

**DILULU FOUNDATION**

GROWING GREENER COMMUNITIES ACROSS AFRICA

GARDENING GUIDE

Making and Using Compost Tea Guide

Learn how to brew and apply compost tea to enhance plant growth and soil health. This guide covers brewing methods, equipment, application techniques, and troubleshooting for both aerated and non-aerated compost teas.

COMPOSTING

ALL LEVELS

ENGLISH

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"Knowledge grows when it is shared."



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Compost tea is a liquid extract of mature compost, brewed to multiply the beneficial bacteria, fungi and nutrients that healthy plants depend on. Gardeners across Africa use it as a natural, low-cost alternative to chemical fertilizers — a brew that feeds plants through their leaves and roots while restoring life to tired soil.

This guide covers the science of compost tea, how to brew it well with simple equipment, when and how to apply it, and the mistakes that turn a good brew bad.

What Is Compost Tea?

Compost tea is made by steeping high-quality compost in water. As the compost soaks, its soluble nutrients and microbes release into the water. With aeration and a little food for the microbes — usually molasses — the beneficial organisms multiply dramatically, producing a liquid teeming with billions of helpers per litre.

Two Main Styles

- **Aerated compost tea (ACT):** brewed with an air pump for 24–36 hours to multiply oxygen-loving bacteria and fungi. The modern standard.
- **Non-aerated tea:** compost steeped in water for 7–14 days, stirred occasionally. Older method, lower microbial counts, but still valuable in small gardens.

Why Brew Compost Tea?

- **Feeds plants:** nutrients in tea are dissolved and immediately available to roots and leaves.
- **Rebuilds soil life:** every application inoculates soil with beneficial microbes that cycle nutrients and suppress disease.
- **Strengthens leaves:** foliar sprays coat leaf surfaces with protective organisms that outcompete pathogens.
- **Stretches compost:** a few kilograms of compost can treat a large garden many times over as tea.
- **Low cost:** the only recurring input is a spoonful of molasses.

"A good compost pile is a bank; compost tea is how you write cheques to every plant in the garden."

What You Need

1. **20-litre bucket:** clean, food-grade, never used for chemicals.
2. **Air pump with airstones:** a simple aquarium pump (around 3–6 watts) drives the whole system.
3. **Quality compost:** mature, sweet-smelling compost or vermicast is the heart of the brew.
4. **Microbe food:** unsulphured molasses (one tablespoon per 20 litres) — use less in hot weather.
5. **Mesh bag or old stocking:** holds the compost while water flows through.
6. **Chlorine-free water:** rainwater or tap water left standing overnight.

Brewing Aerated Compost Tea — Step by Step

1. **Fill** the bucket with 20 litres of chlorine-free water and run the air pump for 10 minutes to oxygenate.
2. **Fill the mesh bag** with 2–3 cups of mature compost or vermicast and suspend it in the water, massaging it gently so the water clouds.
3. **Add the food:** dissolve one tablespoon of molasses in warm water and stir it in. More molasses feeds more bacteria; less favours fungi. Do not overfeed.
4. **Brew** for 24–36 hours with the pump running continuously. The surface should develop a rich, foamy head — a sign of vigorous microbial growth.
5. **Use immediately:** tea is at its peak when the brew finishes. Apply within four hours for maximum life.

How to Know It's Ready

- **Smell:** earthy, sweet, like a forest floor after rain.
- **Look:** chocolate-brown with creamy foam on top.
- **Warning signs:** rotten or sour smells mean the brew went anaerobic — do not use it on plants; pour it onto bare soil away from the garden and clean everything thoroughly.

Applying Compost Tea

Soil Drench

Pour the tea directly onto the root zone of vegetables, fruit trees, seedlings and lawns. Use about one litre per square metre. The microbes travel with the water into the soil, colonising the root zone and improving nutrient availability.

Foliar Spray

Spray tea onto leaves in the early morning or late afternoon — never in strong sun, which kills the microbes and can burn leaves. Cover both sides of the leaf; the underside is where most plant pores live. A simple backpack or hand sprayer works well; strain the tea first to avoid clogging.

Timing and Frequency

- **Vegetables:** every two to three weeks through the growing season.
- **Seedlings:** a half-strength drench at transplanting reduces shock.
- **Fruit trees:** monthly drenches around the drip line during flowering and fruiting.
- **Lawns and beds:** monthly during the rains or as part of regular irrigation.

Compost Tea Recipes

All-Purpose Bacterial Brew

- 20 litres water · 3 cups mature compost · 1 tbsp molasses · brew 24 hours
- Best for: vegetables, annuals, lawns, seedlings.

Fungal Brew for Trees and Shrubs

- 20 litres water · 3 cups leaf-mould-rich compost · 1 tsp molasses · 1 tbsp oat flour · brew 36 hours
- Best for: fruit trees, woody perennials, shrubs.

Vermicast Boost

- 20 litres water · 2 cups vermicast · 1 tbsp molasses · brew 12–24 hours
- Best for: everything — especially container gardens and houseplants.

Safety and Hygiene

- Use only fully mature, well-cured compost — never fresh manure or unfinished compost, which can carry pathogens.
- Wash hands after brewing; keep brewing equipment separate from food utensils.
- Wash produce before eating, as with any garden-grown food.
- Store nothing: tea cannot be kept. Use it fresh or pour it out.

Common Mistakes and Fixes

MISTAKE	RESULT	FIX
Too much molasses	Bacteria bloom then crash; sour smell	Stick to 1 tbsp per 20 litres; brew shorter in heat
Tap water with chlorine	Few microbes survive	Use rainwater or water stood overnight
Brewing longer than 48 hours	Oxygen runs out; brew turns bad	Brew 24–36 hours and use at once
Dirty equipment	Contaminated brew	Rinse buckets, hoses and sprayers after every use
Spraying at midday	Microbes die, leaves may scorch	Apply at dawn or dusk

Compost Tea in Schools and Demonstration Gardens

Brewing tea is a perfect classroom experiment: students can measure temperature, observe foam development under magnification, and test brews on parallel garden beds. Community demonstration gardens often brew a weekly batch as part of their public workshops — visitors smell the forest-floor aroma and are instantly converted.

Frequently Asked Questions

Is compost tea a fertilizer or a pesticide?

It is primarily a soil-life inoculant and gentle fertilizer. Healthy soil life suppresses many diseases naturally, but tea is not a cure for an active infection.

Can I brew without an air pump?

Yes — the traditional method steeps compost for 7–14 days with daily stirring. It produces fewer microbes but still feeds plants. Keep it covered and outdoors; it can smell.

How much does a batch cover?

A 20-litre brew covers roughly 20 square metres as a soil drench, or up to 100 square metres as a fine foliar spray.

What compost makes the best tea?

Mature, dark, crumbly compost with a sweet earthy smell — especially compost that contains a diversity of materials: kitchen scraps, leaves, aged manure and garden trimmings.

Glossary of Terms

- **Aerobic:** requiring oxygen — the condition maintained by the air pump.
- **Anaerobic:** without oxygen — the condition that spoils a brew.
- **Foliar feed:** nutrients applied by spraying leaves.
- **Inoculant:** a preparation of live microbes introduced to soil or plants.
- **Vermicast:** worm compost, an excellent tea ingredient.

Further Learning

Experiment deliberately: brew two batches with different composts, label your test beds, and let your plants vote. Extension officers and permaculture networks can help you view your brew under a microscope — the moment you see the microbial life you have been multiplying, tea-making becomes a lifelong practice.