



blerick tree farm

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## FERTILISER FACT SHEET

### **Why** do we need to fertilise our garden plants?

Unless you are growing plants in their natural habitat and returning all waste matter to the soil, the soil will need to be fertilised to replace lost nutrients.

Garden plants that originate in soils with higher nutrient content will need to be fertilised to grow happily.

Another reason for fertilising is that, in time, established plants use up all the goodness in the surrounding soil. Some plants, such as fruit trees, vegetables and roses, have been bred to be super productive and need extra. Lawns are other good examples, every time the lawn is mowed and the clippings removed, the plants have to begin re-growing their leaves again.

It is important to be aware that fertilisers are not 'food' for plants – plants manufacture their own sugars from the sun – but are necessary to enable plants to function effectively. However, generally, the term 'plant food' is commonly used when referring to fertilisers.

### **What is fertiliser?**

Fertilisers are materials (whether organic or inorganic in origin) that supply nutrients to plants.

The three major ingredients of a plant food are nitrogen (N), phosphorus (P) and potassium (K). Nitrogen is extremely important for leaf growth; phosphorus promotes development of roots, flowers and seeds or fruit; and potassium is necessary for the growth of strong stems and movement of water in plants, in addition to promoting flowering and fruiting.

Most inorganic garden fertilisers combine these three major elements with secondary nutrients and trace elements in a balanced form. They are known as N.P.K. mixtures. Some of the mixtures are higher in nitrogen while others contain a greater proportion of phosphorus or potassium, depending on the purpose for which they are intended.

For example a fertiliser such with an N.P.K. mix of 5:7:4 is higher in phosphorus and therefore good for root vegetables, flowers, fruits, woody shrubs, roses, canes, citrus, sweet corn and legumes.

A nitrogen-rich mixture of N.P.K. 10:4:6, is better for leaf and stem vegetables (cabbage, lettuce, celery, rhubarb, etc.), leafy shrubs and foliage plants.

Organic fertilisers include manures and animal and vegetable byproducts, such as blood and bone and cow manure. These contain smaller amounts of the major plant foods, so they need to be added to the soil in greater quantities. However, as they very often contain a large proportion of fibrous material they are good for build improving soil structure and texture, especially in sandy soils. Because organic manures have to be broken down by bacteria they release their nutrients slowly over a long period. As with inorganic fertilisers, some, such as chicken manure, are high in nitrogen while others, like blood and bone, contain more phosphorus. The best results in the garden come from using a mixture of both organic and inorganic fertilisers.

### Organic fertilisers

Animal Manures – These are excellent for improving soil structure when used in relatively large quantities, but their nutrient value is relatively low and vary variable, depending on the type of manure and the animal's diet.

Pelletised Poultry and Sheep Manures – Manure has been compressed into pellets and dried so that, as the pellets break down, the nutrients release gently over a long period. Dynamic Lifter Organic Plant Food is an example.

Blood and Bone – This is the original 'slow release' fertiliser. It is made from the waste products of abattoirs and provides a very gentle, long-term feeding. It does not contain potassium.

### Inorganic fertilisers

Powdered and Granular NPK Fertilisers come in different formulations to suit different types of plants. These usually contain a high proportion of soluble nitrogen so can be very damaging to roots unless there is plenty of water available to assist the nitrogen to dissolve.

### Water soluble and liquid fertilisers

These types of complete fertilisers are designed to dissolve rapidly in water and are applied directly to the plant by a watering can or a hose-spray attachment.

### Controlled release fertiliser

These are relatively new developments in fertilisers and they have revolutionised fertiliser application in production nurseries. They consist of a soluble NPK fertiliser particle surrounded by a protective coating.

### Tips on fertilising

- Don't apply any fertiliser until you have read the directions carefully.
- Don't try to apply one or two year's supply of fertiliser at the one time. It is far better to provide little and often; trying to get fast growth by a heavy application is a recipe for plant failure.

- Don't fertilise into dry soils. To avoid damage to roots, make sure that the soil is moist by soaking before and after the application.
- Don't apply fertiliser to a lawn and then neglect to water it in very thoroughly, especially in hot weather. It is inevitable that leaf burn will occur with careless applications of fertiliser on lawns.
- Don't fertilise ferns and other delicate plants with strong fertilisers. Use organic based fertilisers such as fish emulsion and blood and bone or a controlled release fertiliser.
- Don't fertilise Australian native plants with fertiliser containing a lot of phosphorus. Whilst many Australian natives accept reasonable quantities of phosphorus, there are many that resent high phosphorus levels.
- Don't continually fertilise lawns with sulphate of ammonia, as it encourages excessive top growth but reduces root development and eventually makes for a weaker lawn. It can also alter the soil pH level towards acid conditions. Apply sulphate of ammonia occasionally, supplementing with follow up applications of a complete lawn food.

### Fertilise effectively

- Fertilise throughout spring, early summer and autumn.
- Water before and after fertilising.
- Apply fertiliser at the dripline and outwards. (The dripline is an imaginary line drawn from the outer edge of the canopy of leaves to the ground.)
- Don't over-fertilise. Use fertiliser at the recommended rate.
- Combine your controlled release fertiliser with a soluble fertiliser occasionally to give your plants an extra boost.

