



Composting: **Hot & Cold Composting**

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Worm Farming Workshops "Face To Face"

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For more instructions, other information about raising worms, links to information and how-to videos on my u-tube channel, books, courses, worm farm plans etc go to my resource page: www.TheWormMan.com.au/help

What is Composting Good For?

Composting is GREAT for excess food / waste.

You'll never get all your waste into worm farms and the worms don't eat some of the stuff you can easily compost. So composting is the way to go to reduce your waste even more.

The resulting compost is great for gardens and plants. Worm compost (castings) is admittedly better, but compost is still a great soil conditioner.

What Is The Difference Between Hot & Cold Composting?

The difference is in the heat generated and how that heat treats the whole pile, when turned correctly.

This also results in hot composting being far quicker.

Hot composting deals with seeds, like from weeds or tomatoes. It also treats pathogens if done correctly. It does not treat parasites in pet manure that can infect humans (look up "Helminth parasites".)

What About The Corkscrew Device That's Used In Composting?

I am not a fan of these as I believe they may harm worms, which will take up residence in your compost, even though they are not supposed to.

The corkscrew won't make a cold compost into a hot compost, although it may make the cold compost a little quicker.

A better alternative is to put "slotted ag pipe", or a rainwater pipe with slots cut into it, into the middle of your composter. This adds extra air into the system.

Thermophillic vs Mesophillic Bacteria?

Different bacteria like different temperatures. When the conditions that species likes are not available, they can go to sleep, or "aestivate," until conditions suiting them return.

A hot compost starts out Meso, becomes Thermo for 3 days, then cools and becomes Meso again - then you turn it. It heats back up and becomes Thermo again. Repeat. At the curing phase, it is Meso.

My Qualifications:

- BCC Certified Master Composter
- BCC Master Composters: Worm Farming & Black Soldier Fly Trainer
- Education provider/trainer to other Council programs
- Cert. 3 Horticulture
- Cert. 3 Rural Ops/Herbicides
- Cert. 4 Training & Assessment (qual. to teach Horticulture to Cert. 3)
- YouTube Worm Farming channel 80+ videos - 165,000 video views.
- Author of E-books, guides and worm farm plans etc.

Hot Composting

Other names: Thermophillic Composting, Berkeley Method

Typical unit: Bays made from pallets or similar. Minimum required volume is 1 metre x 1 metre x 1 metre. (See PICTURE.)

Pros: Treats weed seeds and pathogens. Very QUICK (2 to 3 weeks.)

Cons: A lot more work. A larger area needed to make the bay system.

Overview: Hot Composting uses “Thermophillic” Bacteria. This just means the type of bacteria that love higher temperatures. This is a man-made process to make compost more quickly than nature does it.

Construction: “Bays” are built, often using old pallets. Minimum required volume is 1 metre x 1 metre x 1 metre. (See PICTURE.)

Several bays, often 3 bays, are used to allow ongoing batches to be made and one to be cured.

Process:

- Start with a layer of sticks - this adds air into the system
- Build the pile, alternating layers of 2.5 parts Carbon + 1 part Nitrogen - like a lasagne
- Water each layer as you go
- You can add an Activator/Accelerator every few layers - like comfrey, used coffee grounds, molasses, compost, worm castings, worm leachate etc
- Continue until 1 metre high (by at least 1 m. x 1m.)
- Monitor your temperatures. Once the pile reaches over 55 Celsius for 3 days, it's time to turn it.
- Do this process, to turn the pile three times, trying to get the outside to the middle; and the middle to the outside.
- Add more water when turning to replace what has been used up by the bacteria and the heat.
- Some people will rest / cure it for an appropriate period (this helps to prevent nitrogen draw down etc.)
- The process is finished, ready to use, in 3 to 6 weeks.
- The process should ensure biology is finished and "safe" for use on plants or in compost teas. (Please note with holding periods and industry best practice guidelines.)

Typical Construction:



Cold Composting

Other names: (nil)

Typical unit: "Dalek" style composter (or anything similar, like a rubbish bin or a plain old pile on the ground.) (See PICTURE.)

Pros: Very easy to do, less work. Built as materials become available. Composters are easily purchased second hand for little money. No construction needed.

Cons: Takes longer to complete, even up to 6 months. Several units need to be used, to keep putting your scraps into something.

Overview: Cold Composting uses "Mesophilic" Bacteria. This just means the type of bacteria that love moderate temperatures. This is the way nature decomposes things.

Construction: Units are purchased, new or second hand, or DIY (like a garbage bin or a simple pile on the ground).

Process:

- Built over time, in layers, as materials become available.
- Keep some carbon near your bin. When you have food/nitrogen to add, add it and put the carbon on top to help keep insects away etc.
- The process may take 3-6 months to finish, to be ready to use.
- You may be able to sneak some compost out of the bottom of the unit, but just be aware the biology is not as finished as if you left it run it's course.
- The biology may not be as "finished" as hot composting. So be aware of that if making compost teas, to ensure to restrict from food plants or note with holding periods and industry best practice guidelines.

Typical unit: "Dalek" composter.



Need A Compost Thermometer And Don't Want To Pay \$100 For One?

Read my post about making a compost thermometer from a cheap electronic thermometer sold on ebay for about \$10:

www.thewormman.com.au/temperature

And PLEASE REMEMBER - there's HEAPS of FREE resources on the help page at:

www.TheWormMan.com.au/help

If you have any questions, please just call or email me, I am happy to help.

Thanks and happy composting !!!

Regards,

Brian Donaldson

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