CHAPTER 9
Indoor Plants

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This chapter is designed to familiarize you with the basic aspects of tropical plant care rather then attempting to acquaint you with specific cultural requirements of the hundreds of commonly grown plants in the foliage industry. Bear in mind that in most cases, homes and offices are environments poorly suited to the needs of tropical plants. Thus the task of the indoor plant gardener is to select plants that can best withstand the conditions of a specific indoor location.

Selecting an Interior Plant

Select only those foliage plants which appear to be free of insects and diseases. Check the undersides of the foliage and the axils of leaves for signs of insects or disease. Select plants that look sturdy, clean, well-potted, and shapely.

Choose plants with healthy foliage. Avoid plants which have yellow or chlorotic leaves, brown leaf margins, wilted foliage, spots or blotches, spindly growth or torn leaves. Plants which have new flowers and leaf buds along with young growth are usually of superior quality.

Remember that it is easier to purchase a plant which requires the same environmental conditions your residence has than to alter the environment of your home or office to suit the plants.

Transporting House Plants

When transporting plants, remember the two seasons of the year that can cause damage to the plants, the hot summer and the cold winter months. In the summer, avoid placing plants in a car and leaving the car shut, because temperatures will rise and destroy the plant in a short period of time. If you have to travel for any distance at all, the plant can be burned by the sun shining on it, even though the air conditioner is on and it's comfortable in the car. Shade the plant from direct sun while it is in the car.

During winter months, wrap plants thoroughly before leaving the store to carry them to your car. A short run from the store to the car in very low temperatures can kill or severely damage plants. Wrap plants thoroughly with newspaper or paper bags, place in the front of the car, and turn on the heater. The trunk of most cars is too cold to carry plants safely during winter months.

On an extended trip, make special arrangements so that plants will not be frozen or damaged by cold weather. Many foliage plants will be damaged considerably if the temperature drops much below 50° F., so maintain as warm a temperature as possible around these plants when transporting them from one location to another.

Acclimatization

Research conducted in Florida in the late 1970s revealed an interesting phenomenon. Tropical plants grown in full sun have leaves (so-called sun leaves) which are structurally different from the leaves of plants grown in shade (shade leaves). Sun leaves have fewer chloroplasts, and thus less chlorophyll. Their chloroplasts are located deep inside the leaves and the leaves are thick, small, and many in number. Shade leaves have greater numbers of chloroplasts and thus more chlorophyll, are thin, broad, and few in number. When plants are grown in strong light, they develop sun leaves which are photosynthetically very inefficient. If these same plants are placed in low light, they must either remake existing sun leaves or drop their sun leaves and grow a new set of shade leaves which are photosynthetically more efficient. To reduce the shock which occurs when a plant with sun leaves is placed in shade, gradually reduce the light levels it is exposed to. This process is called acclimatization.

The gardener should acclimatize plants when placing them outdoors in summer by gradually increasing light intensities, and reverse the process before plants are brought indoors in the fall. For newly purchased plants grown in high-light conditions, acclimatize them by initially locating them in a high-light (southern exposure) area of your home and gradually moving them to their permanent, darker location over a period of 4 to 8 weeks.

Environmental Factors

Light, water, temperature, humidity, ventilation, fertilization, and soil are chief factors affecting plant growth, and any one of these factors in incorrect quantity will prevent proper plant growth indoors.

Light

Light is probably the most limiting factor for indoor plant growth. The growth of plants and the length of time they remain active depend on the amount of light they receive. Light is necessary for all plants because they use this energy source to photosynthesize. When examining light levels for tropicals, consider three aspects of light: intensity, duration, and quality.

Light **intensity** influences the manufacture of plant food, stem length, leaf color, and flowering. A geranium grown in low light tends to be spindly and the leaves light green in color. A similar plant grown in very bright light would tend to be shorter, better branched, and have larger, dark green leaves. Indoor plants can be classified according to their light needs by high, medium, and low light requirements. The intensity of light a plant receives indoors depends upon the nearness of the light source to the plant (light intensity decreases rapidly as you move away from the source of light). The direction the windows in your home face will affect 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. A southern exposure is the warmest, eastern and western are less warm, and a northern exposure is the coolest. Other factors which can influence the intensity of light penetrating a window are the presence of curtains, trees outside the window, weather, seasons of the year, shade from other buildings, and the cleanliness of the window. Reflective (light-colored) surfaces inside the home/office will increase the intensity of light available to plants. Dark surfaces will decrease light intensity.

