

# Watering Raised Beds, Berms, Containers, and Houseplants

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## Best Management Practices

Container gardens and raised beds have unique characteristics that affect watering practices. Raised bed gardens often have highly amended soil to improve tilth and drainage. The growing medium in container gardens often consists of a completely soil-less mix comprised of peatmoss, vermiculite, perlite, pine bark, coir, rock fiber, or a combination of these. Because of their high porosity, these mixes do not retain moisture or nutrients very well.

### Raised beds and berms

Elevated garden features are created to improve drainage, enhance the appearance of component plants, or to add topography to the landscape. Soil in raised beds is often amended with organic matter (up to 50-50 ratio) to improve the plant root zone. Surface soil on berms may also be highly amended.

The goal of watering raised beds and berms is to keep soil moist to a depth of 6 to 8 inches. Because the bed is raised and amended to be more porous, drainage is not usually a problem. A raised bed should be irrigated with 1 to 2 inches of water or rainfall equivalent once or twice a week during a typical summer. The amount varies depending on organic matter content and depth of the bed. If the temperature is above average, or if the bed is in full sun and exposed to high wind, more frequent watering may be needed.

### Container gardens

The amount of water required to maintain plants in containers is influenced by shape and size, as well as composition (plastic, terra

cotta, hypertufa, etc.) of the container. Exposure to sun and wind, as well as the density and maturity of component plants also affects the water requirement. Monitor container gardens daily to determine frequency and amount of water needed.

The soil in exposed container gardens often gets too hot for plant roots. Watering during the heat of the day may be necessary to cool the soil temperature. This does not require soaking the soil, just moistening the plants and soil surface to reduce the temperature. Be sure that water coming from the end of the hose is cool.

Water a container to its maximum capacity (absolute saturation) to ensure that water has soaked through the entire container. Using a water breaker at the end of the hose will help disperse the water stream, protecting both the plants and the soil. Water should run out of the bottom drainage hole. If possible, set the container in a saucer. Allow water to run through the container and leave it for at least 30 minutes giving soil time to soak up free water from the bottom. Then dump excess water or extract it with a syringe or turkey baster. This assures that soil is completely moist.

Allow potting soil to dry between waterings. Check moisture by probing media with your finger. It should be dry at least 3 inches deep before watering. Plants respond differently to moisture deficiency; some wilt sooner than others. Learn how plants react and use that information to guide watering practices. Note: Amendments that increase water-holding capacity may be included

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in potting soil — learn how these behave and adjust watering practices accordingly.

## Houseplants

It is impossible to properly water a houseplant on an arbitrary, pre-determined schedule, once a week, for example. Watering frequency varies depending on the size and growth rate of the plant, the nature of the potting soil, the type of container, and environmental conditions such as temperature and humidity.

Potting soil in plastic containers won't dry out as fast as soil in unglazed clay containers (if you tend to over-water, clay would be a good choice). If the appearance of a plastic container is objectionable, it can be placed into a decorative container. This is known as double potting.

Use room temperature water for houseplants. Before watering a houseplant, use your finger to

check the moisture status of the potting soil. For most houseplants — tropicals and flowering pot plants — water when the soil is dry 1 inch below the surface in a 6-inch pot, or 2 inches below the surface in a 10-inch pot. Then apply enough water to saturate the potting soil so some runs out of the drain holes in the bottom. Make sure it isn't just running down the side where dry potting soil may have pulled away from the side of the pot.

Note: Flat bottom pots sitting on a flat surface may develop an "air-lock" (vacuum) that seals off the bottom, preventing drainage. Choose pots with feet, or elevate to provide air space underneath.

After excess water has drained through, discard any that accumulates in the saucer under the pot. It is important to water to total saturation, with some excess draining through the pot, for two reasons. First, this ensures that the

entire soil mass is moistened. Second, water draining from the bottom of the pot carries away dissolved salts from fertilizer application, a process called leaching. Accumulated soluble salts can contribute to root damage due to an osmotic effect.

## Cacti and succulents

When watering cacti and succulents — plants that absorb and store water — the time between waterings should be long enough to allow soil to completely dry and to partially use up some of the water stored in plant tissue. Record the length of time it takes for soil to become completely dry to the touch an inch deep in the container. Then wait that much longer again, before watering. For example, if it takes 2 weeks to completely dry the soil in the pot, the plant should be watered every 4 weeks. This interval varies by the time of year and indoor environment.

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