

Beneficial Microbes

Two different types of beneficial microbes

- Thermophiles, which break down biomass (-> compost starter, “hot compost”)
- Mesophiles and Actinomycetes, which build up humus (-> compost tea, “mature, cold compost”)

Compost starter

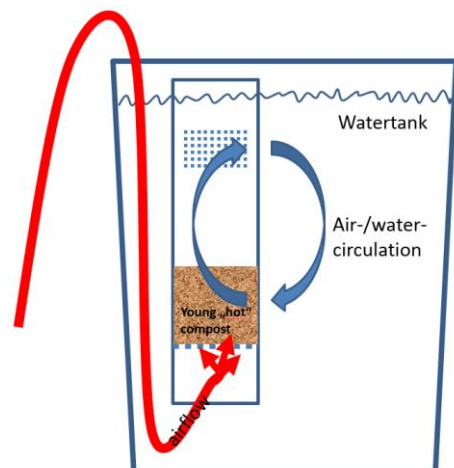
- Break down of plant material (to make compost out of it)
- Is added as conditioner to the pile when starting a new compost windrow

How to produce it yourself:

You need:

- a barrel of minimum 200 l water
- 2 kg of plant material that just started to decompose, e.g. after 5 days of a freshly started compost pile or material that was initially left in the field and started to decompose there
- 0.5 kg of feed for the microbes, e.g. molasses, sugar, whey, seaweed powder, trace elements/minerals
- A compost starter/tea brewer
- An air blower

1. First, you fill the plant material / hot compost and the feed for the microbes into the brewer
2. Attach the air blower to the compost starter/ tea brewer
3. Place the brewer in the water barrel and fix its position firmly to avoid any movement
4. Start the air blower and let it blow and mix for 6-8 hours.



If no power or air blower is available, the materials can be put in the 200 liter tank and stirred manually for minimum 1 hour. Stirring it manually is less effective but better than not doing it.

Note, since it is living microorganisms, the brewer should not stand in full sunlight the entire time and the compost tea should be applied within 48 hours after preparation.

How to apply it:

- The compost starter should be applied while making the compost pile in between the layers.
- The compost starter can be applied using buckets or watering cans. No filtering is necessary prior to application.
- If possible, a second round of compost starter should be applied to the compost pile prior to the first turn.

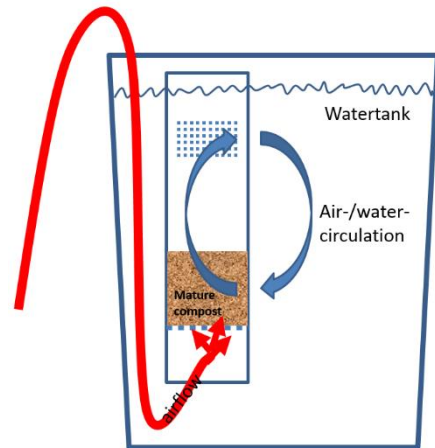
If it is not feasible under your conditions to make a compost pile at a certain location, then, also it is not ideal, you can apply the compost starter also directly in the field on shredded crop residues or mulch for an in-situ composting.

Compost tea

- When compost is applied to the field, nutrients are not necessarily plant available
- The aim of compost tea is then to activate microbes to release nutrients from the compost and make them plant available

How to produce and apply it:

- The setting to produce your own compost tea is similar to the one for compost starter. However, for the compost tea, mature compost is filled into the brewer instead of fresh, hot compost.
- Thus, it is 2 kg mature compost plus 0.5 kg of microbe feed (molasses, sugars, etc.) inside a compost tea brewer which is placed in a barrel with 200 l water
- Let the air blow for 6-8 hours
- Now it can be applied to the field with anything ranging from a back sprayer, watering cans up to your irrigation system. If you intent to use a back sprayer or irrigation system, filtering the compost tea would be advisable to avoid problems with the nozzles.



Note, since it is living microorganisms, the brewer should not stand in full sunlight the entire time and the compost tea should be applied within 48 hours after preparation.

200 l are sufficient for about 20 ha.