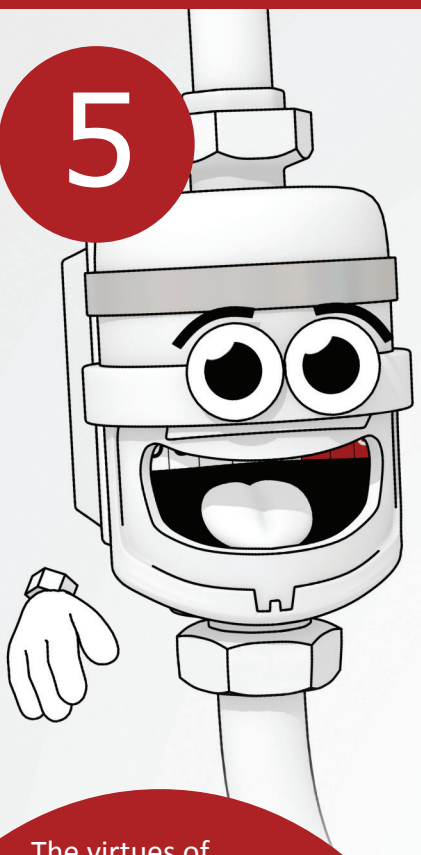
5



Swale me away

with Marcus Ragus

The virtues of swales have been known for many decades. The longer water stays in one spot the more chance it has to enter the soil and penetrate to a good root depth. The deeper the water gets into the soil profile the more available it is for plants over longer periods. This significantly saves garden water inputs over time. Swales are incredibly valuable and effective ways of maximising water infiltration and therefore efficiently using the water that is applied to a site for plants.

What is a swale?

Swales are essentially open drainage ditches or simply depressions in the ground with porous bases that slow water down and allow it to penetrate the soil; thus they recharge soil moisture levels at a depth suitable for plant growth. Unlike normal drains they are built to limit water draining away out of garden areas allowing it time to sink in to the soil. Although they are designed to limit water runoff they can still provide excess water drainage in periods of heavy rains.

Professional urban designers and councils are now increasingly using swales for managing water runoff from urban areas and roads with great results.

How are swales made?

Most swales are easily constructed and require nothing more than digging a trench or depression, although some basic rules do apply:

1. Make sure that the base of the swale is over porous soil and not solid clay otherwise instead of a swale you may end up with a small pond. The water needs to be able to drain into the soil within at least 30 minutes. A little garden surfactant, such as Saturaid, Wettasoil or similar, added to water in the swale will help facilitate water penetration.
2. If on sloping ground, build swales parallel to the contours of the site, ideally above garden beds or tree planting so they collect water and recharge the soil above and below these plantings.
3. Swales can be of any size or shape from small circular crater-like depressions from 40cm wide to snaking trenches many meters long. Ideally they should be a minimum of 25cm deep to give maximum benefit.
4. In periods of high rainfall make sure that any excess drainage water flowing through longer swales does not end up on neighbouring properties.
5. If an open ditch or depression is not visually acceptable or safe then swales can be filled with loose gravel, rocks and other open materials that drain effectively but are also aesthetically appealing and safe.

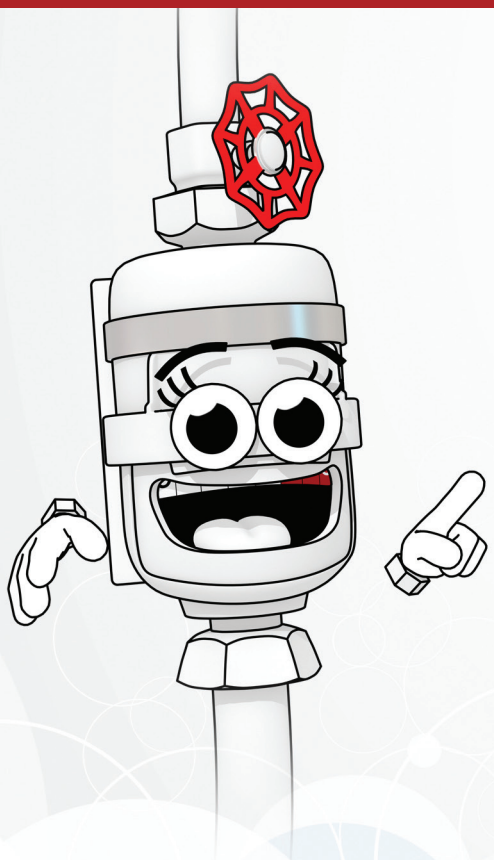
To learn more about WaterSense gardening, check out the online videos at www.rtbg.tas.gov.au or www.taswater.com.au

WATERSENSE MAKESSENSE

ROYAL TASMANIAN BOTANICAL GARDENS

ABOVE: A garden bed using swales to ensure rainwater reaches the roots of plants rather than running off.

RIGHT: Swales can also be used effectively in raised garden beds.



Creative swales

A fantastic way of saving water in the vegetable garden is to use a technique known as Swale Pod Gardening. This entails preparing a circular depression around 25 to 30cm deep and anywhere from 40cm to 1.3m wide that ends up looking a bit like a crater on the moon.

Prior to making the swale make sure you pre-prepare the soil with compost and blood and bone. Once built fill the depression with water and let it soak in, then plant your vegetable seedlings or seed and fill the swale with water again.

Swale pods can also be built into raised garden beds preventing dehydration that is often experienced in these types of gardens in dry weather, and still providing for good drainage in periods of extreme wet weather.

Swale pods are one of the most efficient veggie gardening methods for saving water and a pod can last up to a week at a time without watering. Water savings can be further increased by using suitable mulch, such as hay or straw, around each of the swale beds.

Swales make for interesting, attractive and water efficient production; once you try them you will never garden the same way again.

WATERSENSE MAKESSENSE

ROYAL TASMANIAN BOTANICAL GARDENS