

WATERING & IRRIGATION SYSTEMS

BEGINNERS GUIDE TO GARDENING



WATERING YOUR PLANTS

One important aspect of gardening is watering your plants correctly. Knowing when to water, how much to water, and the factors that affect watering can make a big difference in the health and growth of your plants. In this lesson, we will cover these topics and also provide an activity to make your own water butt for storing rainwater.

When to water

The best time to water is in the mornings when the sun is just starting to come up and plants will start to use water. The soil surface and foliage is also more likely to stay drier for longer than evening watering. This discourages snails, slugs and mildew diseases. Evening watering is also fine, so long as the weather is not too warm so that less water is lost to evaporation. You should never water in the middle of the day when it is hot as most of the water will be lost through evaporation from the surface of the soil.



HOW MUCH SHOULD YOU WATER?

The amount of water required will largely be determined by the plant's water requirements and its rate of growth. The sort of soil, as well as climate, are likewise significant factors.

Light sandy or chalk soils require more frequent watering than heavy clay soils, but less water can be applied each time because excess water will easily drain away. Due to more water within their structure, heavier, clay-based soils require heavier applications of water but can be watered less frequently.

Try giving container grown plants 10 percent of its volume in water each time you water it. Therefore, add 1 liter of water to a 10 liter patio pot. Slowly pour it on, making an effort to keep it in the pot and prevent it from draining out of the bottom. Any leftovers can be reabsorbed by catching them in a saucer under the pot. After watering small containers, gently lift the pot to check for weight and, if not, add a little more water. When the pots are empty and need water, you will soon be able to tell how light they are.

Frequency

Each plant has unique requirements, so there is no one-size-fits-all formula for watering. For instance, in hot, sunny weather, a container plant may require daily watering, whereas a mature shrub may only require a drink in extreme drought. Keep in mind that if more water is given to plants, they will need more water. You can let them dry out a little between waterings and they won't need to be wet all the time.



FACTORS THAT AFFECT WATERING



- The larger the plant is, the more water it is likely to lose and the more nutrients are needed to flower. This is the same for plants with lots of foliage.
- The compaction, texture and structure of the soil it is growing in also has a big impact on the amount of water needed. Clay soils can hold more water than sandy soils, but plants are better at extracting water from sandy soils.
- When compared to a border plant, a large plant in a small pot will require more frequent watering. The roots in a border are free to grow wherever they can find water, drawing moisture from a significantly larger volume of soil than in a pot. Pot-bound plants dry out especially quickly.

- Precipitation, long stretches of daylight, temperature, wind and dampness will influence the pace of water utilised. In general, plants require more water during the warmer months of the summer and less during the cooler months of the winter. Additionally, in hot, sunny, and windy weather, they will use more.



SIGNS YOUR PLANTS NEED TO BE WATERED

If you notice any of the following signs, it may be time to water your plants:

- The foliage is growing slower than usual or not producing fruit or flowers.
- Leaves or stems may look dull, dark, or pale compared to their usual shiny appearance.
- The position of leaves may change, angling downwards or curling.
- The pots feel lighter, and they may blow over in the wind.
- Powdery mildew appears on the plant.

Remember that the surface of the soil or compost may not always indicate whether the plant needs water. It's best to check the soil moisture at the root level by using the touch test. Stick your finger into the soil to a depth of about an inch. If it feels dry at that depth, it's time to water your plant.



ACTIVITY TIME!

Step-by-step guide to making your own water butt

Over recent years we have had some intense summer heat, which has often lead to a hosepipe ban. Unfortunately for gardeners, this can stop may plants getting the water they need. Luckily, with enough planning in advance, we can fill up water butts with rain water and store it for the summer. Follow these simple steps to creating your own water butt:

Instructions:

1. Find a large container (an old plastic bin with a lid or wooden barrel works well) and a location to place it. We suggest placing your water butt near a downpipe of your guttering or in a location that is open to more rainfall.
2. Drill a hole in the side of the container, a few inches from the bottom. Use this hole to add a tap or drain valve to later empty out the water as you need it. (You can also drill a small hole at the top of the barrel to allow some air to flow in and out of the container.)
3. Make a base to raise the container off the ground, using bricks, wood or something equally sturdy. It is best to raise it high enough off the ground to be able to fit a bucket or watering can underneath the tap at the base of the container.
4. Place the barrel on the base, and direct the downpipe into the container.
5. Cover the top of the container with a lid to keep any debris such as leaves or dirt from entering the container. If you do not have a suitable lid, a mesh cover will keep out most debris.

SOURCES OF WATER

Rainwater is a great option for plants and the first “go-to” for gardeners because it is free and can be stored. It takes energy and treatment to deliver tap water to our homes, and it may contain more minerals than many plants require.



Irrigation Systems

Drip irrigation is a slow and controlled watering system that uses small emitters to deliver water directly to plant roots. It prevents overwatering and conserves water by giving plants only what they need. It works by allowing water to slowly seep into the soil, which is more efficient than traditional sprinkler systems.

Drip irrigation is suitable for most types of gardens and adapts to irregularly shaped and uneven slopes. It is especially useful for raised beds, row crops, and trees. The amount of water used depends on various factors, but on average, it uses 2L to 20L of water per hour.

Compared to spray or sprinkler irrigation systems, drip irrigation is more efficient, cost-effective, and eco-friendly. It delivers water gently and precisely, preventing damage to delicate plants and crops.

Watering your plants is a vital part of gardening, and understanding the right techniques can help your garden thrive. By knowing when to water, how much to water, and the factors that affect watering, you can ensure your plants are getting the right amount of moisture. Just follow the tips in this lesson, make your own water butt and you'll be taking a big step towards a healthy and sustainable garden.