Day-length or **duration** of light received by plants is also of some importance, but only to some plants. Poinsettia, kalanchoe, and Christmas cactus bud and flower only when day-length is shorter than a critical number of hours (specific to each plant). Most flowering indoor plants are indifferent to day-length.

Low light intensity can be compensated by increasing the time (duration) the plant is exposed to light, as long as the plant is not sensitive to day-length in its flowering response. Increased hours of lighting allow the plant to make sufficient food to survive and/or grow. However, plants require some period of darkness to develop properly, and thus should be illuminated for no more than 16 hours. Excessive light is as harmful as too little light. When a plant gets too much direct light, the leaves become pale, sometimes burn, turn brown, and die. Therefore, during the summer months, protect plants from too much direct sunlight.

Additional lighting may be supplied by either incandescent or fluorescent lights. Incandescent lights produce a great deal of heat and are not very efficient users of electricity. If artificial lights are to be used as the only source of light for growing plants, the **quality** of light (wavelength) must be considered. For photosynthesis, plants require mostly blues and reds, but for flowering, infrared light is also needed. Incandescent lights produce mostly red, and some infrared light, but are very low in blues. Fluorescent lights vary according to the phosphorus used by the manufacturer. Cool-white lights produce mostly blue light, and are low in red light. Foliage plants grow well under cool-white fluorescent lights, which are also cool enough to position quite close to plants. Blooming plants require extra infrared which can be supplied by incandescent lights, or special horticultural-type fluorescent lights.

Water

Over watering and under watering account for a large percentage of tropical plant losses. The most common question gardeners ask is, "How often should I water my plants?" There is not a good answer to this question. Some plants like drier conditions than others. Differences in potting medium and environment influence water needs. Watering as soon as the soil crust dries can result in over watering.

Plant roots are usually in the bottom 2/3 of the pot, so do not water until the bottom 2/3 starts to dry out slightly. You can't tell this by looking. You have to feel the soil. For a 6-inch pot, stick your index finger about 2 inches into the soil (approximately to the second joint of your finger). If the soil feels damp, don't water. Keep repeating the test until the soil is barely moist at the 2-inch depth. For smaller pots, 1 inch into the soil is the proper depth to measure.

Water 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 2/3 of the pot, which contains most of the roots, receives sufficient water. However, don't let the pot sit in the water that runs out. After a thorough watering, wait until the soil dries at the 2-inch depth before watering again.

When you test for watering, pay attention to the soil. If your finger can't penetrate 2 inches deep, you either need a more porous soil mix or the plant is becoming root-bound.

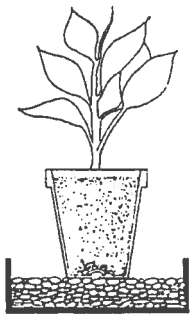
Temperature

Most house plants tolerate normal temperature fluctuations. In general, indoor foliage plants grow best between 70 and 80 degrees F. during the day and from 60 to 68 degrees F. at night. Most flowering indoor plants prefer the same daytime range but grow best at nighttime temperatures from 55 to 60 degrees F. The lower night temperature induces physiological recovery from moisture loss, intensifies flower color, and prolongs flower life. 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. A good rule of thumb is to keep the night temperature 10 to 15 degrees lower than the day temperature.

Humidity

Atmospheric humidity is expressed as a percentage of the moisture saturation of air. To provide increased humidity, attach a humidifier to the heating or ventilating system in the home, or place gravel trays (in which an even water level is maintained) under the plant 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.

Another way to raise humidity is to group plants close together. You can also spray a fine mist on the foliage, although this is of doubtful effectiveness for total humidity modification. Do this early in the day so that the plants will be dry by night. This lessens the chance of disease, since cool dampness at night provides an ideal environment for disease infection.



A layer of gravel or pebbles increases the humidity level.

Ventilation

Indoor plants, especially flowering varieties, are very sensitive to drafts or heat from registers. Forced air dries the plants rapidly, overtaxes their limited root systems, and may cause damage or plant loss. Plants are sensitive to gas used for cooking or heating. Some plants refuse to flower, while others drop flower buds and foliage when exposed to gas. Blended gas is more toxic to plants than natural gas. Tomato plants are extremely sensitive to gas. They will turn yellow before the escaping gas is detected by household members, and are sometimes used in greenhouses as indicator plants for excessive ethylene gas (resulting from incomplete combustion in gas furnaces).

