

## FERTILISE WISE

Home lawns and gardens are a major source of nutrients entering wetlands and the Swan and Canning Rivers. Excess fertiliser used in your garden will eventually find its way into wetlands and the rivers via the stormwater drainage system or through the soil into groundwater. Excessive nutrients in wetland and river systems lead to algal blooms. These can result in the death of animals and plants which live in the waterways and the possible closure of waterway systems for recreational activity.

This guide aims to provide easy to understand application rates and recommended fertiliser types for those living on Western Coastal Plain Soils. Using this information, you will save time and money and help to keep our rivers healthy.

*Excessive fertiliser use can cause algal blooms.*



**For more information, please contact:**

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To attend a free workshop on fertilise and water wise gardening, refer to the websites:  
Great Gardens - [www.greatgardens.info](http://www.greatgardens.info)  
Beyond Gardens - [www.beyondgardens.com.au](http://www.beyondgardens.com.au)

For native plants for your soil type,  
please refer to the websites:  
[members.ozemail.com.au/~wildflowers](http://members.ozemail.com.au/~wildflowers)  
and: [www.fertilisewise.org.au](http://www.fertilisewise.org.au)  
or contact your local garden centre.

For their Waterwise Guides,  
please refer to the Water Corporation's website:  
[www.watercorporation.com.au](http://www.watercorporation.com.au)  
and go to the 'Being Waterwise' pages.

### ACKNOWLEDGMENTS

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South East Regional Centre for Urban Landcare

ALGAE BUSTER



PHOSPHORUS  
AWARENESS  
PROJECT



Caring for the Swan Canning Riverpark



# WESTERN COASTAL PLAIN SOILS



South East Regional Centre for Urban Landcare



Stretching from Joondalup in the north to Leda in the south, Western Coastal Plain Soils are largely yellow, orange or brown sand, usually with a grey surface, over limestone at depth. They tend to be neutral in the surface soils.

Bore water in these areas tends to be alkaline.

The phosphorus retention rate is moderate.

Nutrient loss occurs through the soil into groundwater and via stormwater drains.

## IS A LAWN NECESSARY?

Lawn is the most intensive part of any garden. It requires a large investment of time, energy and resources to maintain a lawn to a high level. Minimise lawn areas and replace them with:

- WA native groundcovers - Grevillea, Kennedia, Eremophila, Clematis, Hemiandra and Hardenbergia species are suitable alternatives offering stunning flower displays.
- Paving – extend garden beds (possibly add a few local native plants) and pave the rest of the area.
- Gravel – extend garden beds (possibly add a few local native plants) and put gravel over the rest of the area.

## ESTABLISHING A LAWN

When establishing a lawn consider what grass type is suitable for your conditions.

Grass Type	Buffalo	Couch	Kikuyu
Fertiliser Requirements	Moderate	High	Low
Water Requirements	Moderate	Moderate	Moderate
Shade Tolerance	High	Low	Moderate
Trafficability	Low	High	High

Table 1: Common grass species and their requirements.

- High quality soil is essential for any successful garden, and lawn is no exception.
- Add compost or soil improver to increase water and nutrient retention and to minimise non-wetting problems. Use at least two litres per square metre.
- Plant buffalo rather than couch to reduce nutrient requirements.
- The best times to plant lawn from runners are during early autumn (March-April) or early spring (August-September) when conditions are mild to warm and there is less chance of losing fertiliser through heavy rains.

- Roll-on turf is an easier and quicker way of establishing a lawn. Roll-on also requires less fertiliser and can be planted at any time of the year.
- Apply small amounts of water frequently until deep roots are established. For the first two weeks apply 4mm of water three times per day.

## FERTILISING REQUIREMENTS

- Different grass species have different fertiliser requirements to achieve a pale green lawn with an even growth rate.
- Fertiliser should only be applied when symptoms of nutrient deficiency occur (eg. yellowing).

LOOK for the FERTILISE WISE endorsement for effective and responsible all purpose fertilisers.



