



FACT SHEET

PREPARATION FOR MAKING GOOD THERMAL, AEROBIC COMPOST FOR BREWING COMPOST TEA

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Based on the methods of Dr Elaine Ingham, Soil Food Web,
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PREPARATION

Good quality compost tea, teems with beneficial microbes and can be brewed from good quality, thermal, fungal dominated compost. The preparation of high quality compost is important to ensure the brewed tea is also of high quality.

In this fact sheet we outline the preparation and steps required to produce good quality compost which can then be brewed and sprayed in a vineyard.

To find out more please refer to the **EcoVineyards BPMG on soil health in Australian vineyards: Part B**, Section 2: The art of making quality compost and compost tea.



Figure 1. How to make your own high-quality compost for compost tea [Photos: Mary Retallack].

Equipment

The following list of items are designed to be used when producing compost for compost tea production.

- 3.5 to 4 meters of wire of 75 mm x 50 mm mesh 1,200 mm wide (and a minimum of 2.5mm thick). Whites Rural Farm Mesh works well. You may need to source the wire from a farm supply shop.
- 3 x 6 mm D-shackles
- Small tarp to cover top to keep rain out and heat in
- Pitchfork(s)
- Step ladder



Figure 2. Items used in compost tea round preparation [Photos: Mary Retallack].

Composting materials

Gather and keep the brown and green organic materials separate prior to the construction of the compost tea round. The material can either be layered (green plus brown) or pre-mixed.

Volume: approximately 1.5 cubic metres of brown materials and a separate pile of 1.5 cubic metres of freshly cut green materials, both shredded into small pieces if possible (i.e., run the brown materials through a chipper or similar). They will reduce in size once placed in the ring and compressed.

Recipe:

- **50% woody/brown material:** i.e., sticks, twigs, small branches, wood chips, wood shavings, sawdust, newspapers, cardboard dry leaves, and straw.

Straw and wood chips are the easiest to get in bulk whilst the other components can be smaller quantities.

- **45% green material:** i.e., grass hay, weeds (dandelion, nettles, mallows are good), vegetable waste, flowers, herbs cuttings (especially comfrey, yarrow, tansy, and borage), Casuarina needles, coffee grounds, silage, seaweed, and bamboo.

For greens: grass, silage, and hay can be bulk materials.

- **5% manure:** i.e., high nitrogen material: cow, horse, chook, pig, or sheep manures, etc., feathers and hair as well as chaffs such as lucerne, clover, pea, bean, vetch, and wattle leaves including seed pods.

Alternatively, blood and bone or blood and fish meal are good as are Dynamic lifter pellets.

- **Other ingredients that can be added:** granite dust, basalt dust, rock phosphate, zeolite powder, eggshells, and charcoal.

Fish hydrolysate (i.e., Charlie carp), Seasol liquids can also be added.



Figure 3. Other ingredients commonly used in compost tea round preparations [Photos: Mary Retallack].

Construction

To start a pile: measure your starting materials into piles in the proportions you need.

Option 1: Layering

- Start layering the pile/ring in proportions of materials i.e., woody + (green and manure).
- If using the ring, then make each complete layer 20 cm (10 cm woody + 10 cm green and manure).
 - Press down heavily by walking on the layer. Water well to get the water content over 50%. Add next complete layer (woody, green, manure), press down and water.
 - Continue until pile/ ring is completely full. Water again very well.



Figure 4. Compressing and watering the materials in a compost tea round
[Photos: Mary Retallack].

Option 2: Pre-mix materials and then construct

- Mix all the layers together in a pile to achieve a final 50% woody material that is well mixed with green and manure
- Build the ring by forking the mixture in and pressing down regularly
- Water well to get water content up to 50% as you build the pile. Cover with cardboard or tarpaulin to reduce drying once completed



Figure 5. Pre-mixing green and brown materials for the compost tea round
[Photos: Mary Retallack].



Figure 6. Adding seaweed and fish hydrolysate (left), compacting (right) [Photos: Janet Klein].

Monitor closely and turn regularly

- Take temperature in several places in the centre of the core within 24 hours.
- When temperature reaches around 55 to 60°C, break the pile/ring and turn the outside to the inside and remake the pile.

Important: Don't let temperatures exceed 65°C!



