
Mulch

What is mulch?

Mulch is partially broken down organic material such as leaves and twigs that has many benefits for your garden. It is usually spread in a layer on top of your garden bed or mixed through your compost to increase aeration and carbon in the compost.

Benefits of mulch

- ✓ Maintains even soil temperatures
- ✓ Reduces evaporation (saving you water)
- ✓ Slows down weed growth
- ✓ Reduces soil compaction
- ✓ Increases soil microbial activity
- ✓ Provides a slow release source of nutrients (less chemical fertilisers)



How to make mulch

Fresh leaves or grass clippings can be composted or piled up to partially break down. These should be added to compost or worm casts in the ration of **one** part compost to **ten** parts mulch. Small prunings and plants can be used directly on the soil. Small woody branches can be chipped with a lawnmower. Large branches should be chipped with a professional mulcher/chipper.

How to use mulch

Garden beds

Clear weeds and debris from the garden bed. Turn the soil and break up packed surfaces. Drench the soil around the plant, rather than regular wide spread spraying as it encourages root growth and healthier plants. Sprinkle some compost around the plant. Apply mulch up to 8 cm thick. Don't put the mulch up against the trunk or stem, or it may cause a disease in the plant.

Sheet mulching

This prepares an area for planting without digging. Cover the area with thick newspaper for a week or two. Remove the cover and the dead weeds. Plant into a thick pocket of compost. Add a thick layer of mulch. No chemicals, fertilisers or other pollutants are needed as the compost will help the plants until the mulch starts to break down and feed the soil.

What sort of mulch should I use?

Different types of mulch have different effects on your garden.

Pine

This makes a neat tidy garden bed.

Wood chip

This should be used over manure mulch unless it has been well aged. It needs to be renewed every two years and does not provide much nutrient to your plants.

Eucalyptus

Fragrant smell and long lasting.

Leaf

Needs to be renewed about twice a year. It can become matted, preventing water absorption. It does not provide much nutrient to your garden.

Mushroom

Very high in nutrients, although quite alkaline so it is not suitable for all plants.

Coconut fibre

Lasts about two years and helps retain water in the soil.

Hay, straw & lucerne

Rich in nutrients, it will need to be replaced every three to six months. It helps repel slugs and snails.

Native tree mulch

Excellent for use on native gardens, it lasts about one to two years.

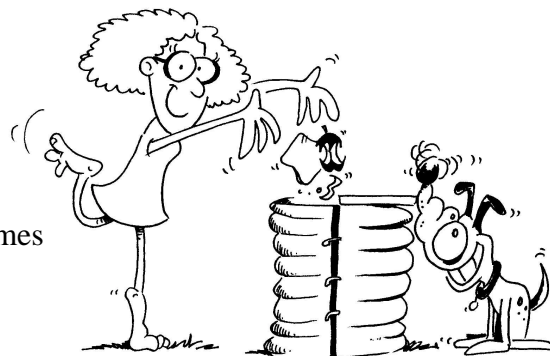
Compost

What is compost?

Compost is organic matter that has been broken down by a biological process, turning it into a soil like substance. Compost is rich in nutrients and helps your plants to grow healthy and disease resistant.

Benefits of compost

- ✓ Improves drainage in heavy soils
- ✓ Increases water holding capacity of sandy soils
- ✓ Reduces soil salinity
- ✓ Increases aeration and insulates the soil against temperature extremes
- ✓ Increases microbial activity in the soils
- ✓ Compost can be used as a potting mix, fertiliser or top dressing



How to make compost

1. Find a sunny, well drained site. Install your bin, heap or bay.
2. Collect your materials. You will need a mix of nitrogen rich materials such as manure, lawn clippings and food ('wet' materials) and carbon rich materials such as leaves, twigs and newspaper ('dry' materials). You should also have some rich soil or finished compost.
3. Make sure you place a good layer of twigs and leaves at the base to ensure good drainage.
4. Add materials in layers, roughly 2-8cm thick. Begin with a layer of coarse dry materials.
5. Add a layer of wet materials - the wet layers should be a bit thinner than the dry layers.
6. Add a layer of manure and some soil - this will introduce the bacteria needed to start the process.
7. Keep on adding layers and water every few layers. You should aim for about

20 parts dry to 1 part wet

What can be composted?

Almost anything of organic nature can be composted. This includes food scraps, grass, leaves, prunings, weeds, tea, tissues and liquids such as coffee and juice. Even the dust out of your vacuum cleaner! *Note:* Animal products such as meat and flies should only be composted in a well established heap as they can be a source of pests such as flies.