Fertilization

Indoor plants, like most other plants, need fertilizers containing three major plant nutrients: nitrogen (N), phosphorus (P), and potassium (K). They are available in many different combinations and under a multitude of brand names. Each brand should be analyzed on the label, indicating specifically how much water-soluble elemental nitrogen, phosphate, or potash is available in every pound of the product. The majority of these fertilizers are about 20-20-20. The first figure indicates available nitrogen; the second, available phosphate; and the third, water-soluble potassium. Commercial fertilizers used for indoor plants are sold in granular, crystalline, liquid, or tablet forms. Each should be used according to instructions on the package label. Frequency and amount of fertilizer application varies with the

fertilizer product, the plant species and season of the year. In general, fertilize young, actively growing plants more than more mature, slowly growing plants; and fertilize at full recommended strength in spring and summer, and at half-strength in fall and winter. In New Hampshire, fertilization can often be eliminated from November through late March due to the reduced light levels of our short winter days.

Soluble Salts

Reduced growth, brown leaf-tips, dropping of lower leaves, small new growth, dead root-tips, and wilting are all signs of high soluble salts. These salts eventually accumulate on top of the soil forming a yellow to white crust. A ring of salt deposits may be formed around the pot at the soil line or around the drainage hole. Salts will also build up on the outside of clay pots.

Soluble salts are minerals, like fertilizers, dissolved in water. When water evaporates from the soil, the minerals or salts stay behind. As the salts in the soil become more and more concentrated, plants find it harder and harder to take up water. If salts build to an extremely high level, water can be taken out of the root-tips, causing them to die.

High soluble salts damage the roots directly, and because the plant is weakened, it is more susceptible to attack from insects and diseases. One of the most common problems associated with high salt levels is root rot. The best way to prevent soluble salt injury is to stop the salts from building up. Water correctly. When you water, allow some water to drain through, and then empty the drip plate. Water equal to 1/10 the volume of the pot should drain through each time you water. DO NOT ALLOW THE POT TO SIT IN WATER. If you allow the drained water to be absorbed by the soil, the salts that were washed out are taken back into the soil. Salts can be reabsorbed through the drainage hole or directly through a clay pot.

Plants should be leached every 4 to 6 months. You should leach a plant before you fertilize, so that you don't wash away the fertilizer you just added. Leaching is accomplished by pouring a lot of water on the soil and letting it drain completely. The amount of water used for leaching should equal twice the volume of the pot. A 6-inch pot will hold 10 cups of water, so 20 cups of water are used to leach a plant in a 6-inch pot. Keep the water running through the soil to wash the salts out. If a layer of salts has formed a crust on top of the soil, you should remove the salt crust before you begin to leach. If the soluble salt level is extremely high or the pot has no drainage, repot the plant.

The level of salts that will cause injury varies with the type of plant and how it is being grown. A plant grown in the home may be injured by salts at a much lower level than it can tolerate under the ideal conditions of a greenhouse. Some plant shops leach plants to remove excess salts before the plant is sold. If you are not sure that has been done, leach a newly purchased plant the first time you water it.

Media

The potting soil, or media in which a plant grows, must be of good quality. It should be porous for root aeration and drainage, but also capable of water and nutrient retention. Most commercially prepared mixes are termed artificial, which means they contain no soil. High-quality artificial mixes may contain slow-release fertilizers, which take care of a plant's nutritional requirements for several months.

Preparing Artificial Mixes

Artificial mixtures can be prepared with a minimum of difficulty. Most mixes contain a combination of organic matter, such as peat moss or ground pine bark, and an inorganic material, like washed sand, vermiculite, or perlite. Materials commonly used for indoor plants are the peat-lite mixtures, consisting of peat moss and either vermiculite or perlite. Here are some comments concerning the ingredients for these mixes.

Peat Moss is readily available baled or bagged; sphagnum peat moss is recommended. Such materials as Michigan peat, peat humus, and native peat are usually too decomposed to provide necessary structural and drainage characteristics. Most sphagnum peat moss is acid in reaction, with a pH ranging from 4.0 to 5.0 It usually has a very low fertility level. Do not shred sphagnum peat moss too finely.

