



## BOKASHI

Bokashi is a method that uses a mix of microorganisms to recycle all solid food waste. Compared to other composting methods such as aerobic and vermicomposting, bokashi is a relatively quick process with little to no restrictions. This method originated from a centuries old Japanese farming practice of covering rice bran with rich, local soil that contains the microorganisms that ferment the waste. After a few weeks, waste is buried and later becomes healthy, nutrient rich soil.

Wheat mill run, wheat bran or rice bran are usually used as media and inoculated with beneficial microorganisms. Wheat mill run can be inoculated with either on-site cultivated lactic-acid bacteria (LAB) and indigenous microorganisms (IMO#2) or EM-1® (Effective Microorganisms®), a specific group of naturally-occurring beneficial microorganisms that was formulated over 30 years ago by Dr. Teruo Higa at the University of the Ryukyu in Okinawa, Japan. EM® is made up of 3 main class of bacteria: phototrophic bacteria, lactic acid bacteria, and yeast.

For instruction on how to cultivate lactic-acid bacteria (LAB) and indigenous microorganisms (IMO#2) using Korean Natural Farming practices please refer to the KHF Resource Sheet: How To Cultivate Beneficial Microorganisms.

## MAKING BOKASHI

Making bokashi requires the following ingredients: Wheat Mill Run, Water, Lactic-Acid Bacteria (LAB) and Indigenous Microorganisms (IMO#2), or EM-1® and Molasses. Use the table as a guide for mixing the ingredients. To make more, use the same ratio of ingredients listed below.

Wheat Mill Run	Water	LAB	IMO#2	OR	EM-1®	Molasses
2.5 lbs	2.5 cups	1 Tbs	1 Tbs		1 Tbs	1 Tbs

1. Add all ingredients into a tub and mix thoroughly.
2. Once mixed, grab a handful of the mixture and squeeze it into a ball. The bokashi ball should keep its shape but crumble slowly to the touch. If it is too wet, add more wheat mill run.
3. Place the mixture inside a plastic airtight container such as resealable storage bags or clean kitchen trash bag. Remove as much air as possible and seal the bag. Allow the mixture to ferment for about two weeks.
4. After two weeks, the mixture should have a sweet fermented smell and is now ready to use. Unused bokashi should be air or sun dried. One method of drying is to spread out the mixture on a tarp on a sunny day. Once mixture is dry, store in an airtight container.



1



2



3



4

# How to... Bokashi

## USING BOKASHI WITH A TWO BUCKET SYSTEM

### A) Two Bucket System Setup

#### Materials needed:

- Two 5 gallon buckets
- Drill with a 3/8" bit
- 1 lid (preferably a screw-on type)

#### Instructions:

1. Drill multiple holes on the bottom of Bucket 1.
2. Install and secure lid on Bucket 1.
3. Place Bucket 1 into Bucket 2. Bucket 2 will collect liquid drainage from Bucket 1.



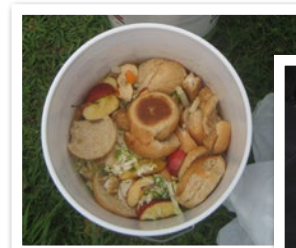
A1



A3

### B) Food Waste Fermentation

1. Collect food waste and place in Bucket 1.
2. Mix bokashi mixture with food waste ensuring that it is thoroughly covered.
3. If in doubt, it is better to add more bokashi than less, especially in the beginning.
4. Add next day's food waste and repeat process of mixing in bokashi.
5. Make sure to close lid tightly after each addition of food waste and bokashi to ensure an anaerobic (no air present) environment.
6. Ferment for about two weeks.
7. Bucket 2 needs to be checked regularly for liquid draining from Bucket 1.
8. Use liquid drained "bokashi Juice" from Bucket 2 right away by diluting with the following ratio: 1 tsp / gallon of water. Use it to water around the base of plants or trees.



B1



B2



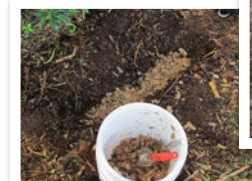
B3

### C) Fermented Waste Transfer

1. After two weeks, the food waste should have fermented.
2. Dig trenches in and around garden beds.
3. Transfer and mix fermented food waste with soil in trenches and then cover with soil.
4. Wait about two weeks until planting.
5. This process will have transformed food waste into a nutrient rich soil that plants love!



C1



C3



#### Ingredients can be purchased at the following:

- Buckets & lids - Most hardware stores
- EM-1® - EM Hawaii, 560 N Nimitz Hwy, Honolulu, HI 96817 808-548-0396, [www.emhawaii.com](http://www.emhawaii.com)
- Molasses - Most supermarkets
- Wheat Mill Run - Waimanalo Feed Supply, 41-1521 Lukanela St, Waimanalo, HI 96795 808-259-5344