

Botanical Traditions: summer newsletter

The Water Issue

In late 2004, the Victorian Government introduced a new pricing system for residential water use to reward households that reduced water consumption and to penalise water wasters.

Two years later, even with all the increased coverage of water issues, usage in Melbourne is down only 4.4% (although we have had a population increase in this time). In fact in some suburbs there has been as much as a 20% increase in the amount of water used.

Last week, in all four of Melbourne's catchment areas no water inflow was reported and all reservoir levels are well below average - in some areas at least 18% below levels at this time last year. Some reservoirs are at 26% storage capacity, while the total storage capacity of all combined reservoirs is around 40%.

It isn't all bad news: Bawlwyn, Carlton North, Kooyong, Templestowe and Camberwell East have all reduced their consumption by more than 15% in the last two years. For the last month the Government has been enforcing water restrictions and have started to fine people who are still watering their lawns (Armadale was targeted last weekend). In January more inspectors will be out looking for signs that lawns have been watered, or if stage 3 restrictions come into play that above ground irrigation has been used.

Water Restrictions



Recently, CSIRO produced a number of reports that predicted that rainfall in the eastern areas of Australia will continue to decrease. In a worst case scenario the current 'drought' may not be a drought at all, but a future indication of our normal

rainfall pattern. With this in mind, we should all begin to make changes to how we design, water and maintain gardens. A summary of the Melbourne water restrictions has been provided below.

STAGE 2 - Current Restrictions

Lawn, paths and pavings can not be hosed. Manual watering systems (the kind you turn on/off by hand) can be used between 6am-8am and 8pm-10pm on alternate days (odd/even as per house number). Fully Automatic watering systems can only be used between midnight-4am on alternate days. Hand-held hoses fitted with a trigger nozzle can be used at any time to water gardens. Only water fountains that recirculate water can be operated. A fountain must not be filled or topped up.

STAGE 3

Only below ground irrigation or a hand held hose can be used. Manual irrigation can occur between 6am - 8am and 8pm - 10pm. Fully



automatic systems can only be used between midnight and 4am. For odd numbered properties you can water on Sunday and Wednesday, for even numbered houses you can water on Saturday and Tuesday. No above ground sprinklers can be used.

STAGE 4

Easy to remember - no watering of lawns or garden at all with mains water.

Alternative Water Sources

Bore water

Bore water is increasingly being seen as an alternative water supply. Experiences overseas highlight the main disadvantages of groundwater use as over-extraction, salt content and the increased chance of the ground water becoming polluted.

Continues next page

Botanical Traditions: summer newsletter

Continues from Page 1

When over extraction occurs empty space is left. In some countries the fresh surface water (rivers, lakes etc) has stopped flowing on the surface and disappeared underground to fill these spaces. In other areas land has subsided to fill the gaps.

The salt content of groundwater means that over time soils become saline and not able to support plant growth.

The interaction between groundwater and surface water bodies is poorly understood. In some areas groundwater and surface water mix together. In other areas they are kept apart by rock layers. The impact of these interactions on the environment is not known.

Groundwater is a significant part of the environment and needs to be managed correctly. Unfortunately the levels of extraction in some States already exceeds their estimated sustainable yield. Improper use of groundwater systems has occurred where industrial wastes have been discharged into the aquifers through bores as a means of waste disposal. Examples of this occurred in Adelaide where septic effluent was discharged and in the South East where wastes from dairy product factories was disposed of into bores.

Greywater

An average house (4 people) produces 430L of greywater a day. Greywater forms a portion of wastewater and can be light

greywater from the shower, bathroom sink and laundry, or dark greywater from the kitchen. Greywater can be used for different purposes depending on its quality.

Untreated greywater can be diverted from the house and used for subsurface irrigation only in times of drought, and can not be stored. Legally

it cannot be used in above ground irrigation systems (microsprays, pop-up or shrub sprays), or in the house (including toilet flushing). We recommend that only light greywater be diverted to the garden.



Greywater Treatment System

Greywater which has been treated to a Class A standard can be stored and used in any type of irrigation system and for flushing toilets.

EPA approved systems that are installed by plumbers and connected to subsurface irrigation receive a \$500 rebate. Plumbing regulations in Victoria and NSW state that any work involving alterations to sewer pipes must be carried out by a licensed plumber.

Suitable Systems

The suitability of different greywater systems depends on the proposed use for the greywater and also the layout of the existing pipes.

Sustainable Plumbing Solutions Pty Ltd (contact: Brent 0421 283 908) offer a consultancy service to help you decide on a system whilst ensuring that the installation can actually be undertaken. A short consultation (less than 1 hour) is \$99, or a more in depth consultancy (less than 1.5 hours) is \$132. The longer consultancy provides an opportunity to discuss additional ways of saving water.

In many cases, existing irrigation systems are not suitable for greywater use. Botanical Traditions is able to provide you with greywater irrigation plans specific to your site needs and if required, undertake the installation.

