



## SOIL IMPROVEMENT | FERTILISING

Fertilisers can play an important part in producing healthy plants but can also cause significant environmental damage so should be used carefully. There are natural and artificial fertilisers, each with varied characteristics. The type of fertiliser you use depends on the particular plants you have in your garden, the means in which the fertiliser is applied and your preference for natural versus chemical.

### ways of fertilising

- Using soil improvers to help change the structure of the soil and provide nutrients to the plants
- Applying fertiliser direct to your plants to encourage growth, flowering and fruiting

### fertilising natives

Many Australian plants grow naturally in soils that are low in nutrients and can suffer from strong chemical fertilisers or those that are high in phosphorus. Natives prefer the use of soil improvers for soil and plant health.

As a general rule, stick with a slow release fertiliser in Spring or when planting, that contains less than 3% Phosphorus.

Depending on which species you plant, topping up Rock Dusts, a dose of Sulphate of Potash (high in potassium) or a handful of Blood and Bone will probably be all your native garden needs for the year.

### types of fertilisers

#### *slow release fertilisers*

The easiest and safest way to fertilise. Many of these only become active when the soil is above a certain temperature or moisture level, so plants absorb and use them only when they are actively growing and need nutrients most. Most slow release fertilisers contain all the required elements for healthy plant growth and flowering

#### *soluble fertilisers*

These are often used to provide a quick burst of nutrients to plants, and will then leach out of the soil quickly. This can become expensive and time-consuming as you need to repeat applications. Nutrients leached from this type of fertiliser can cause algal problems in nearby waterways if over used. These chemical fertilisers are generally used on annuals for fast leaf and flower growth

### artificial fertilisers

Conventional fertilisers feed your plants with three important macro - nutrients that are released directly to the plant from soluble salts:

- Nitrogen promotes leaf growth
- Potassium strengthens roots and stems and gives flowers their colours
- Phosphorus encourages fruit development and fertile seed

Plants absorb these and grow quickly but tend to suffer from micro-nutrient deficiencies that makes them susceptible to pests and diseases. There is also more likelihood of plants suffering water stress and have difficulty during dry spells as root systems are underdeveloped. This is because the macro-nutrients are so readily available there is no need for root systems to forage and develop in the process.

Though chemical fertilisers do improve plant growth, there are many side effects including: damaging the soil biomass, fertility and structure; contamination of waterways and groundwater through unused chemical salts leaching or washing off; and the creation of soil toxicity when nutrient elements become out of balance. These negatives far outweigh the positives of using an artificial fertiliser.

