

bokashi

The bokashi method of recycling food waste

recyclefoodwaste.org

With the bokashi method:

- A. Can recycle ALL food waste:**
meat, seafood, bones, dairy, raw, cooked, ...
- B. Takes 2 weeks to ferment the food waste,**
however, the longer the better.
- C. The fermented food waste (FFW) can be either
buried in soil or composted.**

What you need to ferment food waste:

1. Airtight container(s):

- (a) 5-gallon bucket and easy-off lid
- (b) Gamma Seal Lid
- (c) Lid with vacuum pump

2. Fermentation starter:

- a. Bokashi sprinkle (e.g., wheat bran bokashi)
- b. Bokashi spray (i.e., Activated EM liquid and mist sprayer)

How to ferment food waste:

- 1. Add bokashi to the empty airtight container.**
- 2. (Optional) Cut the food waste into smaller pieces.**
- 3. Sprinkle or spray bokashi to every handful of food waste.**
- 4. Compress the food waste to squeeze out the air.**
- 5. Keep container airtight at room temperature.**

Why treat food waste with bokashi:

- Can collect food waste in a container in the kitchen at room temperature (instead of in the frig).
- Can treat ALL food waste.
- Easier to dispose of expired food keeping the frig clean.

How to use FFW:

- A. Bury/trench in soil**
- B. In pots/planters, sandwich between soil**
- C. Feed to earthworms (worm bin)**
- D. Add to compost**

What is bokashi?

“fermented organic matter”

As a fermentation starter

As a soil amendment

Why you can do ALL food waste:

Microbial metabolites:

- **anti-pathogenic (substances & pH<4.2)**
- **naturally preserves**
 - incl. enzymes, co-enzymes, bacteriocins, organic acids, antioxidants, ...**

What FFW is doing to the soil:

amending the soil with

microorganisms

nutrients

organic matter

What is bokashi composting?

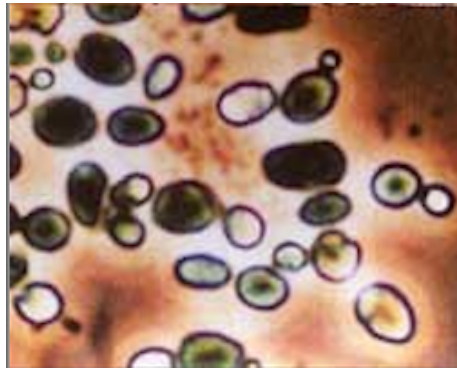
Combining

- **pretreating** food waste by
lacto-yeast-phototrophic **fermentation**
- &
- **composting** the resulting FFW
(hot composting, worm composting, etc.)

Effective Microorganisms

EM, EM-1

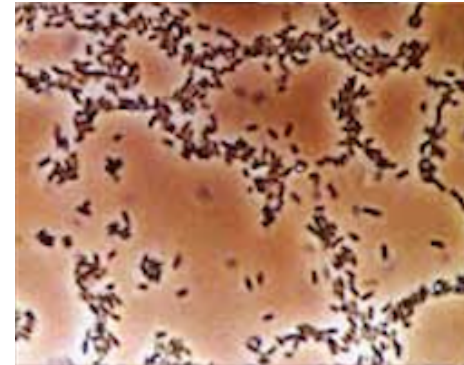
Combination of
3 groups of
microbes



yeast

When T. Higa needed to refer this grouping by a name,
he called them Effective Microorganisms or EM
And EM-1 is the actual liquid containing these
3 groups of microbes.

Microbes function differently
when combined



lactic acid bacteria



phototrophic bacteria

How to make bokashi sprinkle



blackstrap molasses
1% to water



EM•1
1% to water



organic material
wheat bran



mix to ~30% moisture
(1 cup water/lb)



pack airtight to ferment



after 2 weeks, ready to use
"wheat bran bokashi"

St. Mary's Urban Farm, 521 W 126th St Harlem NY

How to make bokashi spray

bokashi spray = Activated EM

in glass bottle with airlock or soda bottle

- **sea salt, ~1% (2 tsp/liter) —optional**
- **blackstrap molasses, 5% (50 ml/liter)**
- **EM-1, 5% (50 ml/liter)**
- **water**