Turning the heap:

You should turn your compost heap about two weeks after setting it up. From then on you should turn your pile about once a week until it is ready. You can add more layers as needed.

Remember ADAM:

- A** Aliveness - a compost heap is a living ecosystem
- D** Diversity - more materials mean better compost
- A** Aeration - more air is less odour
- M** Moisture - the compost should be as wet as a damp sponge

Problems?

Issue	Cause	Solution
My compost smells	Too much moisture	Add dry materials such as twigs and paper. Cover the heap and ensure good drainage. Turn more often.
It takes too long	Not enough nutrient Not enough air Not enough moisture Too cold	Add blood and bone Turn the heap more often Moisten the heap Insulate with hessian or paper
Pests and flies	Meat, seafood or fat	Remove the cause or cover with lime. Turn the heap

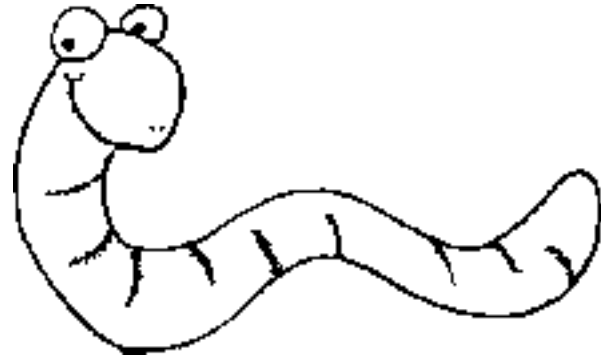
Worm Farming

What is vermiculture?

Vermiculture is the farming of worms to break down organic wastes. The worm turn the material into worm casts, which are very rich in nutrients and make excellent fertilisers, soil conditioners or mulches.

Benefits of vermicompost

- ✓ Worms can eat up to half their own body weight in one day
- ✓ Worms farms produce both a liquid fertiliser and a compost
- ✓ Vermicompost is rich in nutrients
- ✓ Worms will devour almost anything organic
- ✓ Worm farms don't have odours
- ✓ Worm farms can be used indoors, outside, in the garden, laundry or bathroom!



How to make a worm farm:

1. Choose a shady sheltered site.
2. Buy a worm farm or build one. The farm should have a solid base to collect liquid fertiliser and several layers.
3. The farm should have a sealed, well ventilated lid and good drainage. Worms drown easily!
4. Line the first layer with a few sheets of shredded paper and some soil (or use the bedding brick in your purchased farm).
5. Add the Red or Tiger worms on the surface along with a small handful of food. Spray lightly with water.
6. Cover the farm and leave to settle for a couple of weeks. A layer of damp newspaper helps retain moisture.
7. Lift the lid and if all the food is gone, add another small handful. Over time the farm will handle more food as the worms grow and breed. Too much food will make the farm smelly and acidic, but make sure there is always a supply of food.

What will worms eat?

Most organic materials including food, tea bags, egg shells; wet paper and cardboard. Shred the scraps as worms have very small mouths! *Note:* Worms will not eat citrus like oranges and lemons or very strong oily foods such as garlic and onions. They will stop the worms eating other food.

Adding new trays:

When a tray is almost full of worms and compost, remove the newspaper or lid and place the second tray on top. Put the next food in the second tray, recover with damp newspaper and the lid. Over time the worms will move up from tray 1 into tray 2 and begin to fill it. Repeat for each tray and once the worms are established in tray 3, remove tray one and use the compost.

Using vermicompost:

As with other compost, vermicompost can be used when planting, as a top dressing or mixed with sand to make a potting mix. It can be added around established plants to feed them. You can also mix the vermiliquid with water and use as a fertiliser on any plant.

Problems?

Issue	Cause	Solution
My farm smells	Too much moisture Too much food	Ensure it can drain well. Feed slowly at first. Don't add more food until it is all eaten.
The worms won't breed	Too hot or cold Too much acid	Ensure they are cool and moist, but sheltered from winter frosts. Add a teaspoon of wood ash or dolomite each week
Pests in the farm	Attracted to uneaten food	Stand each leg in a bowl of water. Ensure the lid is well sealed. Don't over feed.

Low Waste Gardens

Low waste gardens help to reduce the amount of green material your household produces. Choose your trees and shrubs to suit - do you want them to provide shade, shelter, food for birds, colour or smell? Make sure the sun, moisture and soil is right for the plants you use. If they are not, you will spend a lot of time and money on water and fertilisers to make them survive.

Why are lawns a problem?

