

HOUSEPLANTS DEPARTMENT



BASIC HOUSEPLANT CARE

By Dee Beckman

Growing plants is an art, not a science; a pleasure, not work. There is no such thing as hard and fast rules. There are; however, some basic requirements.

TEMPERATURE	PINCHING, PRUNING, DEAD-HEADING
LIGHT	BATHING YOUR PLANTS
SOIL	LEAF SHINE
WATERING	PROPIGATION
FERTILIZER	TRANSPLANTING OR REPOTTING

TEMPERATURE

Microclimate: Plant temperature requirements fall into one of three categories:

From fall until late spring, night temperature should be achieved for that particular plant. There will be fluctuations in the daytime temperature and this is expected. Nighttime temperatures are traditionally used as the base temperature in horticulture, because the plants are at rest then and are most likely to become cold damaged. A minimum-maximum thermometer can be of great help in determining the temperature range for your plants. Hang it by a window, which will be the coolest place, and it will record the coolest and warmest temperature for that location, most homes fall in the warm to temperate range.

The minimum-maximum range of temperature that will support plant growth is usually between 40 and 98 degrees. Plant growth shows a direct relationship to the surrounding temperature as it increases. Optimum growth of a plant in relation to temperature depends on its place of origin.

Plants from the tropics usually do well in the centrally overheated home, with an average daytime temperature of 72 degrees day temp. In general, plants grown under uniform temperature conditions develop neither as well nor as fast as those grown under alternating day and night temperatures.

On a warm day, photosynthesis is increased; the plant produces lots of food. During the cooler night, respiration slows down; the plant uses less of the energy it has sorted up than it would otherwise. On balance, this leaves more food with which to build a bigger, healthier plant. Plants such as dieffenbachia, philodendrons, and caladiums, come from the steamy lowlands of South America, they will do better with a ten-degree drop in night temperatures. For instance, it is rare to see a dieffenbachia in bloom indoors, yet people have coaxed theirs into flowering. In one example, a dieffenbachia bloomed some months after it spent a summer sitting in a backyard with night temperatures dropping by twenty degrees or more. From this and other recorded cases, the drop in night temperature seems to be a decisive factor in flowering.

Indoor room temperatures in winter can vary as much as twenty degrees or more in the same room at the same time, from near the windowpanes to near the radiators. Get to know the cold and warm spots in your rooms, best learned with the aid of a thermometer, and place your plants according to their preferences.

LIGHT

There is nothing like sunlight for growing houseplants. Light requirements for houseplants usually fall into the following categories;

Light is the single key to the successful cultivation of houseplants. Unlike animals, plants produce most of their food themselves and light triggers and energizes the process of photosynthesis that produces carbohydrates, the plant's food. Without light, production ceases and the plant survives on its own stored energy.

The intensity of light is measured in different ways. The most common method in horticulture is by foot-candles. Since illumination increases logarithmically, the numbers climb rapidly as the light gets brighter and vice versa, a north window on a sunny winter day would be about 150-500 foot candles close to the pane. If, at a given time, the light measured 300 foot candles at the window, then only two to three feet in from the window the intensity will be 100 foot candles or less. That is why it is important to put the light loving plants close to the window as possible.

Plants do not "see" light the way we do. Our eyes are most sensitive to the green part of the light spectrum, whereas plants are more sensitive to the red and ultraviolet light.

Daylight is composed of all colors of the spectrum. Artificial light lacks certain parts of the spectrum. Certain parts are more important to plants than others, playing specific roles. Without them the plant cannot survive. Wavelengths of blue, and particular red control photosynthesis. Ultraviolet, green and another blue are the activators of phototropism these are absorbed by carotenoid pigments manufactured by the plants.

These are the same pigments that give us our vision. Two different parts of the red spectrum determine the overall size and development of the plant. These activate a blue pigment called phytochrome, which is considered to be the key enzyme for controlling all plant growth.

Phototropism is the tendency of the young growth tips of a plant to turn toward the sun, that is the reason why it is necessary to turn your plants ¼ turn when you water.

Etiolation is caused by insufficient light. Its symptoms include spindly, leggy plants with pale, bleached looking foliage due to lack of chlorophyll. A good example if this is a bean or alfalfa sprouts. They are grown in low light conditions, which causes their light, bleached color.

Many plants that find direct sun in the summer too strong will thrive in direct winter sun, when the intensity is considerably less. Another variable where sunlight is concerned is the length of the day since winter days are much shorter than summer days.

The longer the light shines, the greater the effect. For example: twenty hours of 100 foot candles of light will produce as much photosynthesis as ten hours of 200 foot candles. For houseplants you can make up for light loss by extending the hours of light using artificial light.

SOIL

Potting soil is broken down into three categories, loamy, humusy and sandy. The better the soil, the healthier and more attractive your plants will be. Soil mixing can be almost as complex as synthesizing rubies, but a three-part mix may be standardized for soil requirements, divided roughly into the categories mentioned above.

LOAMY SOIL MIX – Standard, all-purpose mix.

One part top soil, garden loam or prepared potting soil
 One part peat moss, chopped sphagnum moss or earthworm castings
 One part coarse aggregate (gravel), perlite or vermiculite

HUMUSY SOIL MIX – acid loving plants like Gardenias

One part top soil, garden loam or prepared potting soil
 Two parts leaf mold, earthworm castings, peat moss or chopped sphagnum moss
 One part sharp builders sand, coarse aggregate or perlite

SANDY SOIL MIX – Cactus soil mix

One part top soil, garden loam or prepared potting soil
 One part leaf mold, earthworm castings, peat moss or chopped sphagnum moss
 Three parts sharp builders sand, coarse aggregate, volcanic rock (scoria), or perlite

KITCHEN SINK MIX – everything but the kitchen sink mix

Six cups top soil, garden loam or prepared potting soil
 Six cups leaf mold, peat moss or chopped sphagnum moss
 Six cups sharp builders sand, coarse aggregate, volcanic rock (scoria), or perlite
 One-cup charcoal
 1/3 - cup earthworm castings
 One-tablespoon bone meal

To decide which type of soil mix would be best for a particular plant, ask you local horticulturist, consult an plant book or consider the growing conditions of the plants natural habitat.

