Earthmaker®
the aerobic composter

ASSEMBLY INSTRUCTIONS on back page
- *please follow carefully*

User Guide

3 BIN PROCESS
gravity does the hard work!!

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Getting the best results

Congratulations on choosing to process your organic kitchen and garden waste with an aerobic Earthmaker™.

Composting is a natural means of making a valuable soil enhancer and your Earthmaker is designed to achieve excellent results with the least effort on your part. In the top chamber water, oxygen and heat help micro- organisms (fungi and bacteria) to break down the raw material. In the cooler middle and bottom chambers, macro-organisms (worms and invertebrates) work to further break down material to mulch and, finally, compost.

Choosing a site

When you have assembled your Earthmaker (see back page instructions) it can be easily moved to a suitable site. PROPER SITING IS IMPORTANT.

- Position your Earthmaker conveniently in relation to your kitchen.
- Choose a place shaded from hot midday sun. While radiant heat warms the top and assists composting, too much heat can soften the plastic and reduce its structural integrity.
- Make a **LEVEL site** approximately one metre in diameter. **A firm, flat base** of brick, paving slabs or timber will stop the Earthmaker from tipping forward, allow for good drainage and easy removal of compost and prevent rodents from burrowing in (see Trouble-shooting Hints).
- Planting herbs around the base is both attractive and useful.

Feeding your Earthmaker

From the garden

Use grass cuttings, dry leaves, weeds* and pruning waste. If possible use a shredder to mince up larger pieces. NB: Using weedkiller containing Chlopyralid on material to be composted may distort some plants.

Do not overload the top chamber. Large amounts of grass cuttings all at once may become slimy. Store any excess grass in a simple bin alongside and layer over food waste as it's added. Shredded paper, straw, vacuum cleaner dust, cold ashes and sawdust (untreated) can be added. Avoid toxic chemicals. Don't add heavy material. Manure has already broken down.

*Weed bulbs like oxalis may germinate. Place them in a black garden bag and leave it in hot sun for a few weeks to sterilise before adding them to your composter.

From the kitchen

Use vegetable and fruit food scraps (chopping them up aids 'digestion'). Coffee grounds, tea bags, paper kitchen towels are also suitable ingredients. Avoid meat and fatty foods: they may attract rodents or other wildlife.

Although anything organic can be fed to your Earthmaker, do not add large helpings of any one type - a varied diet, preferably chopped and mixed, works best. But the Earthmaker is designed to encourage all organic material to eventually breakdown with minimal effort on your part.

NB: Do not expect material to turn into compost in the top chamber - Earthmaking is a three-stage process!

Starting the process

Fill the top chamber with food scraps and garden waste. The mixture will heat up and naturally compact down over a few days. When adding food scraps cover them with dry leaves and lawn clippings.

Mixing and stirring material in the top chamber can be useful Use the Push-Pull-Tool (PPT) carefully – vigorous action may dislodge shelves. **Do not overload the top chamber.**

Every month or so remove the Pull-out Panel and gently push material down into the middle chamber. Start with the material in the front. Composting worms may be added but it is likely that they will find their own way into the material at all levels. Replace the Pull-out Panel.

Continuing the process

Before moving material down from the top again it will be necessary to clear the middle chamber.

Use the PPT through the access hole above the door opening to push material backward and down to the bottom chamber.

When your Earthmaker has been in operation for a few months, micro-organisms and worms (which find their way into the material naturally) will be established in the grooves in the shelves. Do not wash the shelves clean as the older matter serves to kick-start new waste and speed the process.

Before clearing the middle chamber, pull the mulch/compost in the bottom chamber through to the front using the PPT. Remove compost with a long handled shovel. Take care not to damage the lower shelf.

Place your compost directly on the garden or around shrubs, or dig in for new planting. There should be plenty of healthy earthworms. If it is too rich for new seedlings dilute with potting mix or sand /earth.

The Environmental Protection Agency states that aerobic compost acts as a carbon sink - so spreading your Earthmaker compost will reduce your carbon footprint!

Frequently asked questions

How long will it take?

Aerobic composting is faster, but the time taken depends on many variables, eg: amount of material, whether it was shredded, nitrogen /carbon balance, moisture content, time of year, etc. Good mulch is made in several weeks. A few more months of bacterial action converts mulch into real compost.

A cold climate will slow the process whilst warm weather speeds the process. But speed is not really important once the continuous cycle process has been established. The Earthmaker takes waste at any time and provides a continuous source of mulch/compost.

Can weeds be added?

Most weeds can be fed to your Earthmaker like any other green waste, but more tenacious varieties and some weed seeds (eg: oxalis, ground elder, celandine, bindweed, convolvulus) require special treatment. Seal them in a black plastic bag with some grass clippings and leave them in a sunny place to ‘cook’. When exposed to high temperatures for a few months they will decompose and can be fed to the Earthmaker.

