



# **Composting Tutorial**



# Why be sustainable and recycle?

Recycling at home is important because:

- Approximately 39-45% of household waste and 30% of all the waste we throw away is organic and compostable.
- Organic waste (food scraps and garden waste) in landfill breaks down and releases methane, a potent greenhouse gas.
- Organic waste also contributes to landfill leachate that can impact on the environment by polluting water.
- Recycling your organic waste in a compost bin will create rich fertiliser that you can use to nourish your garden.



**FUN FACT** 

Worms are the ploughs of the earth.
They play a vital role in sustaining
life and fertility of all our agricultural
and horticultural systems.



HINT



Watch the video

Food scraps mixed with other rubbish release methane, a potent greenhouse gas which is a pollutant.







Black soil is good soil! Worms and microbes take carbon from the atmosphere and turn it into humus – rich black soil and worm poo – that restores the carbon balance in our soil. Compost is made by micro-organisms that decompose food and garden waste over time.

# Compost, compost, compost!

## WHY HAVE A COMPOST BIN?

- Composting is a great way to get your whole family involved in recycling organic garden and kitchen waste to make your home more sustainable.
- When used regularly, your compost bin will break down your organic waste and process it into rich plant food and fertiliser for your garden. There may even be enough for your neighbours' gardens too!
- If your household only produces kitchen waste, you can still recycle – just work with a worm farm instead.



# **HOW IT WORKS**

Compost is made when micro-organisms feed on organic matter and break it down into smaller and smaller pieces. When the organic matter is fully decomposed, it forms humus – or compost – a dark, soil-like material with a pleasant earthy smell.

While natural decomposition takes a long time, you can produce mulch in just four weeks or rich compost in six to eight weeks. All you need to do is create the perfect environment in your compost bin by providing the air, water and food needed for micro-organisms to rapidly multiply and get to work.

Once you've made your compost, place it around your plants, where it will feed the soil with important nutrients and hold moisture in. Be sure to keep your compost or mulch away from plant stems.



# How to set up your compost bin.

### ONE

# Find a well-drained position

Assemble your bin in a convenient, well drained spot with full sun if possible. Shade is okay too, however you'll need to follow the **A.D.A.M.** principles.

### **TWO**

# Prepare the material

 Place a layer of high carbon material (such as chopped woody mulch, leaves and twigs) into the base of the bin to a depth of 200-300mm. Water this layer well.

- Add two to three shovels-full of rich compost or black, alive soil from your garden (if possible, not essential). You can also add a couple of shovels-full of manure to the mix. This will 'seed' your compost.
- Your compost bin and bedding material is now established.
- If you manage your compost bin according to instructions provided here, you probably wont have an issue with rats and mice.
   However, if you are concerned, sit your compost bin on mouse wire mesh (mouse wire is the harder, smaller wire).







# How to manage your compost bin.

## YOUR COMPOSTING CHECKLIST

Composting is a great easy way to turn your food scraps and garden clippings into rich humus, but there are some important things you need to remember to keep it active.

Get the recipe right

Add roughly equal volumes of food scraps and garden waste to your compost bin.

Aerate
The microbes and worms in your compost need oxygen to remain active.

Mix your bin at least once a week with your Aerator to keep it aerobic.

Moisture
Always keep your compost system moist.

**Drainage**Always ensure excess water can freely drain from your compost bin.

Position
Position you compost bin in the sun if possible. If it must be placed in the shade, ensure you follow the A.D.A.M. principle.

Don't worry if the content in your compost bin gets hot – this is simply the body heat of billions of microscopic organisms creating rich fertiliser and plant food. It doesn't have to get hot, however you still need to mix and aerate regularly to create rich fertiliser and plant food.

# THE A.D.A.M PRINCIPLE

Follow the A.D.A.M principle to keep your compost bin healthy and happy:

# **ALIVENESS**

Compost is a 'living creature' full of worms and healthy microbes.

#### **DIVERSITY**

Mix a variety of ingredients into your compost bin, such as food scraps, dry leaves, fine woody mulch, grass, hair, herbs etc. After all, variety is the spice of life!

### **AERATION**

Use an aerating tool to aerate your compost regularly.

#### **MOISTURE**

All living things need water, but make sure your compost is not too wet and doesn't become dry like a wrung-out sponge.



**Temperature** 





## **FUN FACTS**

The core of your bin can reach temperatures between 42 - 55 degrees during decomposition.

Not all compost bins will reach these temperatures – but you can still make great compost. Mix and aerate the organic waste to heat the contents of your entire bin. This will speed up the composting process.



