Soil Nutrient Analysis Laboratory

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WATERING HOUSEPLANTS

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Watering seems like such a simple task that many are surprised to learn that improper watering is the number one cause of houseplant demise. Plants take up water through their roots. Water is used as plants photosynthesize and transpire, and it is lost through evaporation.

A plant only absorbs as much water as it needs. Excess water will generally drain away in outdoor garden soils. However, houseplants are confined to a container. If too much water is added to a potted plant, it remains in the saucer or cachepot unless we remove it. This surplus water causes the potting medium to remain saturated and displaces necessary oxygen. Ultimately, the roots die due to lack of oxygen.

In less severe situations only part of the root system is injured or dies. Any unhealthy tissue may serve as entry points to disease carrying organisms. Often root rots set in. As roots deteriorate, they take up less and less water and the plant appears wilted or droopy. Often inexperienced houseplant owners will continue to water the plant accelerating its demise.

Proper watering techniques will promote healthy root growth. Instead of watering plants by the calendar, check them frequently to evaluate their moisture needs. Stick your finger into the potting mix and feel for moisture about an inch below the surface. If the planting medium feels dry, give the plant a thorough deep watering. Ideally, the whole root system of the plant will be moistened. Light waterings encourage poor, shallow root growth. Keep in mind that plants will dry out faster when temperatures are higher and when exposed to heat sources as is often the case during the winter months.

Apply enough water so that after about a minute, excess water will be observed seeping out of the drainage holes. Empty saucers or cachepots containing water within an hour or so of watering.

When the rooting medium is excessively dry, it pulls away from the pot and water will run rapidly down the sides of the pot into the saucer without saturating the root zone. To rewet the potting mix and the roots, submerge the whole pot in a sink or pail full of water until air bubbles stop appearing. Then let the pot drain well before returning it to its regular site. Try not to let plants get this dry as some root injury will occur each time.

How much water a plant needs and how often it requires watering depends on both the species of plant and the environmental conditions to which it is exposed. The amount and intensity of light a plant receives, the temperature at which it is grown, and the humidity level all affect the rate atwhich a plant will use water.

In general, plants with thick or waxy leaves or plants with few leaves will require less water than plants with many, soft, lush leaves. Plants also use more water during periods of active growth.

The size and type of container influences the amount and frequency of waterings. Unglazed clay pots dry out quicker than plastic or glazed pots. Plants in too small a container in proportion to their size need to be watered more often and should probably be transplanted in to the next size larger pot. Conversely, plants growing in pots too big for their root system have a hard time using all the water the large amount of potting medium can hold and often exhibit symptoms of overwatering.

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Some moisture is also lost due to evaporation from the soil surface or the surface of porous clay pots. Liquid water is converted into a vapor when exposed to warm temperatures, and it dissipates into the air. The amount of water lost through evaporation can be lessened during prolonged periods of hot weather by double potting, or by covering the potting soil with a thin layer of organic mulch. Double potting is a technique whereby a smaller pot with the plant in it is inserted into a larger pot. Usually a layer of moistened sphagnum moss is placed in between the two pots.

Normally, tap water is used to water houseplants. Water at room temperature is preferable. Chemicals present in municipal water sources may cause injury to houseplants. Sometimes this is seen as a browning of leaf tips and margins. Some plant species are more susceptible to this type of damage than others. Filling the watering can and letting the water sit a day or so before using will often allow any harmful chemicals to dissipate.

Another problem with water quality may be noticed if a water softener is in use. Generally, sodium salts are used in this system, and they can accumulate in the potting mix and injure the plants. Collect water from outdoor taps, which are often not connected to the water softener, or even the downspout of the rain gutter, or consider purchasing bottled water for sensitive houseplants.

Occasionally water sources will have an excessive level of alkalinity. This is determined by measuring the amount of carbonate and bicarbonate present in the water. This will cause the pH of the potting medium to rise above what is required by the plant and nutritional problems usually develop. Most water analyses test for this parameter.

Do evaluate both the water requirements of your plants and your watering techniques. Try out a self-watering container or wick watering system if you are a forgetful waterer at times.

The better you accommodate your plant's needs, the happier and healthier they will be.