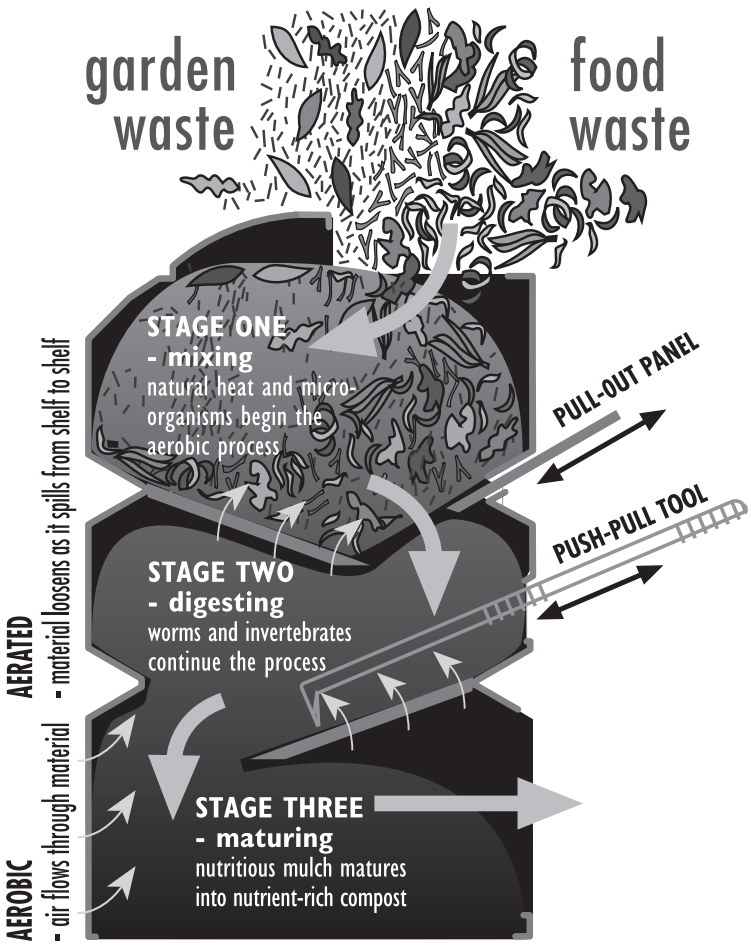
Should worms be added?

No, leave it to nature. Vegetation eating red worms will find their own way into the upper chambers. Soil aerating earthworms will appear naturally in the bottom chamber.

Visit **www.earthmaker.co.nz** for updated information and to ask your own questions.

Summary: how to make good compost

1) Site the Earthmaker in a flat, semi-shaded, convenient position.
2) Start filling the top chamber with a mix of green and brown garden and food waste. Stir carefully with the Push-Pull-Tool. Do not overload.
3) Every month or so remove the Pull-Out Panel and allow the material to drop into the middle chamber. Use the PPT to push material down, gently, if necessary. Replace the panel. Continue filling the top chamber whenever waste is available.
4) Over the next few weeks the material in the middle chamber should gradually decompose and tumble into the bottom chamber. Sometimes you will need to use the PPT, through the round hole above the door opening, to push the material from the middle chamber through to the bottom. Then you can repeat step 3.
5) Pull material in the lower chamber to the front before pushing more compost from the middle chamber into the lower.
6) When you are ready to use compost in the garden, remove it from the lower chamber (taking care not to damage the lower shelf with your spade!)
7) A continuous cycle is now established and that can accelerate the decomposition process. Use your nutritious compost around shrubs or dig it into the garden.



Troubleshooting hints

Material falls through gaps beside Pull-out Panel
This is not a problem - the gaps assist air-flow and will fill. If it really concerns you place newspaper over the gaps.

Material too wet and slimy?
You may have too many grass clippings or have added only food watse. Stir in dry leaves and /or twigs, shredded paper, straw, sawdust (untreated) or shredded dry seaweed. Ensure that the site drains well and that the lid is closed properly.

Material too dry and not composting?
Add water or leave the top open to rain. It may mean that you are not adding enough nitrogen material (grass clippings, green prunings). The composting process needs a critical mass to create heat and stimulate organic breakdown.
NB: Don't expect compost to appear in the top chamber - Earthmaking is a three-stage process.

Compost smells rotten?
If the decomposing material smells like ammonia or hydrogen sulphide ('rotten eggs') it means that the mixing, loosening and aeration has not worked as it should. Add dry leaves or shredded paper. Fold and stir to let in air.

Taking too long to reach the bottom?
You may not be feeding your Earthmaker enough, or a blockage may have developed from large twigs, big vegetable scraps or inadequate mixing and pushing. Remember to chop up food waste and shred garden waste where possible.

Fruit flies are in the top chamber?
At certain times of the year there will always be fruit flies (Drosophila). Do not worry - they are part of nature's process. But if they bother you just break their life cycle by covering with wet newspaper or layer over with grass cuttings.

White grubs appear?
Sometimes, in dry conditions, composting grubs may arrive in the top chamber. They are whitish, 1-2 cm long with a wriggly tail. They are not maggots. Leave them to do their job and layer over with grass cuttings and/or leaves.

Unwanted guests?
Rats or mice may be attracted to food or the warm nesting environment. They can be discouraged by:
- ensuring food waste is well covered with garden waste;
- keeping the lid and door properly closed;
- putting your bin on a solid surface, eg: cobbles or timber slats with narrow drainage gaps;
- putting your Earthmaker in the open (provided its not in hot sun) - rodents don't like open space where they are vulnerable to predators.

Or attract them with non-toxic bait then leave them to decompose in the compost - they will have come from somewhere nearby, so this is way to get rid of them. It is one way of keeping rodents out of your house.

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