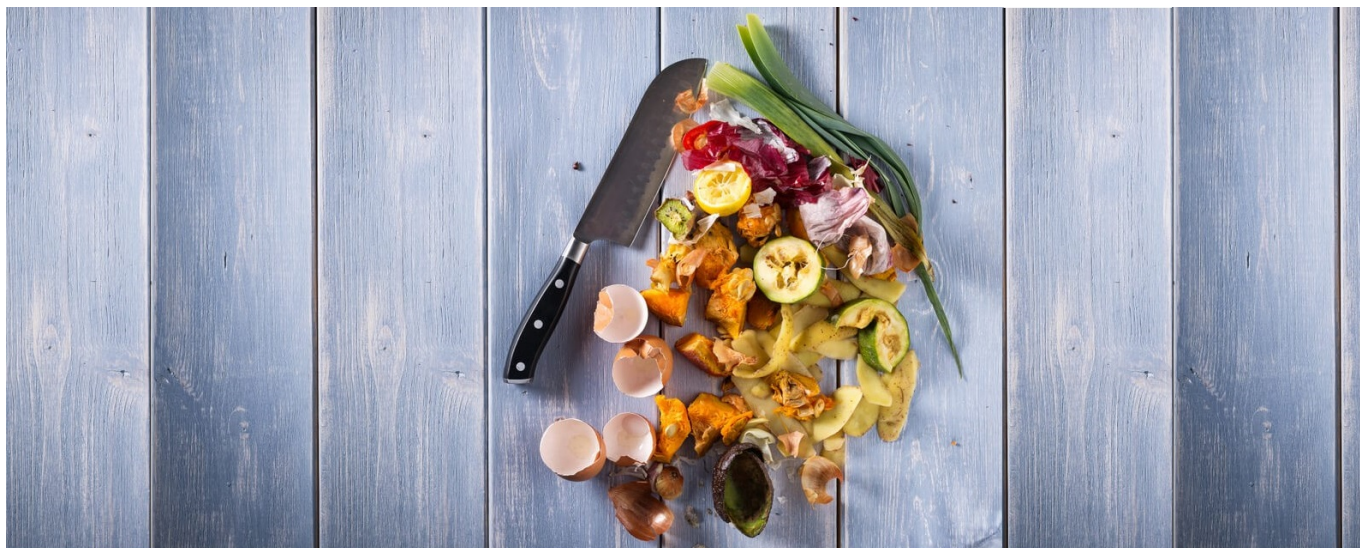


## Card for Humanity - Kitchen Bokashi

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### Kitchen Bokashi

There are many methods for “recycling” food waste/kitchen scraps with composting (aerated static pile) being perhaps the most well-known. This article provides an overview of Bokashi, a method of fermentation which is different to traditional composting.

**Bokashi** (堆肥) is a Japanese horticultural term that refers to an organic waste fermentation process. It is one of a range of Effective Microorganisms (EM) developed by Prof. Teruo Higa.

With food making up more than a third of all household bin waste ([1]), reducing the amount of food we throw out at home is vital. “Recycling” food scraps is a complementary habit we can add into our daily living.

Fermenting food preparation “wastes”, such as domestic kitchen scraps, has considerable benefits. These include the return of greater amounts of carbon, oxygen, hydrogen, nitrogen and energy to land when compared with composting. There are also improvements in soil quality (retaining more nitrogen) and crop growth, plus reduced production of carbon dioxide ([2]).

Kitchen Bokashi occurs when food wastes are fermented under anaerobic conditions. The fermentation process keeps the materials from rotting and becoming putrid, as would occur under normal aerobic conditions. Anaerobic fermentation is produced by using a sealed airtight container, known as a Bokashi bucket, which can be used to ferment food scraps and create a nutrient rich soil conditioner.

To produce kitchen Bokashi, food scraps are collected in airtight containers and inoculated with a carrier such as EM or a Bokashi spray. The Bokashi bucket can be kept indoors or left outside. The microbes in the Bokashi will break down the food scraps by fermenting them, leaving them with a pickled look. After two weeks of fermentation your bin should smell fruity or like vinegar and have a white thin coating (white mould) on top of your scraps indicating the presence of beneficial bacteria. Grey, black or green mould and a putrid odour indicates that the fermentation

process was likely unsuccessful and the juice is best discarded. Fermented food wastes can be incorporated into the garden where they start decomposing in the soil.

There is limited peer-reviewed scientific literature on fermenting food “wastes”, especially regarding Bokashi fermentation. Further research is needed, therefore care is required when analysing claims for EM and its derivative products such as Bokashi.

A Mae Jo University lab analysis found that kitchen Bokashi showed nitrogen, potassium and phosphorus levels comparable to other natural fertilizers and animal manures ([3]).



## References

- 1 <https://www.epa.nsw.gov.au/your-environment/waste/reducing-your-household-waste/love-food-hate-waste> Accessed October 2019
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- 3 Silva, J.A. and R. Uchida, ed. 2000. Plant Nutrient Management in Hawaii's Soils, Approaches for Tropical and Subtropical Agriculture. College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, Accessed September 2019.