# 10 TIPS FOR COMPOSTING SUCCESS

- Every time you put food scraps into your compost bin be sure to add the same amount of 'leafy material' or chopped small woody twigs and leaves.
- 2. To reduce flies, never leave food scraps exposed on the surface of your compost bin. Instead, cover them with a thin layer of fine mulch or chopped small woody twigs and leaves.
- **3.** Mix your compost regularly with an aerator to speed up decomposition
- 4. Check the entire heap is always moist.
- **5.** Use a Tumbleweed Compost blanket to cover the bin. This will keep it moist and dark.
- **6.** Add other ingredients regularly, like manures, the contents from your vacuum, hair, herbs, weeds, grass and soil.

- 7. After you've mowed your lawn, add the clippings over time rather than all at once, and mix them in with other garden waste.
- **8.** Add a teaspoon or two of Worm Farm and Compost Conditioner (dolomite) weekly, to balance acidity.
- 9. When your compost bin is full, it needs to mature for six to eight weeks. To keep the microbes healthy and active, keep the bin moist and mix the compost regularly with your aerator. Add a little dolomite and pelletised manure every week.
- **10.** Leave your full compost bin to mature and start a second bin. This will ensure you can continue recycling your organic food scraps and garden waste.

# FOOD SCRAPS AND GARDEN WASTE

#### Get the recipe right!

Aim to add roughly equal volumes of food scraps and garden waste to your compost bin, but don't panic if it's not possible every time.

Compost is made when micro-organisms feed on plant matter and break it down into smaller and smaller pieces.

The plant matter you add to your compost bin should include:

Food Scraps, which are nitrogen-based:

- Vegetable scraps and other organic kitchen scraps (including egg shells).
- Small amounts of meat or dairy are okay once you become an experienced composter, however if you're still learning, they can cause problems like attracting flies and vermin.

Garden waste, which is carbon-based:

- Twiggy leafy matter
- Lawn clippings (regular small amounts green grass clippings are nitrogen based)
- Small green prunings and general garden waste
- Some garden soil is also beneficial.
- Small amounts of soggy or ripped up newspaper and cardboard is okay, however environmentally, it's best to recycle these in your recycling bin.
- Small amounts of gardening manures
   e.g. chicken and cow manure to speed up
   decomposition. Do not use pet manure,
   which can contain harmful parasites if
   not composted properly. Instead, bury pet
   manure around your trees and shrubs in
   your garden.



# **FUN FACTS**

Carbon is fuel for microbes whereas nitrogen is the building block of protein, which allows microbes and worms to reproduce. A good mix of these elements makes great compost.

Keep a bin of dry materials (torn up newspaper, sugarcane, dry garden prunings) next to your bin so that every time you add kitchen scraps, you can easily add the same amount of dry materials at the same time.



HINT

Watch the video

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When feeding your compost, always follow the composting recipe; for every addition of food scraps, add the same amount of 'leafy material' or chopped small woody twigs and leaves.





# **MOISTURE**

Nothing decomposes without water. That makes it essential to keep your compost system moist by adding waste liquids from your kitchen, such as leftover cooking water, tea and coffee. You can also use freshwater as required.

To speed up decomposition, keep your compost dark and hold the moisture in by covering it with a Tumbleweed compost blanket.

### DRAINAGE

Drainage is as important as mixing your compost to keep it aerated and actively working. Regardless of where you position your compost bin, make sure excess water can easily drain away.

# **AERATE**

It is important to regularly mix and aerate the contents of your compost bin. This will ensure the microbes work hard and fast to decompose the organic waste into rich plant food and fertiliser. Mixing and aerating will also reduce potential issues like flies, vermin and bad smells caused by anaerobic microbes that live in environments with no oxygen.

Use an aerator to mix your compost bin at least once a week. Wind it clockwise into the heap to lift the content to the surface.



**FUN FACTS** 

A compost bin is a great solution for a household that has a mixture of food waste and garden waste.



**HINT** 



Your compost bin will thrive in an aerobic environment. To maintain good aeration and to speed up the composting process, every time you feed your compost, remember to mix, mix, mix!



Watch the video



To check there's moisture in your compost bin, grab a handful of organic matter and squeeze it as you would a wet sponge - you should be able to get a drop or two of water out of it.



**HINT** 

A good moisture level for your compost is when you can squeeze a drop or two from a handful of compost, almost like a well-squeezed sponge.



### **POSITION**

Position your bin in a well-drained sunny spot if possible. If you are only able to keep it in the shade, be sure to follow the principles:

**ALIVENESS** 

DIVERSITY

**AERATION** 

**MOISTURE** 

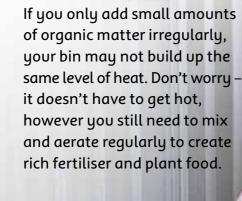
Ideally, you'll place your compost bin on soil, however you can make great compost on a hard surface too. Just beware that you may get brown water stains on the hard surface.

