

## INTRODUCING: THE ALL-NEW BIO-EXTRACTOR



### X350

Our premium model makes 725 gallons per hour and runs with minimal oversight, freeing up labor while producing enough extract for large farming operations.

### X250

A versatile motorized extractor with a variety of configurations and mounting options to fit the needs and budgets of a wide range of mid-sized farms. It can produce 500 gallons of extract per hour.

### X150

This minimalist extractor with a manually operated auger can make 500 gallons of extract per hour. A great budget solution for small farms, and home-steads.

## Recommended resources for further education:

- **The Soil Foodweb School** – Adaptive courses on soil biology, compost production, and microscope assessment designed by Dr. Elaine Ingham.
- **Regenerative Microscopy by Matt Powers** – a hands-on guide for identifying and assessing soil microbes.
- **Teeming With series by Jeff Lowenfels** – an in-depth look at our invisible partners in the soil.
- **What your Food Ate by David Montgomery and Ann Bikle** – a digestible guide to the importance of soil microbes in our diet.

## To learn more or get a quote:



Visit our website at [www.hiwasseeproducts.com](http://www.hiwasseeproducts.com)  
Email: [info@hiwasseeproducts.com](mailto:info@hiwasseeproducts.com)  
Give us a call: 423-436-0502



# LIQUID COMPOST EXTRACT

## HIWASSEE PRODUCTS RESOURCE GUIDES:

Soil Microscopy • Vermicomposting • Liquid Compost Extract



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## BENEFITS OF LIQUID COMPOST AMENDMENTS

A vibrant microbial ecosystem plays a critical role in agricultural soil. In healthy soil, microbes:

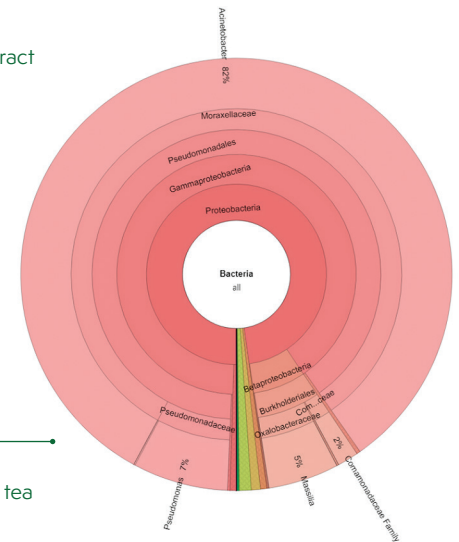
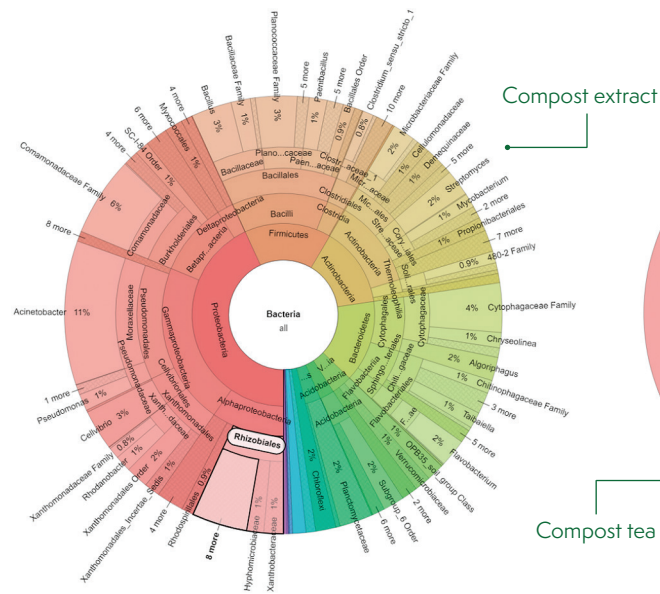
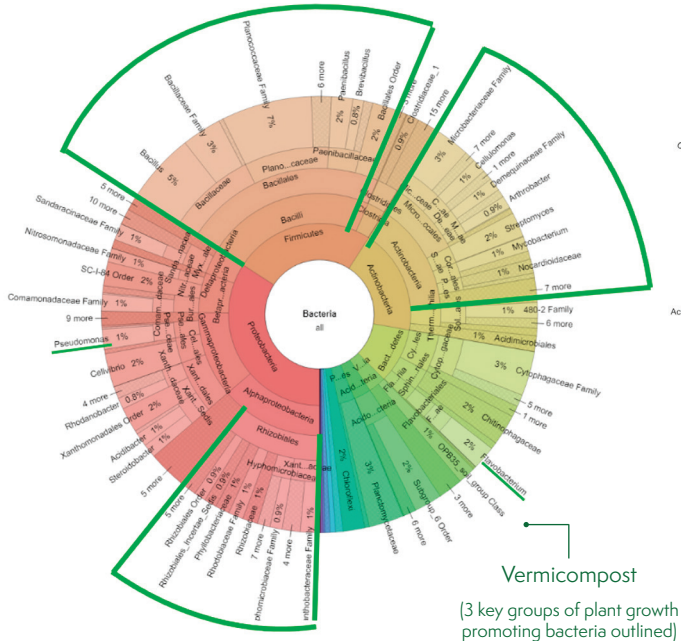
- Promote soil aggregation, improving water infiltration and retention
- Increase root development and carbon sequestration
- Expand plant nutrient uptake, resulting in more nutritious crops
- Improve plant health, promoting resistance to pests and disease

Where this ecosystem is inadequately developed, microbial populations can be extracted from biologically rich compost and applied to the soil as a **liquid compost extract**. One pound of compost can produce 4-10 gallons of extract, making it far more efficient than solid application of compost. Microbial populations in the extract can be multiplied further by adding nutrients and aerating the mixture for a set time to create **compost tea**.

## COMPOST EXTRACT VS. COMPOST TEA:

**Right:**  
Bacterial  
makeup of  
vermicompost,  
extract, and tea  
as determined  
by Zack Jones  
through DNA  
sequencing.

Graphs courtesy of  
Aggrego Data. See  
full article here:



## COMMON COMPOST EXTRACT APPLICATIONS:

- Fertigation, including pivot irrigation systems
- Foliar sprays
- In-furrow applications when seed planting
- Seed coating prior to planting
- Root drenching prior to bareroot / plug planting
- Biochar inoculation

## COMMON MICROBIAL FOODS ADDED PRIOR TO APPLICATION:

- Blackstrap molasses – feeds bacteria
- Fish hydrolysate – feeds fungi
- Kelp powder – feeds fungi
- Chitin powder – feeds microbes, adds calcium to soil

**Compost tea** production employs a “brewing” process designed to expand the population of certain microbes by adding microbial foods and aerating the liquid for 12-48 hours. The tea must be applied immediately, or harmful anaerobic microbes will take over. The biological makeup is far less diverse than extract, as a few bacterial strains will tend to dominate the mixture, and fungi and protozoa do not increase significantly in the brewing process. Compost tea is an effective foliar application, as the large number of beneficial bacteria will out-compete pathogenic strains and prevent disease.