bokashi composting

bokashi = fermented organic matter
The bokashi method of recycling food waste

Step 1. 

- ferment all food waste

Step 2. 

- add to soil
  - or -
  - compost

2 weeks to ferment  →  2 weeks in soil  →  then plant.

- bury/trench
- in pots, planters
- multi-layer with browns and soil
- compost pile/bin, windrow
- worm bin/bed, vermiculture

ingredients:
- wheat bran
- water
- blackstrap molasses
- EM-1 Microbial Inoculant

a) airtight buckets + bokashi
  - purchase ready-to-use
  - or
  - make your own

b) compost

make your own

wheat bran
water
blackstrap molasses
EM-1 Microbial Inoculant
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”

St. Mary’s Urban Farm, 521 W 126th St Harlem NY, Nov. 2013
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: 1/8 blackstrap molasses + 3/8 Activated EM + 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.

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