Figure 7. Compost thermometers that are purpose designed to keep a close eye on temperatures of the compost pile [Photos: Mary Retallack].

- Continue to do this until the pile stabilises at ambient temperature. To meet the 'Australian Standard 4454 composts, soil conditioners and mulches' the pile needs to be turned five times in 15 days (if you are using the compost yourself, do not worry about this).
- Then turn the pile once a month during its maturation phase and it will be ready to use for compost tea production after 5 to 6 months.

NB. The pile must remain aerobic, and moisture must stay between 40 and 50% throughout the composting process. Use rainwater where possible.

Once the compost tea is fully mature you can assess its vitality and life by assessing a sample diluted in rainwater under a microscope prior to use.

Compost tea equipment resellers

- Compost Tea Brewing Company, Western Australia: [Compost tea brewers, compost tea air blowers and microscopes](#)
- Ground Grocer, Orange, New South Wales: [Compost tea brewers, compost tea air blowers, microscopes and compost thermometers](#)

Microscope analysis

If you wish to find out more about how to identify microorganisms and assess their presence in compost prior to brewing and applying different formulations.

Face-to-face microscope courses:

- Agpath Pty Ltd, Victoria: [Small microscope course](#)
- EarthWhile Australia, Western Australia: [Soil health and microscopy workshops](#).
- You may also be interested in Ellen Walkers Tedx talk [The world beneath our feet](#)
- Soil Food Web Institute Australia, South Australia: [Soil microscope classes](#)

Online microscope courses:

- Dr Elaine Ingham: [Choosing a microscope](#)
- Dr Elaine's Soil Food Web School: [YouTube videos](#)
- Living Web Farms: [Assessing soil health using a microscope with Meredith Leigh](#)
- Matt Powers: [Choosing your microscope](#)
- Soil Food Web: [Microscope intensive course](#)

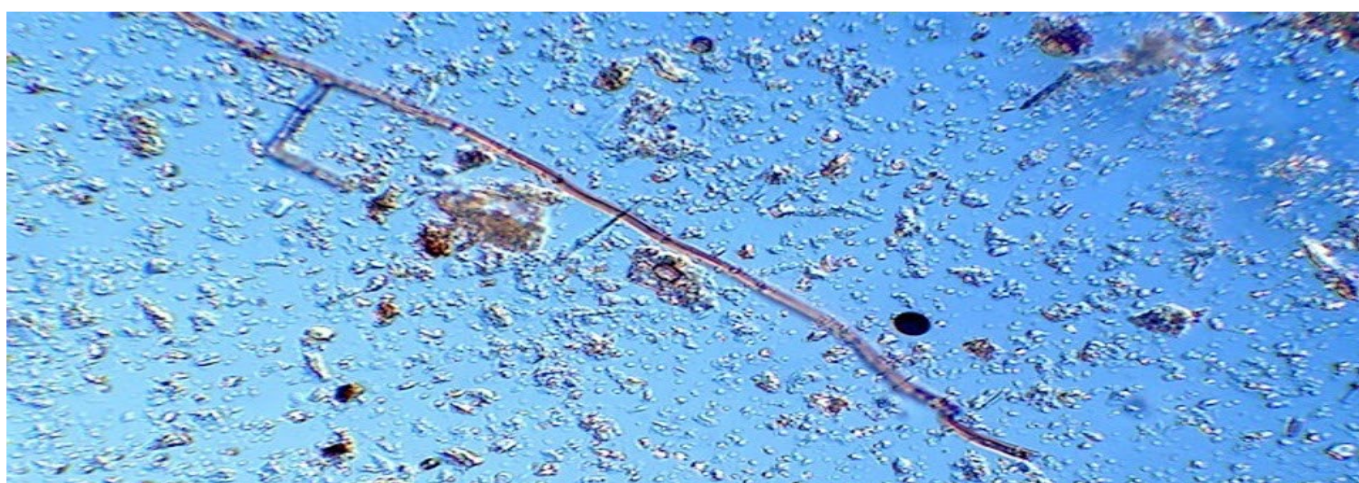


Figure 8. Microscope view of a diverse compost tea sample [Photo: Mary Cole].

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The National EcoVineyards Program is funded by Wine Australia with levies from Australia's grape growers and winemakers and matching funds from the Australian Government.

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