Wattletree Horticultural Services

By Brian Sams

Potting Mixes—a few facts and recipes

Different plants have different needs to grow well. One of the most important of those needs is a good potting mix suited to the types of plants being grown. Potting mixes are varied to provide differing amounts of nutrients, air and water and are adjusted for pH for different plants. To do so the quantity and proportions of ingredients and fertilisers are changed.

A good potting mix should provide :

Support- to help the plant stand and not fall over in windy conditions

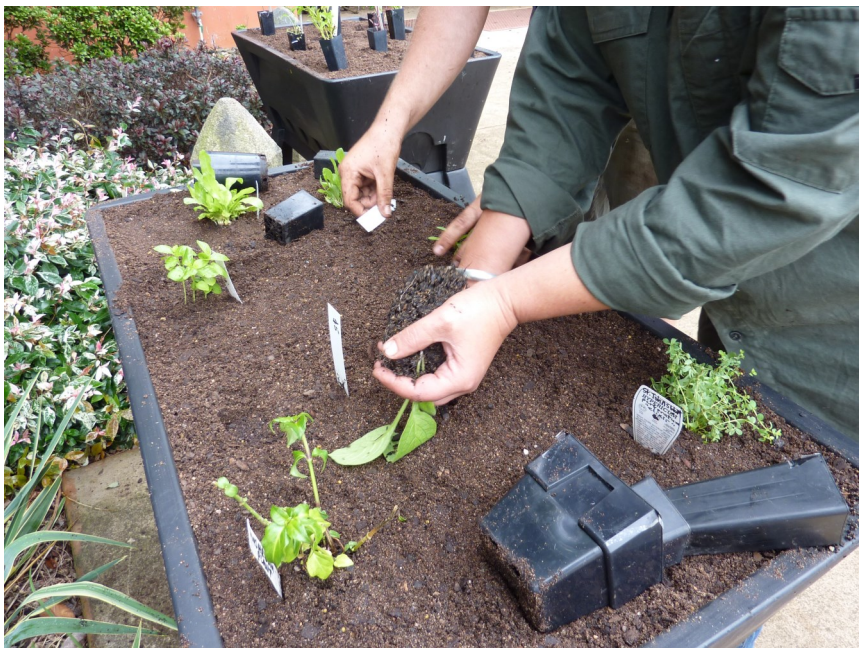
Moisture- the whole plant needs a steady supply of water

Air- needed by the root system to process energy and to grow well

Nutrients – minerals needed by the plant are extracted from the mix. Usually supplied by fertilisers

Can I trust the mixes that are supplied in bags from the large retailers?

If you buy a bagged potting mix you will certainly get what you pay for. A cheap mix will almost certainly perform poorly with much sawdust and other materials that will pack down and reduce plant performance. Pay as much as you can afford for a decent quality mix.



What is the Australian Standard for potting mixes all about?

It was written in the late 1980s in response to perceived problems in quality of potting mixes. It is not compulsory and is fairly easy to achieve as it is a minimum stand. It measures

- Physical properties like % air and water and weight
- Chemical properties like pH, salt levels and levels of nutrition
- Biological properties that might cause damage to plant roots

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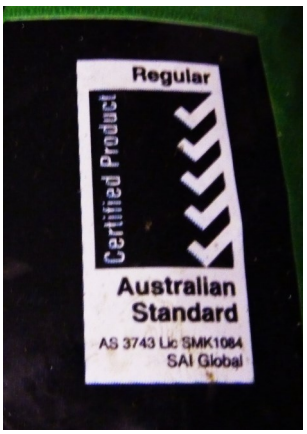
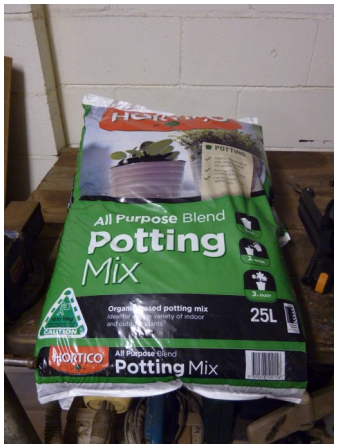
The **black tick Australian standard** indicates that the mix meets all criteria but does not include any nutrients (fertiliser)
The **red tick Australian standard** for premium potting mix indicates that the mix meets all criteria and does include enough nutrients (fertiliser) to last for 3 months from the date of manufacture.





