Indoor Plants - Watering

The main cause of death of potted plants is over-watering. Roots need both water and oxygen, and when surrounded by water, they cannot take up oxygen. These roots may rot and eventually the whole plant may die. The symptoms of over-watering and underwatering are similar. Both lead to poor root health, root decline and possibly death of the plant.

A common question from gardeners is "How often should I water my plants?" There is no pat answer to this question. The amount and frequency of watering depends on many factors, such as the plant species, its growth stage, its location, the type and size of its pot, soil mix characteristics and variable weather conditions.

There is a wide range of watering requirements for different species of plants. Plants with large or very thin leaves and those with fine surface roots usually require more frequent watering than succulent plants with fleshy leaves and stems that are able to store water. Some plants thrive under moist conditions while other plants grow well when kept drier.

Plants may slow in growth after a flush of new growth or a heavy flowering. During these periods and while it is dormant, a plant will need less water.

Water evaporates rapidly from the sides of a porous clay pot, which requires more frequent watering than nonporous, glazed or plastic pots. A large plant in a small pot needs water more often than a small plant in a large pot.

Different soil mixes require different watering schedules. Heavy, fine-textured potting media and those that contain a lot of peat moss hold more moisture than loose, porous mixtures of bark, sand and perlite.

A plant in a warm, dry, sunny location needs more frequent watering than one in a cool, low-light environment.
The rule-of-thumb is to water when necessary. The following methods may be used to determine when to water:

- **Touch the soil** - The most accurate gauge is to water when the potting mixture feels dry to the touch. Stick your finger into the mix up to the first joint; if it is dry at your fingertip it needs water.
- **Tap the pot** - When the potting mix in a clay pot begins to dry, it shrinks away from the sides of the pot. Rap the side of the pot with the knuckles or a stick. If the sound is dull, the soil is moist; if the sound is hollow, water is needed.
- **Estimate weight** - As potting mixtures become dry, a definite loss in weight can be observed.
- **Judge soil color** - Potting mixtures will change from a dark to lighter color as they dry.

There are a number of watering meters available to measure moisture in the soil, indicating whether water is needed. These products vary widely in accuracy. The readings can be influenced by factors other than soil moisture content. Fertilizer and soil type can affect the reading.

When watering is required, water thoroughly. Apply water until it runs out of the bottom of the pot. This washes out the excess salts, and it guarantees that the bottom two-thirds of the pot, which contains most of the roots, receives sufficient water. Don’t let the pot sit in the water that runs out. Empty the saucer.

Do not allow the soil to become excessively dry. If the salt level in the container is high, root damage may occur. If soil does become very dry and hard to rewet, use the double watering method. Water once and then again half an hour later; or place the pot in a sink or a bucket of water. Remove the pot when the soil surface is moist. Allow the pot to drain completely. If peat is allowed to dry completely, not only is it difficult to rewet, it also will not hold as much water as it could hold before it dried.

Do not water with hot or cold water. The water temperature should be between 62 and 72 °F. Do not water plants with softened water because sodium and chloride will also be added to the soil mix, possibly causing plant damage.

Although wilting is often an indication of the need to water, it is not always so. Any injury to the root system decreases a plant’s ability to take up water, including root rot, which is caused by too much water. This inability to take up water will cause wilting, and under these conditions, watering may make the problem worse.

Excerpted from the *South Carolina Master Gardener Training Manual*, EC 678.


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