

creating a waterwise veggie garden

Home grown vegetables are becoming increasingly popular and are a great alternative to store-bought produce. This brochure is designed to teach you how to minimise your water use, while establishing and maintaining a healthy and productive vegetable garden.

where to grow

The first consideration is where to locate your vegetable plot. You need a place that has plenty of sun in winter, but not too much sun in summer. In a densely built up, suburban environment it is often a challenge to find one spot that will be suitable all year round. Below are some easy ways of addressing this.

- Grow your vegetables in large pots or containers. This is especially useful if you don't have a lot of space. Most vegetables can be grown quite successfully in large pots with a minimum soil depth of 20cm. Being able to move containers around means they can be placed in the best position all year.
- Have a summer growing area and another area for the rest of the year. Alternatively, grow vegetables seasonally.
- Create shade over your vegetable garden in summer. The best way to provide shade is to have a high overhead framework, similar to a pergola, and cover it with a light shade cloth that can be removed in winter. A great alternative is to grow another food crop over the top of the pergola. The ideal choice is a grapevine or passionfruit vine, but you could also try pumpkin, melon, gourd, choko or vigorous climbing bean.

Wind is also a significant factor in choosing the right location for your vegetable plot. Choose an area that is sheltered from the hot dry easterlies. If this is not possible, consider planting a windbreak nearby or building one by simply placing shade-cloth over a frame.

what to plant in

Raised garden beds are very fashionable and have a number of advantages, including providing a division between soil and pathways, the ability to grow vegetables on a hard surface, such as concrete or brick where they can grow free of root competition from nearby trees.

However, when compared with growing vegetables in the ground, raised garden beds are more expensive and may require a lot more fill and/or soil. If the material it is made

from absorbs moisture, it will be necessary to either paint the inside of the structure with a sealant or line it with plastic. Untreated materials, such as timber and limestone will take valuable moisture out of the soil and away from the vegetables.

how to improve the soil

organic matter

The key to healthy, productive plants, is a well conditioned, waterwise soil. The most important ingredient, which is naturally lacking in our soils, is organic matter. It stimulates the growth of microscopic living organisms that are present in healthy soils and promote strong plants. Organic matter also considerably increases the moisture retention capacity of soils, reducing the amount and frequency of watering required to achieve superior results. Organic matter buffers potential pH problems and improves the soil texture, which allows for proper root development. Sources of organic matter include compost, animal manures and soil concentrates or conditioners.

If you are starting a new vegetable garden in sandy soil, spread a layer of organic matter about 5cm thick over the area and work it in with the top 25cm of soil (about a spade deep). From then on, organic matter should be added every time a new crop is planted.

soil amendments

Another great way to improve the water and nutrient holding capacity of sandy soils, is to add mineral amendments. Common soil amendments include Spongolite, Zeolite and Bentonite clay, and a one-off addition of these minerals will permanently change the structure of the soil. When adding a soil amendment, ensure to thoroughly mix it in with the top 25cm to 30cm of soil.

water storage granules

These crystals or gels absorb a large amount of water, which is held until plant roots draw on it. To be effective these products must be thoroughly mixed through the entire soil volume. For container grown vegetables, water storage granules should be mixed through prior to planting and for the vegetable garden they should be incorporated thoroughly with the top 25 to 30cm of soil.



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water repellency

If organic matter levels in the soil become too high, it may be prone to being non-wettable in summer. Mulching and the addition of clay may help to overcome this. If the problem does develop it is necessary to apply a wetting agent. These products are registered for use in the vegetable garden, but should be applied very carefully to avoid contact with leaf crops.

looking after the soil

Once you have created a healthy, waterwise soil, it is very important to look after it.

mulching

Mulching is essential. Bare soil wastes water, encourages weeds and increases stress upon plants. A waterwise mulch, spread to a depth of 5 to 10cm, will reduce evaporation from the soil surface.

Good waterwise mulch:

- Has large, irregularly shaped particles that allow water to travel through it to where it is needed.
- Is made from tree and shrub prunings that have gone through a mulcher.

Do not use the following as mulch:

- Materials such as hay or straw should only be used as soil improvers, if used as mulch they can lead to excessive moisture loss.
- Animal manures.

Applying a waterwise mulch will extend the time between watering, reducing your water use.

fertiliser

Fertiliser and water use rates go hand-in-hand. While it may be possible to grow vegetables in straight sand with large quantities of water and fertiliser, it is very wasteful and can be extremely damaging to the environment.

Once you have improved the soil, the use of fertilisers can be considerably reduced in growing your vegetables. Where fertiliser is required, use a slow or controlled release type for best results. Many common vegetable problems occur because of over watering and over fertilising.

what to plant

Many seedling varieties have been bred for commercial growers and will mature all at once, which is not always ideal for home gardening. The alternative is to grow your vegetables from seed, it is cheaper and allows greater control over quantities and timing.

In summer plant or sow a little further apart to give each plant access to a greater volume of soil, water and fertiliser. Make sure you plant vegetables that will be eaten and put to good use.

how and when to water

You should not need to hand water your vegetable garden more than once a day. In most cases every other day or as little as twice a week will be enough.

When choosing an automated irrigation system remember that the most efficient for vegetables (and all other plants) is one that delivers the right amount of water, to the right place, at the right time, with minimum wastage. One of the simplest and most efficient systems available to home gardeners is sub-irrigation or integrated dripper. It delivers water directly to the root system with little or no evaporative water loss. With any system you choose, it is important to get specialist advice.

Whether you are hand watering and/or using an automated irrigation system, be sure to water in the cooler part of the day (before 9am or after 6pm). To find out the watering roster for your region visit our website.

more information

For professional advice, visit our website to find a Waterwise Specialist near you. They include Garden Designers, Garden Centres, Garden Irrigators, Irrigation Design Shops, Landscapers, Lawnmowing Contractors, Plumbers and Water Auditors. Waterwise Specialists have been trained especially to help you save water by providing specialist advice on waterwise products and services for your home and garden.

Look for the Waterwise Approved and Smart Approved WaterMark symbols when choosing gardening products such as mulch, plants, greywater systems and sprinklers.