Which one should I buy?
Due to the time that it takes to manufacture, transport, market and store before sale the nutrients in premium potting mix are often released prior to customers buying the mix. For this reason I recommend that people buy the black tick Australian Standard potting mix and add their own controlled release fertiliser when using the mix.

What is in potting mix?
A wide range of ingredients are available to be used in different amounts in potting mixes to this job. Nurseries use many different ingredients to make potting mixes. What is used depends on what is readily available, what is affordable and what plants are being grown.

Sand
River sand - washed to remove clay and salts. Sand provides drainage, aeration (air spaces) and weight to a mix. It is used in combination with organic materials, eg bark, compost, peatmoss.

Peat
Decomposed (decayed) sphagnum moss. Peat holds large amounts of moisture. It needs to be moistened before use and is difficult to rewet if left to dry. Peat has an acid pH of 3.8-4.5.

Composted pine bark
Retains moisture and provides aeration to the mix. It is composted first so it does not use some of the plant nutrients from the media as it decomposes further in the pot.

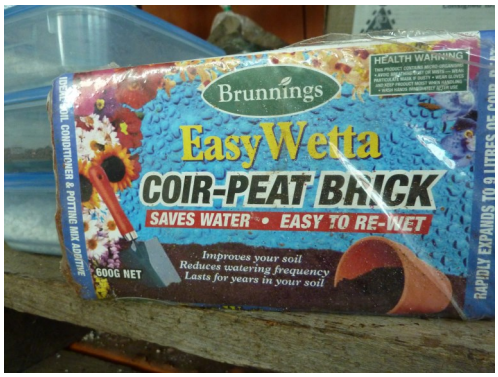
Vermiculite
A heat-treated mineral that is very light in weight. It holds large amounts of water and is used to cover seeds or in propagation mixes.

Perlite
A lightweight material. It holds large amounts of water and provides air spaces (aeration) to the mix. Perlite is sterile (free of disease) and does not hold or provide nutrients. Perlite is very dusty so make sure the mix is just damp to reduce the haz-

ard of dust in your lungs.

Coir

Composted coconut fibre, which can be substituted for peat moss. Coir is organic, holds large amounts of water, provides good aeration and usually has a low pH. It is a great alternative to Peat moss and more environmentally friendly.



Soil

Is NOT used!! It does not have suitable properties for use in pots and may introduces pests or diseases to the mix.

Commercial nurseries then add a controlled release fertiliser such as Osmocote or Nutricote to their mixes at an application rate of between 3-5 grams per litre of mix. Saturaid/Moistureaid/Hydroflo are wetting agents and are commonly added to potting mix to maintain moisture levels in the pots between watering.

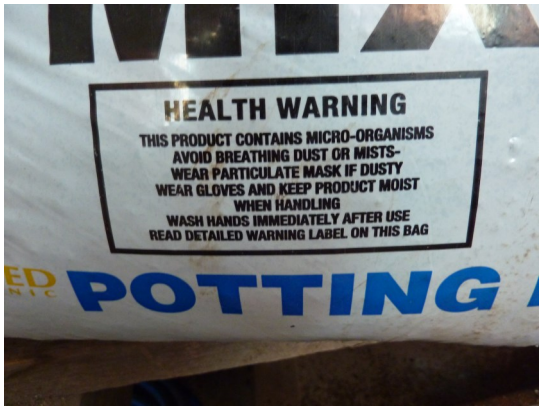
Are their legitimate safety concerns in using potting mixes?

