# HOME COMPOSTING

## QUICK-START

Presentation By Yini Wang

Date created: April 2023

# INTRODUCTION

About a third of the food produced around the world goes to waste, and much of it ends up in landfills—where it becomes a source of methane, a greenhouse gas 25 times more potent than carbon dioxide. Eliminating waste is the ultimate solution, but some will always remain. For that there is a solution that nearly anyone can do: *composting*.

# WHAT CAN YOU COMPOST AT HOME?

## GREEN MATERIAL (NITROGEN)

Food scraps

Most grass clippings and yard trim

Coffee grounds and paper filters

Paper tea bags

Eggshells

## BROWN MATERIAL (CARBON)

Leaves

Plant stalks and twigs

Paper (non-glossy)

Cardboard

Untreated wood chips

# HOW TO MAKE FINISHED COMPOST?

Carbon

Finished Compost

Time

Nitrogen

Air

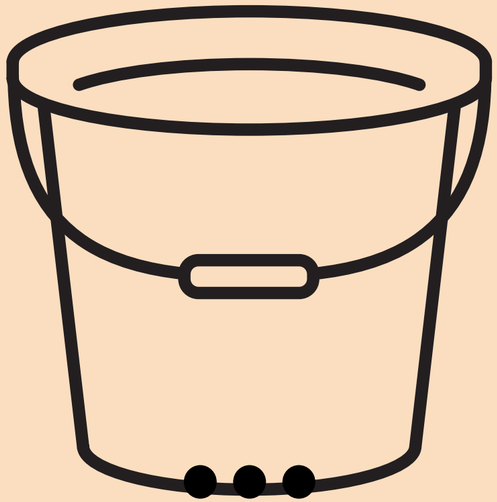
Water

# VERMICOMPOSTING

Vermicomposting, or vermiculture, is a method of using worms to transform organic waste into nutrient-rich vermicast, or worm castings.


- Suitable for small and/or indoor spaces.
- Takes a few weeks to a few months to get the castings.
- Smaller scale composting.
- Red Wigglers are most commonly used for vermicomposting.
- Red worms are vegetarian - avoid oily, high-acidic, spicy or dairy products.
- Avoid overfeeding.

# VERMICOMPOSTING SETUP



**Steps:**

**1 - Bottom: drainage for excess leachate.**

**2 - Bedding: shredded paper, cardboard, straw, coconut coir, leaves, etc.**

**3 - Adding worms.**

**4 - Adding food scraps.**

**5 - Adding a light cover: newspaper, plastic bag, etc**

Repeat #3 and #4 to add more layers.

**6 - Top: Cover the container.**

*Make sure there are air holes around the bucket and at the bottom.

*Worms and bins are sold online, nurseries or at bait stores.

*Worms will reproduce over the time.

**Commercial Bin**

**Homemade Bin**

# COLD PILES

Cold composting is a process that allows microorganisms to break down organic wastes like food scraps and yard waste to produce a soil additive. It is the easiest composting method because it requires low to no maintenance or monitoring.

- Suitable for backyard.
- Takes several months up to a year to produce finished compost.
- medium scale composting.
- Maybe managed actively or statically.
    - Active management would involve turning, churning and mixing.
    - Static management is useful when moisture level is maintained at 50% and coarse bulking material is added as the pile is built.

# COLD PILES SETUP

DIY Options

Steps:

1 - find a space in backyard

2 - Mix green and brown materials

3 - Cover the pile

*It's important to cover the pile in high desert climate to ensure proper moisture level.


Commercial Options

# HOT PILES

The heat in the hot pile is internally generated from the breakdown of the carbohydrates in the organic substrate by microbial enzymatic action. The more material there is, the more bacteria can grow and generate heat, and the bigger the core is, which is naturally the hottest part.

- Suitable for backyard.
- Takes 3-6 months to produce finished compost.
- Large scale composting.
- Total batch size should be a minimum of a cubic yard.
- The pile is maintained at target temperature of 140~150°f.

# HOT PILES SETUP

New Zealand Box Composter

**Steps:**

**1 - Bottom: adding a layer of bulking material such as twigs, branches, pinecorns, etc. to allow air flow.**

**2 - Adding in green, brown and more bulky material. (Carbon:Nitrogen ratio of 30:1)**

**3 - Mixing the batch. (min. 1 cubic yard)**

**4 - Cover the top.**

*Once the batch is organized, it will reach desired temperature in about 72 hours.

*It's important to cover the pile in high desert climate to ensure proper moisture level.

# SHEET MULCHING

Sheet mulching is a practice of layering organic materials, such as paper, cardboard, and compost, over an area of grass or weeds. Sheet mulching suppresses unwanted plants, builds soil organic matter, prevents erosion, and conserves water.

- Soil amendment for large areas.
- Takes 6-9 months to be ready.
- Large scale composting.
- Minimum maintenance.

# SHEET MULCHING SETUP

**Steps:**

**1 - Clean up the area - remove weeds/plants, even out the surface.**

**2 - Water the surface and spray the inoculant.**

**3 - Begin by layering damp cardboard and/or paper. (Weed prevention)**

**4 - Building up the mulch with alternating layers of nitrogen and carbon sources.**

**5 - Repeat #4 if possible. Build at minimum 8 inches of layers. 12-18 inches would be ideal.**

**6 - Water the surface periodically.**

*For inoculant, use diluted compost tea or make your own by soaking chicory, alfalfa, comfrey, stinging nettles, flowers/plants from the garden and molasses in warm water for a few days.

*Ideal time for a sheet mulching project would be the fall, the soil will be ready in the spring for new growth.

# BOKASHI

Bokashi is a Japanese word meaning "fermented organic matter."Bokashi composting is an anaerobic fermentation process that relies on inoculated bran to ferment kitchen waste into a safe soil builder and nutrient-rich tea for your plants.


- Suitable for indoor spaces.
- Takes 2-3 months to produce finished compost.
- The best part about Bokashi is that you can use many kitchen scraps and organic waste that you can't otherwise use in traditional composting, including meat and dairy products, cooked food, eggs, etc.

# BOKASHI SETUP

Bokashi bins can be purchased or DIY with a bucket with lid and a spigot/drainage system.

Bokashi bran can be purchased or made at home. Recipe can be found in the book "Bokashi Composting: Scraps to Soil in Weeks" by Adam Footer

**Steps:**

**1 - Alternating layers of food scraps and bokashi bran. Squish them down.**

**2 - Drain liquid off. The fermentation process will produce excess leachate that can hamper the beneficial bacteria. The leachate can be diluted as fertilizer for houseplants or garden plants.**

**3 - Once it's full, let the bucket sit for 2~3 weeks. Do not open during the time to allow the anaerobic fermentation process.**

**4 - Bury the fermented food waste in a bare spot of your garden to allow it to decompose. Finished compost will be created in 1-2 month.**

# find more composting resources at nmcomposters.org

References:


- Bernalillo County Extension Master Composter Training Manual (Aug 2021)
- Photo credits: Canva pro stock photos