



Why fertilise wisely?

Just like people, plants need food – they need a range of nutrients for good health and growth. Too much food can also make plants sick and harm our rivers.

All plants need some nitrogen and potassium for healthy growth. Other nutrients such as phosphorus and magnesium are needed in much smaller quantities and trace elements, like iron and copper, while essential, are only needed in tiny amounts.

Nutrients must be dissolved in water before plants can absorb them. So watering and fertilising are closely linked.

Any nutrients not taken up by plants may enter the stormwater and groundwater systems and find their way into our waterways.

The excess fertiliser from our gardens is a major source of nutrients entering waterways, and contributes to algal blooms, which can be toxic. Excess fertiliser is also money down the drain.

The solution is to improve the soil (to hold nutrients), use slow release fertilisers (sparingly) and to not wash fertilisers away by overwatering.

What is fertiliser?

Fertiliser is the name for products that release nutrients. They can be organic or inorganic (sometimes called mineral or chemical). Fertilisers contain nutrients in differing quantities, their rates of release can vary from instant to slow release over many months. They can be applied as liquids or solids.

Organic fertilisers are made from the remains of plants and animals. For example, seaweed, blood and bone, and manures. Organic fertilisers can also be used to improve the soil. Organic does not mean that the fertiliser is safe for our plants or waterways.

Inorganic fertilisers are formulated for specific purposes and can be applied as a:

- liquid – purchased as a concentrated solution or powder to be diluted and watered in; or
- granular (many lawn fertilisers) – spread directly over the soil to then dissolve down to the plant roots.

Slow or controlled release fertilisers are generally better for your plants and better for the river. High temperatures and over watering can cause the release to be too fast.

Before you fertilise

Good soil is the foundation of a good garden.

The soil holds the key to healthy plant growth and efficient use of precious resources, such as nutrients and water.

The table below summarises the characteristics of the common soil types.

Soil type	Nutrient holding capacity	Non-wettable	Water holding capacity
Sand	Poor	Very common	Poor
Gravel	Medium	Occasionally	Medium
Loam	Medium	Rarely	Good
Clay	Medium	Very rarely	Good

Sandy soils do not hold nutrients, so when fertiliser is applied, most is wasted. Proper soil amendments (turning sand to soil) are essential to increase nutrient and water holding capacity.

Common soil amendments include:

- organic matter (compost and soil conditioners);
- minerals (Clay; Gypsum; Spongolite; Zeolite); and
- soil-wetting agents.

For more information see the Water Saving Ideas Soil Improvement brochure available at watercorporation.com.au.

When to fertilise

The fertiliser needs of plants differ according to their variety and size:

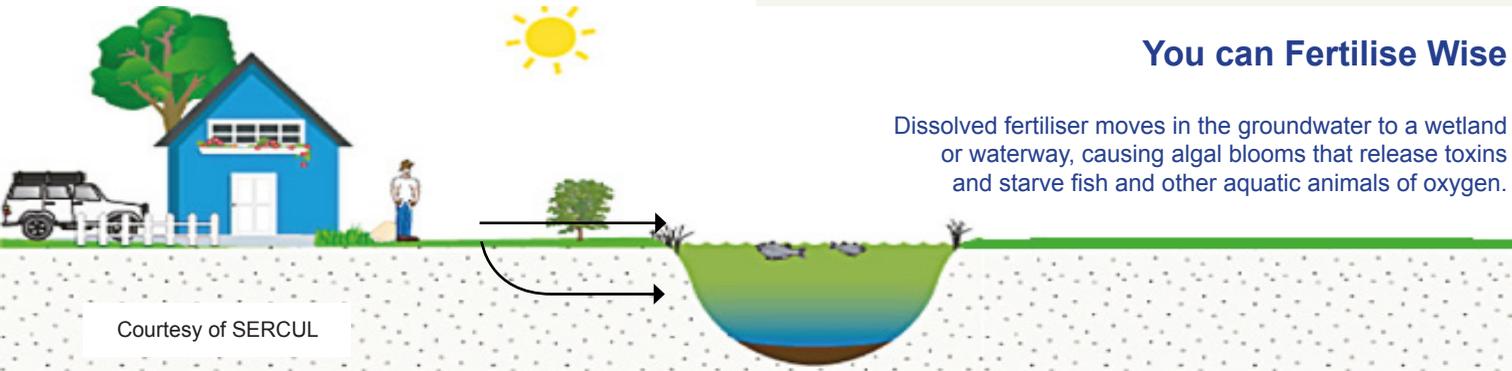
- Lawns usually need fertiliser once in Spring and once in Autumn.
- Vegetables and annuals need fertiliser every few weeks if soils have been built up with suitable amendments.
- Small plants only need small amounts applied to the root zone.
- Most native plants need less fertiliser than exotics. A low-phosphorus fertiliser, applied in spring, will be sufficient.

Generally, it is better to apply a slow release fertiliser often during Spring and/or Autumn. Feeding plants in winter or when rain is expected is wasteful. Rain and over watering washes nutrients past the roots.



You can Fertilise Wise

Dissolved fertiliser moves in the groundwater to a wetland or waterway, causing algal blooms that release toxins and starve fish and other aquatic animals of oxygen.



Fertilising your lawn and garden

How much to fertilise?

Most ornamental plantings require fertilising just a couple of times a year. Fruit trees, vegetables and plants that are pruned hard each year need more fertiliser.

Fertiliser needs to be applied near the plant roots or it will be wasted. Often the canopy area can be used as a guide.

The canopy area for small plants, like seedlings, is very small and only a small amount of fertiliser is needed.

Lawns are commonly over fertilised. If the soil has been amended, only small amounts of fertiliser are required. Cutting regularly maintains healthy growth without scalping the leaves. Leaving clippings on the lawn provides a recycling of nutrients and can almost eliminate the need for fertiliser!

Most fertilisers have a recommended application rate on the packet. It is important to note that this is the maximum amount that should be applied.

Filling an everyday container, such as a cup, with your fertiliser and weighing it can be a useful guide.

- A teaspoon holds about 4g of fertiliser;
- A tablespoon holds about 16g;
- A match box holds about 25g;
- A cup holds about 250g.

Fertilise responsibly

We all need to fertilise responsibly to protect the health of waterways so they can be enjoyed today and for generations to come. You can help by:

- **preventing fertiliser spreading** on to paths, driveways and roads from where it can be washed down the drains and into waterways;
- **not applying fertiliser prior to rain** to avoid nutrient runoff or leaching into groundwater;
- **not overwatering** to avoid washing nutrients away;
- **use as directed on the packet** (and treat that as a maximum);
- **fertilising only when plants need it** (see page 5), not as a routine every few weeks; and
- **seek advice** from a Waterwise Garden Centre or community gardening workshops.

For more information

www.agric.wa.gov.au under 'Gardens and households'

www.fertilisewise.org.au South East Regional Centre for Urban Landcare (SERCUL) Fertilise Wise Campaign

www.greatgardens.info to attend a free Great Gardens workshop or
www.beyondgardens.com.au to attend a free Beyond Gardens workshop and learn about RiverWise gardening

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