Working with potting media involves a degree of risk. Health risks include

- Legionnaires disease
- Tetanus
- Dermatitis
- Respiratory ailments
- Infection of open wounds

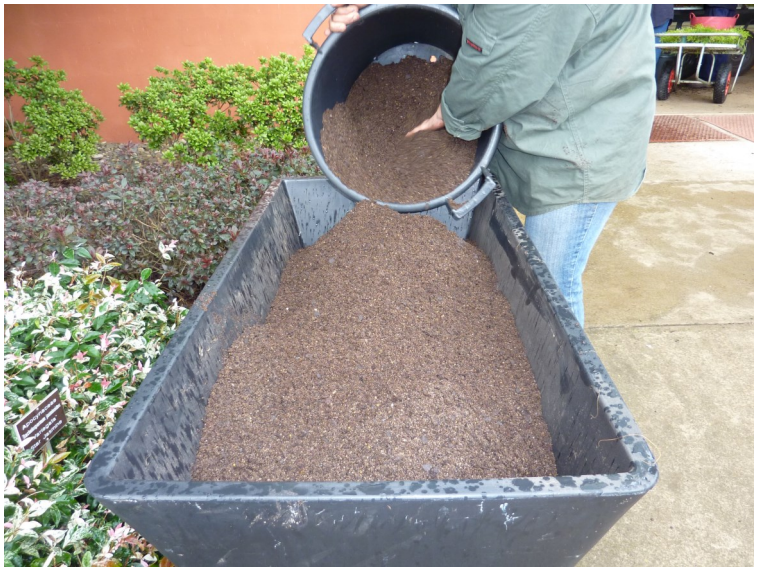
To minimise these risks

- Wear a particulate disposable mask to avoid breathing in dusts.
- Wear suitable eye protection such as good quality sunglasses or goggles.
- Wear gloves
- Ensure mix is moist
- Store potting mix products in a cool dry location to limit growth of bacteria.
- Wash hands on completion of use of potting mix.



The following are some recipes that I have had success with over the years. (Quantities of additives are for a 50 litre mix)

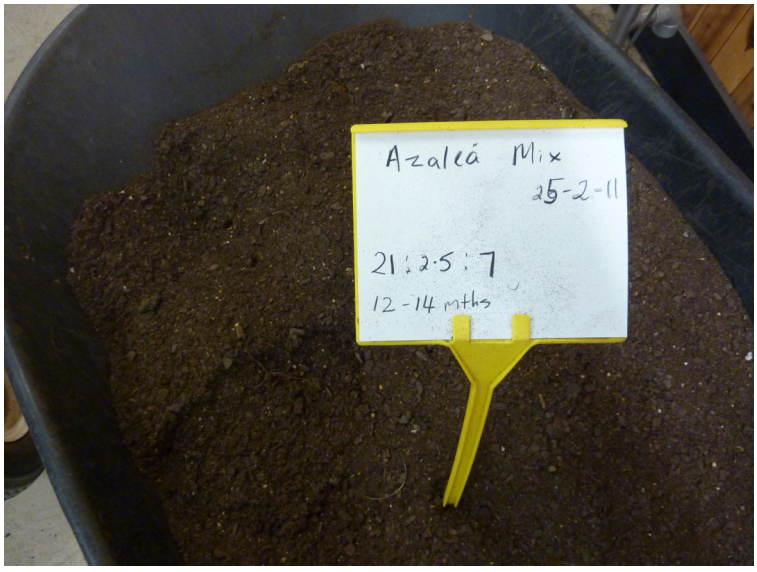
Standard mix
4 parts pine bark
1 parts peat
1 part sand
250g Dolomite
50g Saturaid®
50g Trace elements
250 grams Osmocote ®



Fern Mix
3 parts pine bark
2 parts peat
1 part vermiculite
250g Dolomite
50g Trace elements
250 grams Osmocote®

Propagation mix
3 parts Perlite
2 parts peat moss
1 part coarse sand
Fertiliser is not added to this mix

Azalea mix
3 parts pine bark
2 parts peat
1 part sand
250g Dolomite
50g Saturaid®
50g Trace elements
250 grams Osmocote®



Indoor Mix
2 parts peat
3 parts bark
1 part Perlite
1 part sand
250g Dolomite
50g Saturaid®
50g Trace elements
250 grams Osmocote®