Many of the grasses used to make lawns are not suitable to our climate. They may require frequent mowing or watering, as well as many fertilisers. All of this costs a lot of money and pollutes our National Park. Try to follow the three *R's* - *Reduce, Reuse and Recycle*.

REDUCE your lawn

Think about it. Can you replace some lawn with:




- ✓ Trees or shrubs, which provide shelter and food for fauna?
- ✓ A vegie patch?
- ✓ Low waste ground covers such as Lawn Chamomile?
- ✓ Mulched areas for footpaths?

Grass is not the only lawn material. Make sure you check which plants are suitable to your soil, light and planned use. There will be a range of plants which will replace your grass with low maintenance, low water and low cost lawn. Talk to your local nursery or check the table below.

REUSE your lawn

After mowing, let the clippings fall back onto the lawn as a mulch. It will save you **time** as you won't have to run back and empty the catcher. It will **reduce** your lawn's requirement for fertilisers by up to **25%** AND by adding mulch, your lawn won't dry out as much and need watering.

Note: If your lawn is very long and thick, you may have to collect some of the clippings for compost.

Name	Description	Soil
 Native grass <i>Dryarna flavius</i>	 Native turf	 Any
Nathers green <i>Sporobolus virginicus</i>	Fine leafed native grass	Any, but prefers sandy
Kidney weed <i>Dichondra repens</i>	Rapid growing, 1-2cm tall, 1m wide with small yellow flowers in spring	Well drained
Swamp mazus <i>Mazus pumilio</i>	Forms a dense mat 1m wide, with small white-violet flowers in spring	Tolerates moist boggy soils
Lawn chamomile <i>Chamaemelum nobile treneague</i>	5-10cm tall, non-flowering	Most types
Pennyroyal <i>Mentha pulegium var. decumbens</i>	2-3cm tall, red-purple flowers in summer, aromatic	All, but prefers moist
Corsican mint <i>Mentha requenii</i>	3-6cm cushion, tiny flowers in early summer, aromatic	Well drained, moist, with good nutrients
Wild thyme <i>Thymus serpyllum</i>	3-12cm tall, leaves rosy to white, aromatic	Well drained, dry and damp clay
Creeping boobialla <i>Myoporum parvifolium</i>	4 cm tall, 1-2m wide, small pink-white flowers in spring/summer	Any with high drainage

Low Waste Gardens

RECYCLE your lawn

If you use clippings onsite, they make excellent compost and mulches. However, at the landfill, they produce greenhouse gass and leachates which can pollute our environment. Clippings are high in nitrogen and moisture so they compost quickly., but will need layers of twigs and leaves to prevent clumping.

Clippings can be used as mulch on gardens to add nutrients and reduce water evaporation.

- ✓ Mix with leaves and twigs and leave to settle for a week.
- ✓ Add some extra nitrogen such as manure at a 10:1 ratio and water the garden before applying
- ✓ Place the grass mulch around the garden up to 3cm deep.

LOW WASTE trees and shrubs

Choose trees and shrubs that suit your climate. Once you have planted, you can also do the following to reduce waste:




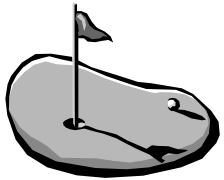
PRUNING: Only prune when necessary, and avoid pruning from flowering to the end of fruiting.

MULCHING: A good layer of mulch will reduce water use, suppress weeds, prevent soil compaction, and feed your plants.

WATERING: Water in the morning, preferably with a soak or drip hose. Water thoroughly and infrequently to improve root strength. Try to use grey water from washing machines or get a tank to save rainwater.

FERTILISER: Use organic fertilisers such as compost. Chemicals are expensive, cause pollution and can weaken your plant health.

DECIDUOUS TREES: These produce massive quantities of green waste and often need a lot of care and water. Try to choose more hardy species - and if you do want a deciduous tree, compost and mulch the leaves.

 Watering	 Sun	 Mowing	 Use
Drought tolerant	Full sun or part shade	None or very little	Filters grey water
Drought tolerant	Full sun or semi shade	A few times a year	High traffic areas, filters grey water
None to low	Sun or shade	A few times a year	Mild traffic (recovers after wear). Good for edges
None when in correct position	Sun or semi shade	None to very little	Tolerates foot traffic in shaded moist areas
Low once established	Moderate sun	As needed	Used as tea, shampoo or fertiliser
Only in extreme heat	Full sun or part shade	None	High traffic, repels insects
Low	Full sun or part shade	None	Mild to moderate traffic
None to low	Full sun	Not usually required	Mild traffic. Used in cooking, easing headache, antiseptic
Drought tolerant	Full sun	None	Suppresses weeds