

Growing plants in pots or containers

Gardening with pot plants can be very water efficient, potentially using less water than similar plantings in the ground.

Because of their limited water-holding capacity, however, you'll need to water pot plants more often. Watering frequency will depend on the size of the pot, its placement and the plants selected.

The following simple tips will help you develop a successful pot plant garden and still conserve Queensland's precious water resources.

Choosing the right pot

Size

Make sure your pot is the right size for your plant. If it is too small, the plant will be restricted and stressed by lack of room. If too large, your pot will take up more space and water than is necessary. As a guide, choose a slightly larger pot than the root ball of the plant, remembering that a faster-growing plant will require a larger pot to accommodate its growth.

Type

Pots can be either porous or non-porous. Water is able to pass through porous materials, so porous pots will absorb water from the soil mix, and then lose water as they dry out. Plastic, foam and glazed clay are non-porous and will retain water better than porous materials such as unglazed terracotta or wood.

Plastic: Lightweight and economical, plastic pots come in a wide range of colours. They provide very little insulation from heat, especially in direct sunshine, and plants can suffer heat stress quite quickly. Keep in mind that the darker the colour of the pot, the more heat is absorbed.

Foam: Made of polyurethane, plant container foam doesn't rot in water, is lightweight and comes in a wide variety of shapes and sizes. It provides quite good insulation from heat but may not be as strong as other pot materials.

Glazed Pots: Glazed ceramic pots are strong and non-porous. They are also available in many colours, and offer better insulation than plastic pots.



Terracotta: Traditional terracotta pots are made from fired clay. Left unglazed they are porous, absorbing water readily and losing moisture from the sides, resulting in the potting mix drying out more quickly. Before planting, you can moisture-proof terracotta pots by either painting the inside with a liquid sealant or lining the inside with polythene or plastic. (Be sure to cut holes into the lining to align with the drainage holes of the pot.)

Self-watering pots

Some pots have built-in watering devices, such as a wick or water well. These pots reduce the need for frequent watering and are a great low-maintenance option.

Drainage

Whichever type of pot you select, ensure there is adequate drainage to prevent waterlogging. Place some larger pebbles at the bottom of the pot to allow water to escape freely. If using a pot lining, be careful not to block drainage holes.

The mix

Healthy potted plants begin with the right potting mix. Do not use soil, as it tends to become compacted quickly. Instead, choose a good quality potting mix which contains organic materials, fertilisers and water-retaining particles such as water crystals.

Quality potting mixes maintain a good balance between holding water and draining well, enabling plant roots to get sufficient water but not becoming waterlogged. Some mixes have been approved by Australian Standards and carry the relevant logo on the bag.

Note: There are some health risks involved in using potting mix. You should take precautions such as wearing a mask to prevent inhaling or ingesting dust or particles, and washing your hands and work clothes afterwards. Store the mix in a cool location and avoid shaking the bag.

Soil wetting agents

Most potting mixtures will become water repellent if allowed to dry out completely. When this occurs, water poured on the surface will just roll off, or will appear to soak in but actually enter at one spot and then run straight out of the bottom, leaving the soil dry. A wetting agent acts to open up the potting mix to allow the water to penetrate and be absorbed.

Treat your pot plants with wetting agents each year. The simplest method is to immerse them in a prepared solution every spring.

Fertiliser

Potting mix needs to be fertilised regularly to replace lost nutrients. Use only the amount of fertiliser required for pot plants. The most successful pot plants are those which are fed enough to maintain their size, rather than to promote excessive growth.

Some gardeners apply too much fertiliser in the mistaken belief that a fast-growing plant is a healthy plant. Forcing a plant to grow fast not only increases its water demand but can cause it to be more susceptible to disease.

Soluble and slow-release fertilisers are best for most pot plants. Be sure to follow the instructions on the container.

Also note that high nitrogen fertilisers will promote leaf growth at the expense of flowers or fruit, so check the nutrient balance of the product you are using.

Mulch

One aid to water retention is mulch. Just as flower beds benefit from a good layer of mulch, so can your container garden.

Mulch slows evaporative water loss from the surface, and insulates the soil. Moderate soil temperature is better for the plants' roots. The proper mulch can also serve an aesthetic purpose, dressing up plantings before the plants have completely filled in.

Allow a depth of five centimetres of mulch in your pot and be sure the mulch is kept clear of the plant stem to avoid possible fungal problems.

Refer to the *Mulch and your garden* information sheet at <www.derm.qld.gov.au> for more information about mulch.

Watering

To test whether a pot plant needs watering, simply push your finger into the soil to a depth of about five centimetres. If the soil feels damp at that depth and sticks to your finger, the plant does not need water.

Water only when your pot plant needs it. Over-watering is bad for your plants' health and can contribute to the development of fungus and disease. Look for wilting or leaf curling—these signs indicate that it's time to water.

Water the potting mix, not the plant's flowers and leaves. Watering the foliage could encourage disease, as well as water waste through evaporation.

Use enough water to fully penetrate the root zone to encourage deep root growth. As far as possible, avoid frequent shallow watering as this causes shallow root growth, leaving the plant more susceptible to drought and some diseases.

Drip irrigation systems with individual drippers for each pot are very useful in keeping the soil moist. Soil wetting agents can also help maintain healthy moisture levels within pots.

Note: Don't use greywater on plants in pots as the risk of salt and nutrient build up is heightened by the limited soil volume and may damage the plant's root system.

Growing fruit, vegetables and herbs in pots

Container gardening is also an excellent way to grow fruit, vegetables and herbs. Refer to our *Growing fruit, vegetables and herbs* information sheet, available at <www.derm.qld.gov.au>.

Insect and disease control

Diseases on pot plants can spoil their appearance and weaken them, reducing their chances of survival. Avoid pests and disease by buying healthy plants and monitoring their health closely. Your local nursery or garden centre has a range of disease and pest control products to suit most plants.

More information

The Waterwise Plant Selector <www.derm.qld.gov.au/waterwise/plantselector> or your local nursery can help you find plants that are the most water efficient for your local conditions. Other water-efficient gardening guides are available on the Department of Environment and Resource Management website.