

## Mulch and Native Plants

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There have been many articles written on mulch and the following are my views together with the results of some research that you may find of benefit. There are three types of mulch:

- Organic material such as: eucalyptus leaf litter, wood chips, pine bark chips, compost, lawn clippings, pea straw, stable straw, lucerne, seaweed, hay, manure, sugar cane mulch, paper, etc.
- Inorganic mulch such as: gravel, decorative pebbles, any crushed rock, sand, etc.
- Living mulch: any dense growing ground cover plant.

Why do we mulch native gardens? The main reason is to try and simulate the growing conditions in the bush, where leaf litter forms a very natural and effective layer over the soil. This is especially so along the coastal regions. As well, mulch makes the garden look more 'Australian' in its appearance.

How thick should mulch be applied? In general, mulch should not be applied any thicker than 75 mm. Mulch applied too thick causes deoxygenation of the soil and this can, at worst, kill plants.

### Advantages of mulch

- An effective and safe way to reduce weeds.
- Reduces evaporation resulting in less watering.
- Keeps soil temperatures cooler in summer and warmer in winter.
- Using organic mulches, results in the soil benefiting from addition of nutrients as the mulch decomposes. This helps create good soil structure as it greatly increases the biological activity in the soil (especially earth worms and other beneficial microbes).
- Protects the soil surface from the compacting effect of rain.
- Using living mulch has the added results of flowers and interesting leaf texture.
- *Eucalyptus* mulch is particularly beneficial in a native garden because it promotes the development of micro-organisms in the soil which enhance plant health.
- Improves the appearance of garden beds.
- Organic mulch decomposes over time and this benefits the soil by the addition of nutrients, especially nitrogen.

### Disadvantages of mulch

- Soil needs to be wet/damp before mulch is applied.
- If the mulch material used is so effective it can completely insulate the soil and prevent moisture penetration.
- Use of fresh, green organic material can deplete the soil's nitrogen supplies as nitrogen is used up in decomposition. Added extra nitrogen (e.g. blood and bone) is needed to compensate for this and best applied before spreading the mulch.
- Layers of paper are often used under mulch as a weed suppressant but this may attract nematodes. Thick layers of paper can also be colonised by termites.
- As organic material breaks down it coats the soil with a wax like substance making the soils and especially sandy soils 'non-wetting' or water repellent. Applications of soil wetting agents are very effective and well worth using to overcome this.
- Use of mushroom compost as a mulch is not recommended for acid loving native plants, as it is often quite alkaline.
- Organic mulch needs to be topped up every 1 to 2 years to maintain desired thickness as it breaks down over time.
- Inorganic mulch can look unsightly when leaves fall on it and they can be difficult and time consuming to remove. As well, lawn mowers and pebbles/crushed rocks are a bad mix.

## Mulching tips

- Before mulching, remove any grass, weeds and dead plants from the bed.
- Put in any new plants before applying your mulch layer.
- Mulch can be applied at any time, but is best applied in mid spring or early summer.
- How you are going to water the plant needs to be considered before the mulch is laid. Drippers or soaker hoses placed below the mulch work more effectively. Water applied above the mulch may not always get down to the soil. After rainfall or watering dig down to see how far the water progressed through the mulch. The soil can still be dry even after heavy rainfall - an all too common problem.
- Do not pile mulch up against the stems and trunks of plants. Piling mulch against plant stems can lead to trunk rot and plant death.
- Use inorganic mulches for native plants growing naturally in low nutrient soils.
- Before selecting what type of mulch to use, take into consideration where the native plants you are using originate from. For example, for inland plants from drier areas, a mulch of gravel may be the best option as damp organic mulch often leads to fungal problems with these plants. On the other hand, for rainforest plants, deep green organic mulch would be a better option.

## Conclusion

No one mulch is universally the best so consider the above before making a choice.