

FACT SHEET SCHOOLS & EARLY LEARNING ENVIRONMENTS

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WATER

December 2020

Water Smart Gardening for Schools & Early Learning Environments

Water smart gardening is a smart way to garden in all seasons, not just the dry seasons. Water smart gardening includes garden design, soil improvement, plant selection, and care of plants and lawns so as to minimise water use whilst keeping gardens healthy. Outdoor water use can comprise as much as 65% of domestic water use, so developing a low water use garden can really help conserve valuable drinking water and keep excess water use charges to a minimum.

Being Water Smart in the Good Seasons

Seasons with average and above average rainfall provide the best opportunity for establishing water smart gardens. To ensure gardens are better able to tolerate future dry conditions, aim to establish and increase plantings and adopt other outdoor water smart design features.

Design of Gardens and Play Areas

Garden design is the starting point when developing a water smart garden and outdoor play area. Select drought hardy plants, group plants according to their water needs and provide shelter with windbreaks or tall hedges so less water is required. Avoid runoff of rain and irrigation water by using permeable surfaces like gravel and mulched garden beds. Aim to minimise lawn area – consider using artificial turf and soft fall mulch as alternatives. Water tanks are a valuable water storage for irrigation water.



Many native plants are water smart plants

Choosing Water Smart Plants

Water smart plants are typically those from low or medium rainfall areas and of Australian, South African or South American origin. Look for plants with small leathery leaves, silver or hairy foliage or grass-like plants and plants with a high oil content – such as tea trees and gum trees. The beauty of many water smart plants is that they can attract wildlife, helping to bring native birds and beneficial insects in to gardens.

Care of Garden Beds and Young Trees

Mulching is very important for conserving soil moisture and can reduce soil moisture loss by as much as 60%. Mulching provides a source of organic matter which, when it decomposes or breaks down, provides food for plants and soil organisms, as well as improving the water-holding capacity of soils. Use a coarse mulch-like hardwood chip mulch or spoiled lucerne hay for garden beds and young trees and spread to a depth of about eight centimetres. Keep a few centimetres around the stems of plants clear of mulch, to prevent wood rot developing. It is best to apply a slow-release organic fertiliser under the mulch as the decomposition process will draw nutrients out of the soil. You can use pelletised poultry manure for most plants and choose a low phosphorous fertiliser for native plants.

Lawn Care

When lawn areas become compacted from foot traffic they tend to shed water rather than absorb it. Improving the ability of lawns to absorb rain or irrigation water is a good water smart gardening principle. This can be done by aerating the lawn using a commercial aerator for larger areas or a garden fork inserted to depth every 20cm or so across the lawn. Aeration is best done in early or mid-spring. Topdressing lawns with composted screened cow manure will help improve the water holding capacity of topsoils, however this product can be smelly and dusty so may need to be applied prior to holiday periods.

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Care of Kitchen Gardens

Vegetables and berry crops are high water users and will need regular watering to ensure good growth and yields.



Using worm castings is a great way to convert food scraps into plant fertiliser

Many vegetables will 'bolt' or go to seed and become bitter tasting when water stressed. Wicking beds are well suited for school kitchen gardens as they use water very efficiently and only need to be watered every second or third day in summer – 'Vegie Pods' are one such example of a wicking bed system.

For other vegetable growing beds it is best to install a weeper hose system for watering – this is a perforated plastic hose that is pinned on top of the soil and 'weeps' water to where it is needed, at the soil surface. Cover the weeper hose with sugar cane or lucerne mulch to further reduce evaporation of water.

To improve the water holding capacity of soils, add organic matter as this will act like a sponge and hold water in the topsoil. Adding compost or aged cow or horse manure will help to build up the organic matter of soils.

Sheltering kitchen gardens with row covers is an excellent way to keep food plants productive during hot conditions. Hooped arches can be covered with shade cloth to greatly reduce the exposure of plants to heat and wind. Small aperture bird netting will also reduce drying winds and provide some shade.

Worm Farms

Worms are sensitive to hot temperatures so ensure worm farms are moved to a shaded position during late spring and summer. Keep the bedding moist by adding water as required and keep the feeding layer cool by covering with a wet layer of hessian.

Worm castings are very valuable for water smart gardens as they provide slow-release organic nutrients for plants as well as providing organic matter to soils, helping to hold soil moisture. Worm castings make an excellent seed raising and propagation mix without the health risks associated with bagged seed raising and potting mixes.



Worm farms are a wonderful addition to the water smart garden

Wildlife in the Water Smart Garden

The easiest way to attract native birds and pollinator insects to gardens is to plant native plants, as these provide the pollen and nectar they need. Plants such as small gum trees, native fuchsias, bottlebrushes and native grasses are very attractive to native birds and pollinators. Caring for local wildlife is most important during dry times when the usual watering points and nectar sources are in short supply. Place a shallow bird bath in the shade to keep the water cool. Shallow water bowls with stones in the bottom will ensure native insect pollinators have access to much needed water. Make a shallow frog pond to provide valuable habitat for our local frogs, including the Perons Tree Frog. Remember, frogs obtain their water directly through their skin, so ponds and creeks are vital to their survival.

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Prepared by Dhyana Blore, Horticulturist & Sustainability Educator, Natural Splendour Gardening and Horticulture, Dec 2020. Not for reproduction in part or in full without author's permission.