WATERING

Watering is the most inexact of all horticultural sciences. It is usually done by “feel”. Most plants like their soil either constantly moist but not wet or they prefer to dry out between watering but not bone dry. The key in watering is good drainage.

Remember, there is a big difference between moist and wet soil. A good rule to go by - allow the top one third of the soil to dry down in between watering and thoroughly saturate the soil when you do water, don't allow the plant to sit in water for more than a couple of hours. Each plant will dry down in its own time depending on light, temperature and type of the plant. Depends on what that plants natural environment is, and are you duplicating it.

FERTILIZER

Most fertilizers are chemical, water-soluble compounds. Only fishmeal and fish emulsions are what would be considered “organic”, derived from once-living organisms.

Trace elements such as Boron, Copper, Iron, Magnesium, Manganese, Molybdenum, and Zinc are some of the micronutrients need by your plants. These are readily available in most fertilizers. Some fertilizers specifically state that they contain trace elements as well as **Nitrogen**, **Phosphorus** and **Potassium**.

All fertilizers have an analysis on the label that represents the percentage of the “big” three elements **NITROGEN (N)**, **PHOSPHORUS (P)**, **POTASSIUM (K)**, in that order. These are the key elements in all fertilizers.

They are used in the following way by the plants; nitrogen primarily stimulates leaf growth and photosynthesis, phosphorus concentrates its effect in root and stem development. It also enhances color display in flowers when bloom season approaches. Potassium or potash does a number of things. It is like a health tonic to plants making them more disease resistant. A 20-20-20 fertilizer contains a good balance of all three elements and would be a good all-purpose fertilizer for houseplants.

PINCHING, PRUNING AND DEAD HEADING

Vine plants are best pinched back. This forces them to branch out and makes a much fuller, healthier-looking plant. Do you have leggy looking plants that have spindly branches? This will bring back a bushy appearance. If you have flowering plants that the flowers have faded, this will allow them to bloom longer and possibly keep them from getting leggy.

The best way to prune is to remove 1/3rd of the new growth, allowing some leaf growth behind. I always say, “leave leafs”. Don’t leave a bare stem if you can. Make sure you use a pruner that gives you a nice clean cut, cut as close to the next set of leaves without leaving behind a long stem or nub. Be careful not to damage the latent bud at the base of the leaf.

BATHING YOUR PLANTS

Tip plant at a 45-degree angle and rinse off dust and potential bugs and eggs, with a soapy water solution. I usually use 2 to 3 drops (1tsp) of liquid dish detergent to a gallon of room temperature to lukewarm water. If the plant is too large to tip you can put this solution into a spray bottle and spray down the plant and then rinse the plant off with clear water. A small plant can be turned upside down and immersed in water.

LEAF SHINE

After bathing your plants you may have some water deposits left over that are making the leaves look dull. You can use a leaf shine to help bring back that luster. To make it yourself you can use whole milk or mayonnaise (1 tsp mayo or milk to 2 cups filtered or distilled water), or you can also use any of the products commercially available.

I like to use leaf shines that contain oils or paraffin. Spray on the surface of the leaf but not underneath. The majority of stomata or breathing holes are located on the underside of the leaf and it is this area that does most of the plants “breathing”. Always do a test spray on Sanseveria, Yuccas, Ferns and Dracaenas. DO NOT use on cactus and succulents.

PESTS (INSECTS)

Common pests on houseplants are aphids, fungus gnats, spider mites, mealy bugs and other scale insects.

PROPIGATION

The method used for dividing and starting new plants, are varied by genus and is a science as well as an art. Following is a list of methods for different types of plants. You will have to check a plant book or consult a horticulturist for the method that is suitable to that specific plant.

- Air layering
- “Breaking the foot” or breaking a new plantlet off
- Cane sections
- Cloning
- Creepers
- Cuttings
- By division
- By division of bulb lets
- Grafting
- From leaf sections or vein cuttings
- By offsets i.e. Suckers, or crown divisions
- Rhizome division
- From runners
- From spores
- From stem sections
- Tuberous roots

“Kitchen sink” propagation: I usually find out which methods people are more comfortable with i.e. rooting in soil or rooting in water. After determining what plant they wish to propagate, go from there.

If what you want to do is complicated, I usually will recommend the go to a web site or read a book about the type of propagation they intend to use and try it. Propagation procedures normally take a little know-how, space, proper mediums, temperatures, light, watering, etc., to be successful.

TRANSPLANTING OR REPOTTING

Transplant only when needed. Only after the plant has acclimated to its new location and you can't keep up with the watering i.e. the water goes through the soil too fast or the soil is drying out too fast between your watering, then you might consider transplanting (going to a bigger pot).

Repot your plant into the (same size) pot if you are just changing out an ugly pot to a nice decorative pot. A standard recommendation for transplanting is to plant into a pot that is two inches wider, that the one you are taking it from.

If the roots are encircling and matted, you may gently cut them away or pull them slightly apart. You may want to cut away up to a 1/3rd of the matted encircled part. Many people think that all plants go into “shock” if you do this or even transplant them; this is not so. If you are gentle, and do not disturb the entire root system, place it in a soil that is dependable, reliable name brand potting medium, water it thoroughly and give it time to adjust to its “new shoes” before moving it, you should have no problem.