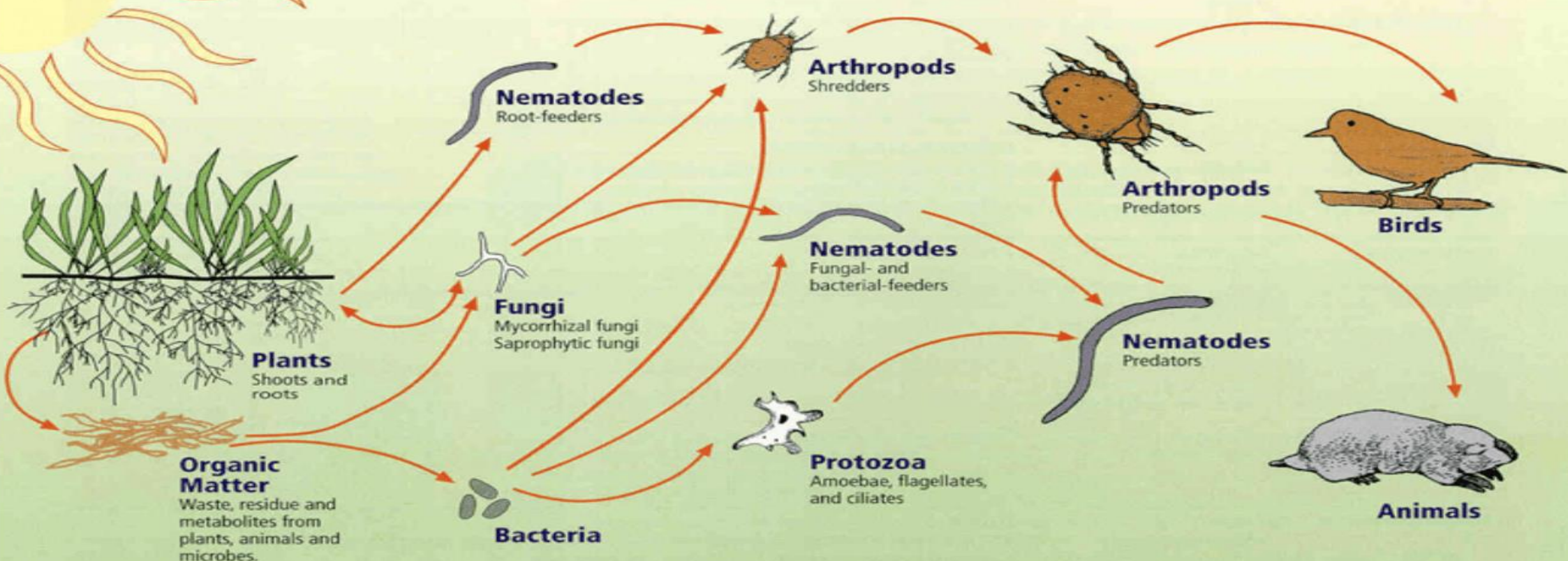
REDUCES NEED FOR SYNTHETIC FERTILIZERS
Compost sufficiently supplies soil with nutrients like phosphorus and nitrogen. This reduces the need for additional fertizlier because compost naturally provides the necessary nutrients for the soil.

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!

The Soil Food Web

Nematodes
Root-feeders

Arthropods
Shredders

Arthropods
Predators

Birds

Fungi
Mycorrhizal fungi
Saprophytic fungi

Nematodes
Fungal- and
bacterial-feeders

Nematodes
Predators

Plants
Shoots and
roots

Protozoa
Amoebae, flagellates,
and ciliates

Animals

Organic Matter
Waste, residue and
metabolites from
plants, animals and
microbes.