- Otherwise, when establishing a lawn use a complete establishment lawn fertiliser with a Nitrogen to Phosphorus to Potassium (N:P:K) ratio of 10:2:6. Use a MAXIMUM of 25 grams per square metre ( $g/m^2$ ) (See Table 2).
- For established lawns use a complete maintenance lawn fertiliser with a (N:P:K) ratio of 10:1:6. Use a MAXIMUM of 25 grams per square metre ( $g/m^2$ ) (See Table 2).
- If the fertiliser you are using contains greater than 20% Nitrogen, then apply a MAXIMUM of 12  $g/m^2$  (See Table 2).
- If fertiliser is required, apply two applications in spring and two in early autumn (September, October, November, March and April) when grass grows rapidly.
- DO NOT fertilise in summer or winter. Summer

fertilising encourages over use of water. Fertiliser applied during winter will be washed into stormwater drains or leached into groundwater.

Table 2: Nutrient analysis of fertilisers and their application rates. To check the nutrient analysis of a fertiliser, look for the percentages on the fertiliser bag.

Fertiliser Type	Maximum Fertiliser Analysis			Maximum Application Rate ( $g/m^2$ )
	Nitrogen (N)	Phosphorus (P)	Potassium (K)	
Complete Establishment	10 - 12%	1 - 2%	6 - 10%	25
Complete Maintenance	10 - 12%	0 - 1%	6 - 10%	25
Maintenance with Nitrogen	Greater than 20%	0%	0%	12

A male hand can hold approximately 50 grams of fertiliser while a female hand holds approximately 40 grams.

- Soils affected by alkaline bore water may have trace element deficiencies. Ensure your fertiliser contains trace elements such as iron (Fe), manganese (Mn), boron (B) and zinc (Zn).
- Other nutrients such as sulphur (S), magnesium (Mg), calcium (Ca) and the trace elements copper (Cu) and molybdenum (Mo) may also be required for good growth.

## LAWN MAINTENANCE

- Apply a soil amendment product (containing zeolite, bentonite clay, spongelite or fly ash), to the manufacturers' instructions, to improve the sand's ability to hold onto water and nutrients.
- Apply a good quality wetting agent, to the manufacturers' instructions when fertilising, to improve lawn productivity and reduce run-off of water and nutrients.
- To reduce thatch build up that promotes diseases and non-wetting, use fertilisers sensibly and mow regularly with a close-cut during autumn.
- Areas of lawn with dead spots may respond to extra potassium (in sulphate or potash) applied with a wetting agent from a watering can.
- Extra potassium in autumn will toughen lawns for winter.

## WATERING GUIDE

- Frequency of watering is based on your house number.
- Two days a week have been allocated to water your garden.
- To find out your sprinkler days, take the last digit of your house number and apply it to the table below.
- Water for a maximum of 15 minutes. Overwatering leads to leaching of nutrients from the soil into groundwater.
- During the wetter months, you will not need to water your garden.

LAST DIGIT OF HOUSE NUMBER	YOUR TWO SPRINKLER DAYS	
1	Wednesday	Saturday
2	Thursday	Sunday
3	Friday	Monday
4	Saturday	Tuesday
5	Sunday	Wednesday
6	Monday	Thursday
7	Tuesday	Friday
8	Wednesday	Saturday
9	Thursday	Sunday
0	Friday	Monday

## ENVIRONMENT-FRIENDLY GARDENING TIPS

- Healthy soil is the key to a great garden. Use complete fertilisers and amendments that improve soil, rather than those that provide a few water soluble nutrients.
- Grow low fertiliser and low water use plants such as local native plants.
- Minimise the use of deciduous trees as falling leaves can enter stormwater drains and contribute to nutrient problems in waterways.
- Group plants with similar water/fertiliser/shade requirements.
- Plant deep rooted perennials rather than annuals.
- Use a high quality, coarse mulch in garden beds to reduce watering (and thus minimise the amount of nutrients seeping through soil and into groundwater).
- Take care using raw animal manures that break down readily leading to nutrient losses through the soil into ground water. Composted manures are better.