General Plant Care Guide

When to water

Water in the mornings, if you can, as this is when the sun comes up and plants will start to use water. The foliage and soil surface is also likely to stay drier for longer than evening watering, discouraging slugs, snails and mildew diseases. Plants start to transpire in sunlight, drawing water from the soil, through their roots, up their stems and out through tiny pores on their leaves called stomata. Evening watering is also fine, as the cooler conditions mean less water is lost to evaporation.

Watering in the heat of the day is not a good idea as much water is lost through evaporation from the surface of the soil and the plants will use water more efficiently if watered in the cooler parts of the day.

Watering frequency

We're frequently advised to 'keep plants well-watered' but just how often should that be and how do we know if a plant is getting enough water?

There is no simple rule of thumb for watering as each plant has different needs - for example, a container plant in hot sunny weather may need watering daily, whereas a mature shrub might only need a drink in extreme drought. But below are some things to think about and look for to help you get it right for your plants. It's good to remember, plants will use more water if more water is made available to them, so you can allow them to dry out a little between watering and they don't need to be wet all the time.

Factors that affect how often you need to water:

- **Size, species and stage of growth of the plant -** the larger and more leaves a plant has, the more water it is likely to lose and the more nutrients are needed to grow flowers and fruit. These are mainly taken up through the roots, dissolved in water, so more water is generally needed to produce flowers and fruit
- **Texture, structure and compaction** of the soil or growing media and its organic matter content. Plants cannot extract every drop of water from soil and some soils may still feel damp even though plants have started to wilt. This tends to happen in clay soil. A clay soil can hold more water than a sandy one but plants are able to extract more water from sand than clay. In contrast, sandy soil can feel dry even though there may be moisture still available to plant roots. Sandy soils tend to need smaller amounts of more frequent watering than clay. Caring for your soil by adding organic matter will improve its water holding capacity
- **Whether the plant is growing in a border or** container or with root restriction e.g. next to a wall. A large plant in a small pot will need more frequent watering than one planted in a border. In a border, the roots are free to grow wherever they are able to find water and hence draw moisture from a much larger volume of soil than if the roots are confined in a pot. Plants that are pot bound (i.e. have more roots than compost in the pot) dry out particularly quickly
- **Season and weather** (e.g. rainfall, hours of sunshine, temperature, wind and humidity) will affect the rate of water use. Generally speaking, plants use more water in the warmer summer months and less in the cooler winter months. They will also use more in hot, sunny and windy weather. And watering will need to be more frequent during prolonged dry spells with no decent rain (light showers are of little use to plants as the water simply evaporates or only wets the very surface of the soil where there are few roots)

Signs that your plants may need more frequent watering

- Less than expected growth of foliage, or production of fruit or flowers
- Leaves or stems that look dull or lost their shine, sometimes darker or paler than normal
- Change in position of leaves, they may angle downwards or start to curl
- Wilting (take care though as this can also indicate overwatering!)
- Pots become lighter in weight
- Pots blowing over in the wind
- Symptoms of powdery mildew

If the surface of the soil or compost is dry, that does not necessarily mean that the plant needs water. Water is needed at the root tips, so surface moisture is not always a good indicator. If using the touch test, push your finger down into the compost or soil to at least knuckle depth to see if it is damp, rather than just feeling the surface.

How to water

Plants can only effectively use water through their roots, taking water from the surrounding soil or compost. So water needs to get to where it's needed, at the tip of the roots and not the leaves. Wet or humid foliage will encourage fungal problems and evaporation from the surfaces.

Watering more thoroughly, but less frequently helps get the water down to the deeper root tips. It is better to water the garden before drought really sets in, to keep the soil moisture levels even and avoid the soil being continuously dry. But, equally important, the soil doesn't have to be really wet all the time because plants roots need air as well as water to grow well. Consider the way we drink a glass of water, it doesn't have to be full all the time, but we might prefer it was topped up half way rather than it becoming completely empty.

Where plant roots are restricted for example in containers or growing next to a wall or fence post, more frequent watering may be needed as the roots are extracting water from a smaller volume of soil than if they were growing freely in the border soil.

Once drought has set in to border, it is futile to try and remedy this by light watering over a wide area. Light watering may encourage surface rather than deep roots, leaving plants more susceptible to drought. Instead, make a single thorough watering of the plants that are suffering. Try to water in the cool of the evening or the very early morning, so that less water is lost immediately to evaporation.

Watering effectively where drainage is poor is very difficult. It's better to improve the drainage or choose plants that are appropriate for the conditions such as those suited to both wet and dry conditions. Roots are very susceptible to airless conditions, particularly when the soil is warm in summer.

How much water to apply

How much water is needed will depend largely on the water requirements of that particular plant and how actively it is growing. The type of soil or growing media as well as weather are also important considerations.

Light sandy or chalk soils need watering more frequently than heavy clay soils, but less water can be applied at each watering, as the excess will drain away easily. Heavier, clay-based soils can be watered less frequently, but need heavier applications of water because they hold more water within their structure. Adding **organic matter** increases the water holding capacity of most soils.

When watering containers, try adding 10% of the volume of the container at each watering. So for a 10 litre patio pot, add 1 litre of water. Pour it on slowly, aiming to keep it in the pot and not allow it to drain out of the bottom. A

saucer placed under the pot will catch any excess and allow it to be re-absorbed. For small containers, gently lift the pot after watering to see if it feels heavy, and if not, add a little more water. You will soon gauge how light the pots are when they are in need of water.

If plants have wilted between waterings, you may need to water more often, but slowly and thoroughly so that the water reaches the root zone. Avoid disturbing the soil surface if you can, by slowing the flow. Pop a rose attachment on your watering can, a variable nozel on your hose or simply reduce the pressure at the tap. This will allow water to infiltrate into the soil more slowly.

Methods of watering

Watering cans: Most garden watering can be aimed specifically at the stem bases beneath the foliage canopy using a watering can, leaving the surrounding soil dry. This helps to limit weed problems and ensures all the water goes where it is needed, to the roots.

Seep hoses: These hoses or pipes with holes in them deliver water accurately to established plants and plants in rows. They can be hidden beneath soil or mulch, which also avoids evaporation losses. Water doesn't move much sideways from seep hoses. Therefore the lengths of hose need to be positioned across plant root systems, such as going under a shrub, or the lines placed 30-45cm (12-18in) apart in denser plantings. They work best on heavy soil where the water spreads further sideways than on lighter soils.

Automated irrigation systems: To save time and labour on bigger or more water-demanding areas such as fruit and veg plots, install a drip or trickle irrigation system. Only the root zone should be wetted - water that penetrates deeper will be inaccessible to most plant roots, and leach nutrients into the deeper layers of soil. Suppliers can advise on installation of these systems. They can be operated on timers or with moisture or rain sensors but still need checking especially when setting up if wastage is to be avoided. They can be particularly useful if you go away on holiday. Solar powered pumped systems can make use of stored rainwater whereas most drip irrigation needs mains pressure to work well.

Sprinklers: These have only limited use in gardens, as they need mains pressure to work and can use as much water in an hour as a family of four people would normally use in two days.