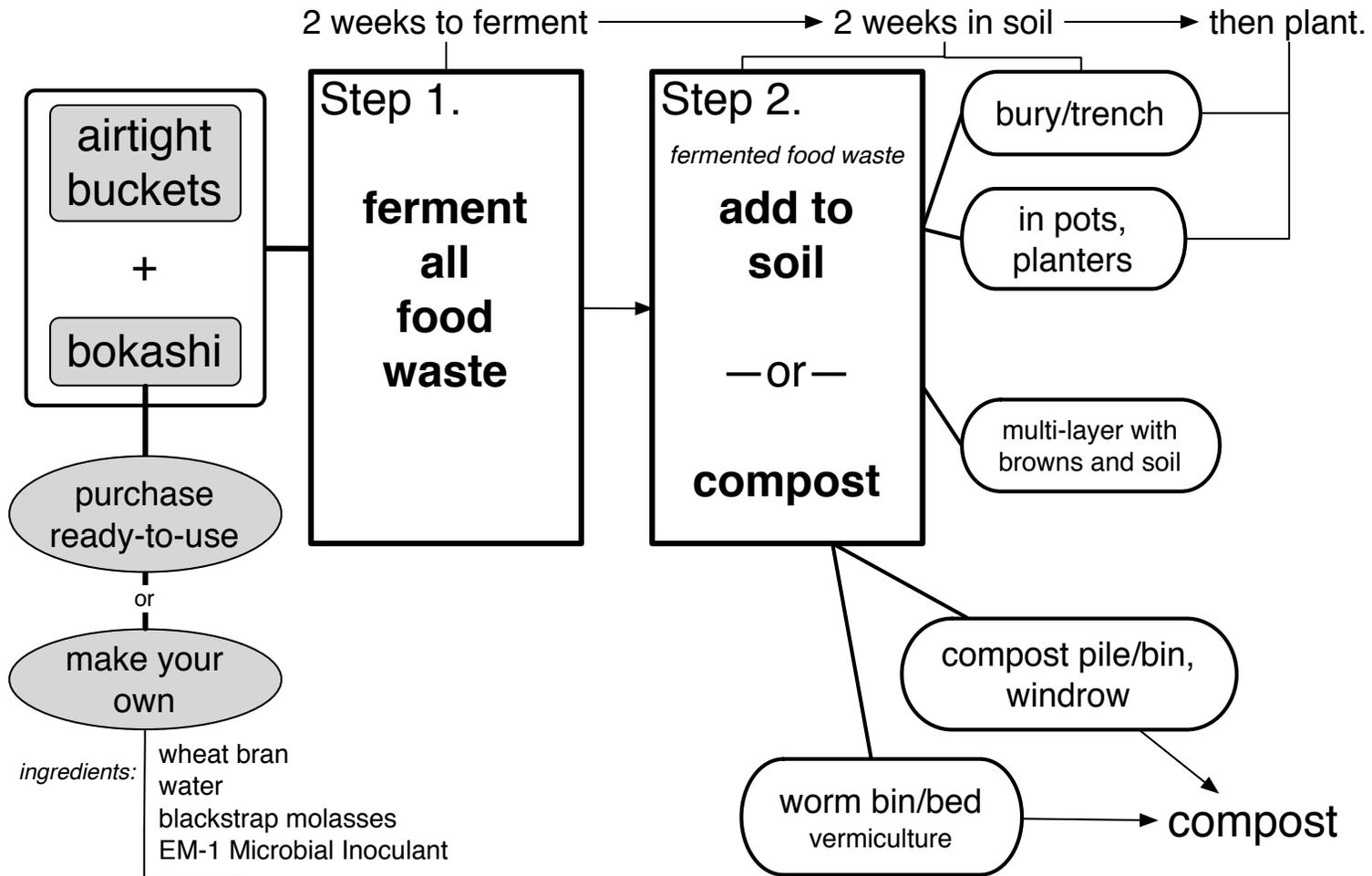


bokashi composting

bokashi = fermented organic matter

recyclefoodwaste.org

The bokashi method of recycling food waste



How to make bokashi



blackstrap molasses
1% to water



EM•1
1% to water



organic material
wheat bran (1 cup water/lb)



mix to ~30% moisture
(squeeze test: sticks together, no drip)



pack airtight to ferment



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

Other Materials

A. As microbial host:

(microbial inoculant, probiotic and/or fermentation starter)

bran (1%*): wheat bran, rice bran, oat bran, barley bran/
barley feed, rye bran/rye feed, millet hulls *(feedipedia.org)*

organic waste (5%*): coffee chaff (husk shed when roasting raw
coffee beans), cocoa/cacao husk (chocolate factory waste), coconut
coir (shredded), wood shavings (walnut wood, teak, pine, mahogany;
avoid maple, poplar), leaves (thoroughly dried, then crumbled).

B. As direct bokashi application:

nutrient-rich (1%*): rice bran + fish meal + oil cake

* 1% blackstrap molasses and EM•1 each to the volume of water used.
5% blackstrap molasses and EM•1 each to the volume of water used.

Sprinkling the microbes

as bokashi bran onto food waste



Spraying the microbes

Mixture: $\frac{1}{8}$ blackstrap molasses + $\frac{3}{8}$ Activated EM + $\frac{4}{8}$ water



Making the bokashi spray

Mist spray bottle: 16 fl oz clear bottle *(from sks-bottle.com)*



Video: link at recyclefoodwaste.org

Effective Microorganisms

EM, EM-1

Combination of 3 groups of microbes
with the dominant species of each group

Microbes function differently
when combined

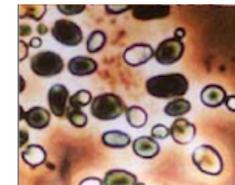
These microbes exist most anywhere,
but are not normally found together.

When Teruo Higa discovered (1982) how effective
this combination was, he needed to refer to this grouping
by a name, so he called it Effective Microorganisms or EM.

And EM-1 is the actual liquid
containing these 3 groups of microbes.



lactic acid bacteria
(various *Lactobacillus* spp.)



yeast
(*Saccharomyces cerevisiae*)



phototrophic bacteria
(*Rhodospseudomonas palustris*)

Images: EM Research Organization

Activated EM ingredients

Fermentation container: **2-Liter** PETE bottle (soda bottle)

Add 2 cups **water**

Add heaping tablespoon of **sea salt**; swirl bottle

Add 5% **blackstrap molasses** 100 ml; swirl bottle

Add 5% **EM-1**, 100 ml; swirl bottle

Add water to 1 inch below neck of the bottle

Squeeze out air when closing cap.

2 weeks to ferment. Room temperature. When pressure (carbonation), release gas.

See video, "Making Activated EM (in the garden)," link at recyclefoodwaste.org

bokashi composting

Step 1

ferment food waste

Step 2

as soil amendment



*El Sol Brillante Community Garden
and the Children's Garden
East 12th St, Ave A & B
East Village/Lower East Side
New York, NY*

