
Indoor Plant Care

Indoor plants can create a cool, spacious indoor environment while adding color and interest. While indoor plants can thrive in some settings, many homes and other indoor spaces are poorly suited to their needs. Growing indoor plants successfully is dependent upon selecting plants that are best suited to available growing conditions, providing proper care to maintain health and vigor, and monitoring for insect and disease problems.

Light is probably the most essential factor for house plant growth because it is the energy source that drives photosynthesis. The direction the windows face affects the intensity of natural sunlight that plants receive. Southern exposures have the most intense light, eastern and western exposures receive about 60% of the intensity of southern exposures, and northern exposures receive 20% of a southern exposure. Curtains, trees outside the window, weather, season of year, shading, and the cleanliness of the window also affect light intensity.

Increased hours of lighting allow a plant to make sufficient food to survive and/or grow. However, plants also require some period of darkness to develop properly and should be illuminated for no more than 16 hours per day. Plants receiving inadequate light may have elongated stems, small/pale leaves, and/or exhibit poor growth. Excessive light can also be harmful. When a plant gets too much direct light, the leaves become pale, sometimes sunburn, turn brown, and die. During summer it may be necessary to protect plants from too much direct sunlight.

Over- and under-watering account for a large percentage of indoor plant losses. Some plants like drier conditions than others. Differences in soil or potting medium and environment also influence water needs. House plant roots are usually in the bottom two-thirds of the pot, so do not water until the bottom two-thirds starts to dry out slightly. To determine whether or not a plant needs water, stick your index finger into the pot about one-third the overall depth of the soil. If the soil feels damp, don't water. Keep repeating the test until the soil is barely moist to the touch.

When it's time to water, irrigate the pot until water runs out of the bottom. This serves two purposes. First, it washes out all the excess salts (fertilizer residue). Second, it guarantees that the bottom two-thirds of the pot, which contains most of the roots, receives sufficient water. Do not let the pot sit in the water that runs out. Watering frequency will vary by season and increase as the plant grows. If your finger can't penetrate 2 inches deep, you either need a more porous soil mix, or the plant is becoming root-bound.

In general, foliage house plants grow best between 70 and 80 degrees F during the day and from 60 to 68 degrees F at night. Excessively low or high temperatures may cause plant failures, stop growth, or cause spindly appearance and foliage damage or drop. A cooler temperature at night is actually more desirable for plant growth than higher temperatures.

Humidity can be increased by either using a humidifier or placing gravel trays under the plant pots or containers. This will increase the relative humidity in the vicinity of the containers. As the moisture around the pebbles evaporates, the relative humidity is raised. Air conditioning and heating dries plants rapidly and can overtax their limited root systems. Placing plants too close to air registers can cause damage or plant loss.

House plants require fertilization due to the limited root space in pots. Commercial fertilizers used for house plants are sold in granular, crystalline, liquid, or tablet forms. Each should be used according to instructions on the package label or even more diluted. As a general rule, use a fertilizer recommended every 2 weeks from March to September. During the winter months no fertilizer need be added at all because reduced light and temperature result in reduced growth.

Repotting indoor plants gives you an opportunity to inspect the root system and/or divide the plant to share with friends. Other reasons to repot include: outgrowing the pot; minimizing damage due to salt build-up; or, insect or disease problems. When repotting, you should consider potting media composition, size of the pot, and what the pot is made of. Sanitation is also a consideration when reusing pots and selecting media.

All indoor plants need repotting from time to time. The frequency of repotting depends on the growth rate of the particular plant. Fast-growing plants may need repotting annually, while slow-growing plants may require repotting every two to three years. Some plants (e.g., amaryllis) thrive when pot bound.

Use a soilless media that contains a combination of organic material (usually peat moss) and inorganic material such as washed sand, vermiculite, or perlite. The ratio of organic to inorganic material should be about 1:2. The organic materials will hold water and the inorganic materials will provide drainage and aeration. These materials are devoid of essential plant nutrients, so fertilizers that include micronutrients are always added to commercial products. Do not use garden soil because it is likely to contain plant disease organisms and provides poor drainage and aeration.

Used pots that are available for reuse should be washed with detergent and sanitized in a 10% chlorine bleach solution before reuse to minimize disease transmission. Plastic pots are easier to sanitize than ceramic pots or wooden boxes. The pot that you are planting into should be about two inches in diameter larger than the previous pot. Have an ample supply of pre-moistened media available.