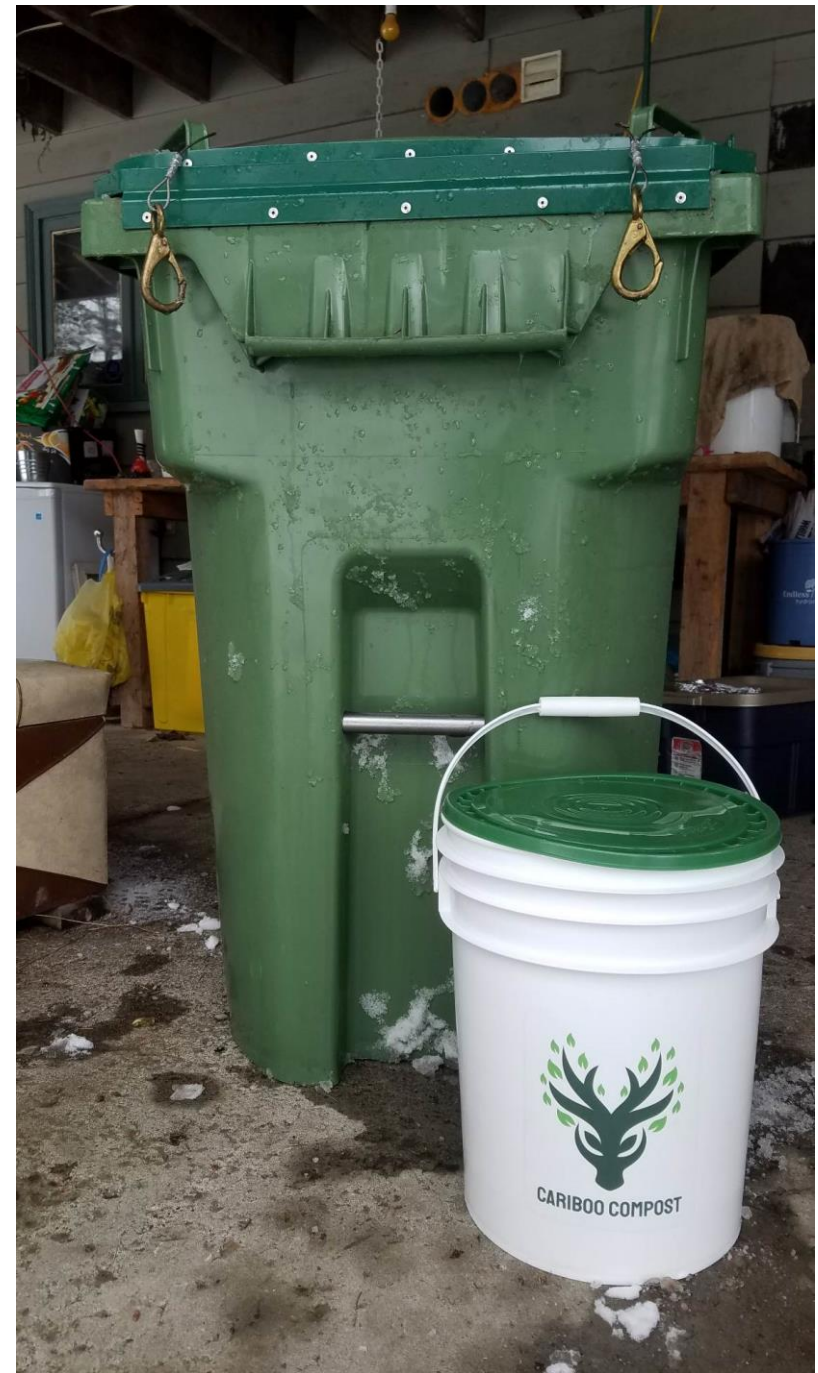**Bacteria**

First trophic level:
Photosynthesizers

Second trophic level:
Decomposers
Mutualists
Pathogens, parasites
Root-feeders

Third trophic level:
Shredders
Predators
Grazers

Fourth trophic level:
Higher level
predators

Fifth and higher trophic levels:
Higher level
predators

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