To eliminate the risk of vermin and other creatures getting into your compost bin, position it on a pad made from pavers and/or on mouse wire mesh (mouse wire is the harder, smaller wire).

#### **TEMPERATURE**

Decomposing organic matter gets hot from the body heat of billions of microscopic organisms working hard to create humus.

As an example, a compost bin that is regularly fed can reach temperatures of up to 55 degrees Celsius or higher at its core. For the best composting results, spread the heat by regularly aerating and mixing the contents of your bin.



# When your compost bin is full.

Your compost needs six to eight weeks to mature, and while it's best to work with two compost bins, you can create great compost with one.

#### If you're using one compost bin

Harvest the bottom layer of finished compost using an Aerator to bring it to the top of the bin. Alternatively, simply lift and move your bin then gather the ready compost that's left behind using a shovel.



#### If you're using two compost bins

When your first compost bin is full, leave it to mature and start a new heap in your second bin with a fresh supply of food scraps and garden waste.

Keep your maturing bin moist, and mix it with the aerator weekly. Remember to add a little Worm Farm and Compost Conditioner, as well as cow or chicken manure every week or two.

#### Using your mature compost

Your compost is mature when it is the colour of dark rich soil and smells earthy.
At this point, it will be better than anything you can buy at a shop.

Every time you plant veggies or a tree in your garden, use your compost to promote healthy plant growth and nutrient-rich food that will contribute to the health and wellbeing of your family.







# Compost bin problem solver.

The following common problems can quickly be resolved:

#### You're still learning to compost

Don't add meat, dairy or bread to your compost bin until you are an experienced composter – these ingredients can encourage vermin.

#### **Unpleasant odours**

Increase aeration by regularly mixing the compost and add more coarse/dry materials.

#### Not heating up and slow to break down

Add more nitrogen such as manures, fresh grass clippings, blood and bone etc.

Also, check the moisture level and if necessary, add more water when mixing – a dry heap wont heat up.

Mix your compost well and often!

#### Attracting vermin

Sit your compost bin on mouse mesh (this seems to be the most effective barrier for vermin).

Always add a layer of carbon/dry materials on top of food scraps and keep the lid in place.

Keep the compost bin moist and mix it more regularly – vermin like a dry, settled environment.

Do not add meat or dairy products to your compost.

#### Ants

Keep the compost moist – ants don't like a damp environment.

Add a little extra Compost Conditioner.

Mix your compost heap well and often.

#### Fruit flies

Add a layer of dry materials (or a compost blanket) on top of any food scraps.

Add a little extra Compost Conditioner. Mix your compost heap well and often.

#### I don't have enough food scraps

If you don't have enough food scraps to mix with your garden waste, simply substitute them with extra animal manures eg. cow, chicken manure etc. Don't use pet manure.

Mix your compost heap well and often.

Refer to our website for more problem solvers! *Visit website* 

# **COMPOSTING TUTORIAL QUESTIONS**

- 1 Approximately what is the percentage of compostable waste that Australian households throw away in their rubbish bin each year?
  - a) 39-45%
  - b) 10-20%
  - c) 90-100%
- 2 What happens to organic waste when it is put into landfill?
  - a) It breaks down into soil
  - b) It naturally disintegrates
  - c) It releases methane, a potent greenhouse gas which is a pollutant
- 3 Where should you position your Compost Bin?
  - a) In full shade
  - b) In your garage
  - c) In full sun where possible and a well-drained position
- 4 What is the best ratio of food scraps to garden stuff in the composting recipe?
  - a) 100% food scraps, no garden stuff
  - b) Roughly 50% garden stuff to 50% food scraps
  - c) 100% garden stuff, no food scraps
- 5 What can I do to speed up the composting process?
  - a) Place newspaper in my compost bin
  - b) Keeping my compost moist and Mix, Mix, Mix!
  - c) Cut up the garden and kitchen waste into smaller pieces

- 6 How damp should my compost be?
  - a) It should be the consistency of a well squeezed sponge
  - b) It should be dripping wet
  - c) It should be very dry
- **7** A compost bin is good for?
  - a) For kids to hide in
  - b) Cricket stumps for a game of backyard cricket
  - c) A household to compost a mixture of food scraps and garden waste
- 8 How can a Compost Bin benefit my family?
  - a) It is a fun and educational activity for the kids
  - b) It will help us to reduce our landfill waste
  - c) It will provide fantastic free fertiliser for the garden
  - d) All of the above



Answers Q1. A Q2. C Q4. B Q5. B Q6. A Q7. C Q8. D