The next step is to cover the holes in the bottom of the pot to keep soil from washing out the hole. A paper towel or coffee filter works well, but will decompose. A piece of window screen will last the life of the plant. Despite what your grandma said, forget the rocks in the bottom. Pots with a drainage hole do not need rocks and actually the rocks just decrease the soil volume where roots can grow.

The best time to repot plants is when they are actively growing, usually spring through summer. To begin, hold the potted plant upside-down while knocking the lip of the container sharply on the edge of a table. Hold your hand over the medium, straddling the plant between your fingers. If the plant has become root-bound, you should cut and unwind any roots that circle the plant. Use a clean, sharp knife if cutting is necessary. Remove the top layer of the old medium if you see any accumulated salts. Conversely, you may not see any roots and decide the plant does not need repotting. In this case, simply pop it back in the pot and no harm done.

Examine the roots after the plant is out of the pot. The roots should appear firm and white or light-colored. Black, dark colored, squishy or smelly roots are symptoms of root disease caused by over-watering or poor drainage. Rotted roots should be trimmed with a clean, sharp knife or pruners. Roots may also be pruned to keep a plant at a certain size. To do this, you trim off up to 1/3 of the bottom of the rootball. You may also make 3 to 4 vertical cuts through the root mass up to 1/3 deep into the center of the rootball. Again, only use clean, sharp tools.

To repot, put some medium in the bottom of the new pot. Set the rootball in the middle of the new medium. Fill medium between the sides of the pot and the rootball. Do not add medium above the original level on the rootball, unless the roots are exposed or it has been necessary to remove some of the surface medium. Gently press or firm the medium with your fingers. After watering and settling, the medium level should be sufficiently below the level of the pot to leave one-half to an inch or more headroom - depending on the size of the container.

Indoor plants can have a range of pests including aphids, mealybugs, mites, thrips, fungus gnats, and whiteflies. Some of these can also exude honeydew which can also attract ants.

To be effective in any pest control program, you must first correctly identify the pest species which you are targeting. This can often be done by close inspection. Aphids can be green, black, yellow, or red and are usually found on the growing plant tips. Scales can either be soft-bodied or armored. Soft scales produce sticky honeydew. Mealybugs are a mobile form of soft scale with a white, waxy coating that also exude honeydew. Mites are microscopic and therefore more difficult to detect. They leave behind small holes and fine webbing. The tops of damaged leaves often appear stippled with silvery or yellowish dots. Thrips are also very small and can fly when mature. They can be detected by gently tapping the affected part of the plant against a white piece of paper and inspecting with a magnifying glass. White flies are tiny, sap-sucking insects. The larvae (nymphs) look somewhat like scale. The adults are white and can often be seen flying around the plant.

Sticky Traps

Blue or yellow sticky traps (cards that attract insects) are useful for attracting and trapping flying adult fungus gnats, whiteflies, thrips, and others. Upon landing, an insect becomes stuck to the card due to an adhesive coating. Blue sticky traps attract thrips and yellow sticky traps attract whiteflies and fungus gnats. Fungus gnats are the most common insect found on indoor plants. Catch the adults with sticky traps and use a soil drench of Bti to kill the eggs that have already been laid in the soil. [Fungus Gnat Integrated Pest Management](#) .

Soaps

Soaps are salts of fatty acids. Fatty acids are found naturally in plants and animals and when reacted with metal salts, they become soap. Formulations of liquid soaps are sold commercially as insecticides.

Horticultural Oils

Horticultural oils are highly refined petroleum oils that contain added surfactants (an additive that allows them to be mixed with water and applied as a solution). In general, oils kill all stages of insects by smothering them. Oil also kills eggs by penetrating the shells and interfering with metabolic processes and/or interrupting respiration.

Beneficial Nematodes

Beneficial nematodes are not a pesticide, but microscopic round worms in the genus *Steinernema* and *Heterorhabditis*. They live in the soil and feed on many plant pests. Beneficial nematodes feed on the larval stages of fungus gnats.

Systemics

Systemic pesticides are applied to the soil and are absorbed by the plant's roots. The insects is killed when eating the plant.

Always read the product label to ensure it is intended to control your specific insect. Contact your local Cooperative Extension office for the best management methods for your situation.

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