For further information visit www.sustainableplumbing.com.au or the EPA Victoria site at www.epa.vic.gov.au/



Simple Greywater Diverter

Botanical Traditions: summer newsletter

Class A Recycled Water

Class A reclaimed water has been verified as containing extremely low levels of potential pathogens. In some new residential areas of Melbourne it is supplied to properties via a third pipe (separate from mains drinking water and sewerage systems) for non-potable uses such as garden/lawn watering and toilet flushing. Class A reclaimed water is not currently permitted for uses such as human drinking water or bathing.

Class A recycled water has a wide range of uses including:

- residential garden watering
- closed system toilet flushing
- process/cooling water for industry
- fire protection stores and reticulation systems
- irrigation of parks and sportsgrounds
- contained wetlands or ornamental ponds
- Food crops that are consumed raw

If you are interested in using Class A water please contact us for prices and a delivery schedule.

The Blue Lotus Farm and Nursery

The Blue Lotus Farm Nursery specialises in a number of plants that have previously been impossible to obtain in the Melbourne Area.



For example, they have a large range of *Nelumbo nucifera* (photograph above) also known as the sacred lotus. This spectacular aquatic plant has large flowers and leaves that are held high above the water. They can easily be grown in our climate. The oldest seed that has yet been germinated into a viable plant was from an approximately 1,300-year-old lotus fruit, recovered from a dry lake bed in northeastern China.

The lotus plants are sold already potted into a little water garden of their own which would make them an ideal gift for someone who only has a balcony or small courtyard garden.



Geoff, the owner has also been breeding a line of *Amazonica cruziana* or Santa Cruz water Lily which can survive in cooler districts (<20C water temperature). Native to Northern Argentina and Bolivia this lily can grow leaves up to 2.5m in diameter, which are capable of supporting up to 150kg. The plant has night blooming fragrant flowers (they may stay open all day in overcast conditions) that are white and female on the first day and pink and male on the second.

For a number of years, Geoff has been working on a 14 acre display garden which contains all of the water lilies and also selected water plants. He currently has 3 large lakes and a number of smaller ponds. All plants are clearly labeled and it is well worth a visit.

The nursery and display gardens are located 2kms past Yarra Junction on the Warburton Highway. The nursery is open to the public on Saturday and Sunday, or by appointment during the week. The Nursery can be contacted on 0418 350 339 and the web address is www.bluelotusfarm.com.au



Botanical Traditions: summer newsletter

Compost or Landfill?



Organic waste consists of food scraps and garden waste and makes up approximately 50% of the volume of our household waste. It is the

component of our waste that is most beneficial to the environment as a soil conditioner.

There are many significant benefits to be gained from composting at home. In summary they include:

- eliminating the environmental problems associated with land filling;
- reducing unsustainable practices of trucking waste long distances to landfill sites;
- building healthy soils;
- supporting a diverse population of living organisms in the soil;
- reducing the need for chemical (inorganic) fertilisers;
- conserving water by reducing evaporation and increasing absorbent capacity of soils.

Whilst composting at home takes a little time, the benefits are substantial. Remember that if just one household commences composting, that is one tonne of organic waste annually that is converted into approximately a half a tonne of compost and contributes to the protection of our soils and environment.

New Product - Joraform Composter

Whilst many of us embrace the idea of making compost and even have compost bins, we do not actually use the compost we produce. In many cases this is because there is only one compost bin and it is hard to lift, turn and distribute.

I have found a product that is a vast improvement to the traditional bin systems. These compost bins can be located in any area (they do not have to be placed on earth) - they can even be mounted on walls. The unit does not come in contact with

the ground which discourages cockroaches, rats and snakes.

Rotation

The Joraform compost bin is easy to rotate which means that oxygen is spread uniformly through the mix, and the fresh, new waste comes in contact with the older already composting waste, this speeds up the process. The air supply can be adjusted to suit the amount of waste through vents. Insufficient airing makes a compost smell bad so this feature prevents the compost from smelling.

Insulation



The Big Pig
Large enough for 7-12 people. Available for \$795.00 From Botanical Traditions.



The Little Pig
Large enough for 4 - 6 people. Dimensions 1200mm x 900mm. Available for \$565.00 From Botanical Traditions.

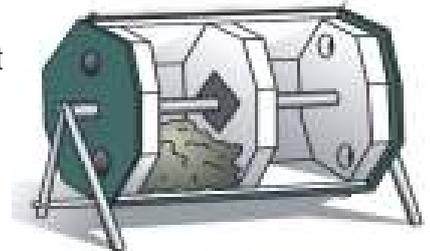
As the waste breaks down it generates heat. Different microorganism function at different rates depending on temperature. The ideal temperature for compost is above 75 C. This will enable the bacteria to function at a high rate and also for any seeds to be killed. The insulation of the unit means that even in winter it reaches high temperatures.

Two chambers

The unit has two compartments.

One compartment that can be in use or have scraps added to it and another that can be maturing.

Once one has composted down it can easily be emptied and the process starts again.



