

"Rules Of Thumb" for nutrient supply from compost

Nutrient supply:

	First year	After four years
Potassium	65-85%	100%
Nitrogen	10-15%	40%
Phosphorous	30-40%	100%

Why compost benefits the environment

By using compost, not only can you help to reduce the amount of waste that goes into landfill, you can also help to reduce greenhouse gases.

And because compost can reduce the application of fertilisers, herbicides and pesticides, the need for harsh chemicals which can leach into waterways and groundwater can be eliminated.

Did you know?

Compost can:

- create water saving as much as 70 per cent.
- reduce soil erosion by up to 30 per cent through adding structure to the soil
- assist in the slow release of macro and micro-nutrients in the soil that are vital for plant growth, reducing the need for fertiliser
- improve the flavour and nutrient content of fruits.



Making the most of your compost application

It is important that soil moisture is monitored and irrigation schedules are adjusted accordingly. Similarly, monitoring vine nutrition is also important when using a compost mulch application.



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Focusing on the benefits of compost for...

VITICULTURE

Using a compost mulch application during vineyard establishment has been proven to give vines a great head start.

With conservative estimates of irrigation savings between 20 and 30 per cent when compost mulches are applied, it's no surprise that many viticulturists are investigating the use of compost mulches to make savings in their watering requirements.

Compost and water savings

Compost mulches conserve soil moisture by preventing evaporation. Direct sunlight can heat the soil, and with warm air moving across the surface, moisture is drawn upwards and evaporates. Even a shallow layer of compost on top of the soil can slow down this process and conserve moisture.

And there are more benefits...

- improved organic matter levels
- increased nutrient availability
- improved soil structure
- improved water retention

- improved drainage
- assisted vine growth and disease resistance
- a reduction in unwanted insects
- less need for commercial herbicides or pesticides
- increased soil structural stability
- reduced soil temperature fluctuations
- suppression of weeds
- prevention of wind erosion.

Compost and nutrients

Compost mulches have been shown to enhance the soil nutrient status of vineyards depending on the type of compost applied, vineyard location, climate, soil type and management practices.

The main benefits of compost are improvements to the soil's physical and chemical properties, increased soil moisture, decreased water consumption and increases in vital nutrients to the crop and subsequent yield.



There are three key nutrients which have been the most widely studied with regard to compost application: Potassium, Nitrogen and Phosphorous.

Potassium

Potassium is important for vine nutrition and wine quality, and is therefore essential for vine growth. Yields and vines suffering from potassium deficiency have been found to improve almost immediately with the application of compost mulches. Getting the right amount of potassium into the soil is a balancing act and requires regular vineyard monitoring.

Nitrogen

It is thought that about 10-15 per cent of nitrogen becomes available in the first year of application of compost mulch,

with up to 40 per cent available after four years. This is based on research conducted on the use of compost around the world. This area of research still needs to be evaluated more specifically for Western Australian grape growing conditions.

Phosphorous

Some studies have shown that phosphorous levels can double after compost mulch application. Variability in results is likely to be site specific and this makes it especially important for growers to monitor nutrient levels closely after compost mulch application. As a general rule, about 40 per cent of phosphorous should become available in the first year, with 100 per cent available after four years.

