NATURE'S WAY

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DIY INSTANT COMPOST TEA

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BREWING FOR GARDENERS

Please first read *DIY Instant Compost Tea – Introduction* and *Starter and Application for Gardeners*, at
https://www.gladstoneconservationcouncil.com.au/gcc-campaigns/regenerative-agriculture/

Aerated brewing

Good natural soil biology needs oxygen, so aerated brewing is necessary to achieve good biology.
An aerobic brew smells 'good', the sweet smell of good moist soil. Anaerobic biology does not need oxygen and smells like rotten eggs or ammonia and is often harmful. Check by smelling and dump anaerobic brews.

Equipment

A 40-litre brew can be brewed using many designs as long as it results in a lively 2-cm boil on the water surface – a jumpy surface as seen on the video, see Photo 3. A pump suitable for a 40-litre brew must produce at least 40 litres of air per minute.

One example consists of two 20-litre pails, an aquarium pump, 20 mm conduit and fittings and 13 mm poly pipe and fittings, all available at most hardware shops.

Photo 1 – Overview

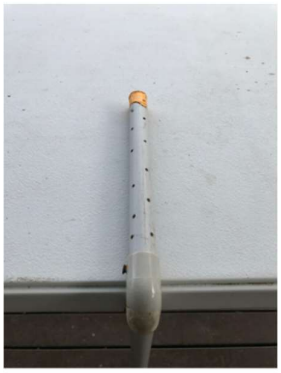

Photo 2– Spreader pipe- underneath view

Photo 3 – Boil on brew

The twelve 3-mm air holes in the spreader pipe in Photo 2 face sideways and downwards. One row either side of the centre line minimises anaerobic dead spots around the edges.

Another example of brewing equipment consists of a 60L blue drum with the top cut and the drum filled with 40 litres of water. A pond pump (under the red cover in photo 4) supplies air.

A poly pipe connects the pump to the spreader pipes at the bottom of the drum. When ready, the brew is syphoned from the drum into a watering can or tank used for application, see below **Application.**

Photo 4 - Overview

Photo 5 - Pond pump

Photo 6 –Air spreader

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Feeding the biology
Multiplying biology requires food. The ingredients added during brewing favour fungal growth, which is the part of the biology that builds soil structure and captures long-term carbon. Fungi needs the other biology as food to survive and grow.

Brewing
Use only rain water or non-chlorinated water.
To remove chlorine, allow to stand in the sun or aerate for 3 – 4 hours.

Mix into 40 litres water or non-chlorinated water
- 100 ml Fish emulsion,
- 200 ml Seaweed liquid,

- Soak starter in about 5 litres of water for 10 minutes, breaking lumps by hand, then add to brewing drum
- Brew for 24 hours in warm weather and 48 hours in cool weather.
- Apply within 4 hours after stopping aeration.

Note:);

Application
Once the brew smells 'good', let the starter settle for a few minutes before syphoning the brew into the spray equipment. Add sufficient water to enable application. The brew can be poured directly onto the soil or sprayed over the plants to stop disease on leaves and fruit.


Photo 7 - Sieve

The brew can be applied in many ways:
- by watering can,
- with a backpack sprayer,
- with a water pump and hose,
- with a 16-litre battery powered sprayer.

When using a backpack sprayer or pump, the use of a simple sieve such as an aquarium fish net will reduce the chance of nozzles blocking.

Spread the remaining solids by watering can - without a nozzle.

Applying to soil
When applied as a soil improver, 40 litres may treat 2,000 – 4,000 square meters, which is far more than a house block. Add at least 40 litres additional water at application.

Applying to foliage for disease control
Literature reports the use of compost tea for disease control, both in ground and above ground.

We have observations of disease control on leaf and fruit diseases in pawpaw and cucumbers.

In photo 8, the brew was applied to the area below the line on the fruit, the area above was the control.

The photo was taken seven days after application.
The brew stopped spread of the fungus and the damage remained limited to the surface.

The flesh from the control area was still edible.

Photo 8 – Disease control on pawpaw

The brew has also been used to significantly reduce powdery mildew on cucumbers but no photos were taken.

We are testing this further.

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