

Compost Tea



Actively aerated compost tea is another tool in the organic gardener's tool belt for boosting the overall health of the garden. Compost is used as an inoculant in rainwater with food and air provided to breed beneficial microbes (microorganisms) which can then be applied to the garden as either a foliar spray or soil drench.

Compost tea boosts the immune system of your garden via the principles of competition, much like fighting weeds by planting densely so there isn't space or light for them to grow. High beneficial microbial populations take up available habitat in the garden and leave no room for pathogens. In addition, if beneficial microbe populations outnumber non-beneficials, they have a greater chance at can successfully fighting pest and disease outbreaks.

Effort Scale:

Easy	1	2	3	4	5	Hard	Requires set up of aerobic system and attention to timing
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What is it?

Aerated compost tea is different than the compost extracts commonly used in the past. Most beneficial microbes require an aerated environment to thrive (this is why we pay close attention to the moisture and air content of our compost piles). By providing air via an aquarium pump, we keep the bucket of tea oxygenated and therefore conducive to beneficial bacteria, fungi, nematodes and protozoa.

Tip: Aerated compost tea is not to be confused with extracts or manure "teas" where compost or manure is allowed to soak in water for days to weeks without any aeration. Research has shown that this produces an anaerobic (non-oxygenated) environment that breeds pathogens and is not beneficial to your garden.



A double outlet aquarium pump is necessary for DIY brewers

Ingredients for a 5 gallon Brew:

- **Compost (2–4 cups):** Good quality home-made compost. It should smell earthy and sweet and be as moist as a wrung out sponge. Don't use compost purchased from a garden store, it has been sterilized to kill weed seeds but this also kills the microbes you are trying to breed! Vermicompost is wonderful to use as well.
- **Water (5 gallons):** Non-chlorinated—only use rainwater or dechlorinated water, as the chemicals in tap water are there to kill microbes! In Victoria, our water is sterilized with chloramine, which does not "evaporate out" by leaving a bucket of water out overnight. If you do not capture rainwater, you will need to purchase a dechlorinator from your local pet store (often used in aquariums).
- **Food (2 tblsp):** You can tailor your tea to produce a brew that is dominant in either bacteria or fungi. Bacterial foods include unsulphured molasses, fish emulsion, cane sugar, maple syrup, fruit juice while fungal foods include kelp, rock phosphate, oatmeal, fish hydrolysate.
- **Air (lots of bubbles):** Find out how to build your own actively aerobic compost tea brewer with an aquarium pump and tubing by following the link in the "Sourcing Supplies" box on the next page



General Order of Events:

1. Assemble brewer (See "Sourcing Supplies").
2. Place compost/food and small air stones in paint strainer bag
3. Add rainwater/dechlorinated water
4. Bubble for 24-36 hrs at room temperature, out of direct sunlight
5. Strain and use within 4 hrs
6. **Sterilize tubing and bucket with 1:10 hydrogen peroxide to water solution (unclean equipment breeds bad bacteria)**

Tip: Tea should smell sweet and earthy. If there is any sulfuric or putrid smell, it has gone anaerobic and you should discard it.

Application:

- Apply early in morning or evening to avoid UV damage to microbes.
- 5 gallons/acre as a soil drench or 10 gallons/acre if using as both a soil drench and foliar spray
- Foliar Spray: Make sure you are getting the tea onto the undersides of leaves, a pesticide sprayer works best but you can also get creative with a watering can. Spray until drips are coming off of plant
- Soil Drench: Use a watering can and drench soil around plants, great for transplanting!
- Immediately after leaves have fallen in autumn and again in early spring to mitigate the impacts of non-beneficial fungal growth due to decay over the winter time
- Every two weeks if just starting to apply it to your garden, reducing to once or twice throughout the growing season after a few years when there is a noticeable improvement in plant health



Sourcing Supplies:

- Instructions for making your own 5 gallon brewer: [Deuley's Little Texas Tea Brewer](http://tinyurl.com/compostbrewer) (<http://tinyurl.com/compostbrewer>)
- Pet stores that sell aquarium supplies: pump, tubing, connectors, air stones, dechlorinator
- Deli counter or bakeries will usually give away 5 gallon buckets, make sure to clean with hot soapy water
- Paint stores/hardware stores will have paint strainer bags
- [Organic Gardener's Pantry](http://www.organicgardenerpantry.ca) carries kelp, fish emulsion, brewers and starter kits



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