There are three models sized for the household,

Botanical Traditions: summer newsletter



*The Commercial
Large enough for 100
people. Dimensions
150.5cm x 300cm x
124cm. Available for
\$39,000.00 From
Botanical Traditions.*

multi unit development and restaurants, nursery or other large producer. The two smaller units can be wall mounted. The commercial model required power. All available from Botanical Traditions. You can email us on info@botanicaltraditions.com.au with any further questions.

Keeping Your Own Chooks and Ducks



Keeping chooks and ducks supplies you with free-range eggs and manure but there is another advantages. Poultry convert the inedible into the edible, turning kitchen scraps into eggs. If you have poultry you may reduce the need for fertilising, mowing and pest control. Chooks are very good at catching insects, particularly codling moth and snails.

The chickens will be happier provided with both shade and entertainment, ducks will need a pond or similar. It is to your advantage to grow some food for the chooks as this will reduce feed bills and also provide the chickens with a healthy, varied diet.

A poultry forage system can be combined with any garden by simply placing, in amongst the other plants, material for the chooks and ducks to forage on. Ducks will strip many vegetable plants

back so you may need to build a barrier around the veggie patch if you want to have ducks and allow them to forage in the resting veggie beds.

In urban areas where space is limited, you may only be able to support two or three animals - one animal should have at least 5m² to walk around in. If the area you keep them in develops bare ground then you have too many animals for that area. Remember also that even in urban areas there are foxes and large feral cats. The animals will need to be put away at night.

You will need to check with your local council regarding any special requirements they have.

Summer In The Garden

During the hotter months it's important to use water wisely and also take particular notice of trees and other plants which can, because of lack of water, become stressed. Typically when a plant is stressed it will express certain nutrient deficiencies and be more likely to be over run by pests.

Two common nutritional deficiencies are magnesium and potassium. Magnesium deficiency is characterised by yellowing of leaves between leaf veins and around leaf margins, sometimes with red or orange tints. The leaves often fall from the plants early. Discolouration begins on older leaves, then affects younger growth. If untreated the foliage will die. Typically this is a problem in acidic sandy soils. A foliar feed with a dissolved solution of Epsom salts will help the problem if it relates to the pH of the soil as the nutrients will be absorbed through the leaves and not the roots. Deficiency symptoms of potassium are also exhibited in the older leaves of the plant first. A browning (dead tissue) occurs along the leaf margins. As symptoms become more severe, the browning progresses into the tissue between the leaf veins, and to younger leaves. Potassium deficiency can also be expressed in irregular brown spots throughout the leaves.

Continues Next Page

Botanical Traditions: summer newsletter

During summer, when plants are stressed, expect a wide range of pests to move in. There is no need to be concerned about it, unless the plant looks like it is suffering - especially look at the young growth on the plant. If it is getting

Featured Plants



Callitris glaucophylla (White Cypress Pine or Karapaarr). Is a species that is spread throughout Australia. It has a height that ranges from 5m-20m. The single trunk has rough, furrowed bark. The foliage is bluish-grey but this also depends on the subspecies. Callitris are faster growing than exotic pines and are far more drought

resistant. The trees look fantastic as specimen plants, in groups are even as hedges. The tree and the timber is very termite resistant.

Agonis flexuosa 'Nana' (Dwarf willow myrtle) is a small shrub growing 1m tall and up to 1.8m wide. It is tolerant of all soil types, sun and



partial shade, and can also tolerate periods of inundation and drought. It is indigenous to western Australia. It has small white flowers in summer but seems to flower only occasionally in Melbourne. The new growth is often tinged red/bronze and is very attractive, the foliage has a gentle weeping habit. There is also a variegated form and a fine leaf form.



Banksia spinulosa (Hairpin banksia) is an erect small tree or large shrub growing 2.5m tall to 2.5m wide. The leaves have a fine texture and the

flowers are yellow with hooked purple/bronze stamens from February to September. It is indigenous to the Melbourne area and does best on light soils - although it will tolerate all soils. It grows best in full sun but will also tolerate partial shade. It is very drought tolerant once it becomes established and can be grown under Eucalypt trees.

Stenocarpus sinuatus (Firewheel tree) is an upright tree growing to 12m tall and 4m wide. It has large course leaves when young and smaller leaves as it



ages. The flowers are amazing and look like little red wagon wheels. The flowers are produced from April to September but not until the tree is 12-15 years old. The trees do best in rich deep acidic soil in full sun or partial shade. Young trees are frost sensitive but drought tolerant. The growth rate is slow. This is a worthwhile tree for its flowers, unusual leaves and lack of leaf litter.

Employment Opportunity

An opportunity exists for a motivated and enthusiastic person to join Botanical Traditions. The successful candidate will receive training in maintenance, soft landscaping and design. Would suit person looking for part time or casual work for approximately 2 days a week in the short term but full time in the next 12 months. Experience not essential. Please fax resume to 88024753 or call Ruth on 0411 313 312 to discuss further.