Vermiculite is a sterile, lightweight, mica-like natural rock. When it is heated to approximately 1800° F., its plate like structure expands. Vermiculite will hold large quantities of air, water, and nutrients needed for plant growth. Its pH is usually in the 6.5 to 7.2 range. Vermiculite is available in four particle sizes. For horticultural mixes, sizes 2 or 3 are generally used. If at all possible, the larger-sized particles should be used, since they give much better soil aeration. Vermiculite is available under a

variety of trade names. Always purchase "horticultural-grade" expanded vermiculite. "Construction-grade" vermiculite often contains contaminants which can damage or even kill plant roots.

Perlite is a sterile material produced by heating volcanic rock to approximately 1800° F. The result is a very lightweight, porous material that is white in color. Its principal value in soil mixtures is aeration. It does not hold water and nutrients as well as vermiculite. The pH is usually between 7.0 and 7.5. Perlite can cause fluoride burn on some foliage plants, usually on the tips of the leaves. The burn progresses from the tip downward. This damage looks very similar to damage from high soluble salts, low relative humidity, and lack of water. If you suspect fluoride to be the cause of such a problem, you may want to repot the plant into a media lacking perlite, and also check your water for high fluoride levels. Typically, fluoride toxicity is seen on members of the Lily family (Aloe, Spider Plant, Cast-Iron Plant, Asparagus Fern).

A good formula for artificial mix follows:

1 bushel shredded peat moss

1 bushel perlite or vermiculite

½ cup finely ground agricultural lime

1/3 cup 20% superphosphate

This artificial mixture is very low in trace or minor elements, therefore, it is important to use a fertilizer that contains these trace elements.

Soil Mixes for Specific Plants

Soil-based media can be mixed to provide the most efficient composition for the type of plant to be grown. According to generally accepted standards, we can divide indoor plant soil mixes into four distinct groups, according to the type of plant to which they are most suited.

Foliage Plants

This soil should be moderately rich, have a good base of clay loam, and hold moisture and fertility adequately. It must be a crumbly, well-structured soil. It is generally made up of one part of good garden loam, one part of clean sand or perlite, and half to one part of either peat moss, compost, leaf mold, or vermiculite. Mixing about 1 teaspoon of superphosphate with each quart of mixed potting soil is desirable and encourages good root growth after repotting. If the garden soil is alkaline, sphagnum peat moss will have enough acid reaction to neutralize the mixture. This soil is used for all foliage plants and some flowering plants that do not prefer a rich soil.

Flowering House Plants

This soil is often referred to as humus soil because it contains about 50% humus-rich materials or similar ingredients. It is important that the soil does not become so rich that it is soggy after watering. Two parts of sphagnum, or one part sphagnum and one part vermiculite, are added to one part garden loam and one part clean sand. Also add 1 teaspoon of superphosphate per quart of soil mixture. This soil is generally used for African violets, gloxinias, begonias, calla lilies, and other tropical flowering plants.

Cacti and Succulents

This soil does not need any humus material. It is composed of equal parts of sand, garden soil, and vermiculite or perlite. It is preferred for cacti and other fleshy leaved, desert-type succulents.

Orchids

Fir-tree bark or Osmunda fiber is generally used in glazed or plastic pots. The container should be large enough so that new growth is 1 to 2 inches from the rim of the container.

Any soil containing garden loam should be pasteurized. This can be done easily at home. Spread the soil on a cookie tray and bake it at 180° F. for 30 minutes. Do not heat it longer than 30 minutes, and be aware that it will smell unpleasant while baking. Alternatively, a purchased potting soil can be used in these mixes; such materials are already pasteurized.

Containers

There are many types of containers from which to choose. A good container should be large enough to provide room for soil and roots, have sufficient head room to provide a reservoir for proper watering, provide bottom drainage, and be attractive without competing with the plant it holds. Containers may be fabricated of ceramics, plastic, fiberglass, wood, aluminum, copper, brass, and many other materials.

Clay and Ceramic Containers

Unglazed and glazed porous clay pots with drainage holes are widely used. Ornate containers are often nothing but an outer shell to cover the plain clay pot. Clay pots absorb and lose moisture through their walls. Frequently the greatest accumulation of roots is next to the walls of the clay pot, because moisture and nutrients accumulate in the clay pores. Although easily broken, clay pots provide excellent aeration for plant roots and are considered by some to be the best type of container for a plant. Plants in porous pots generally require more frequent watering than plants in nonporous pots.

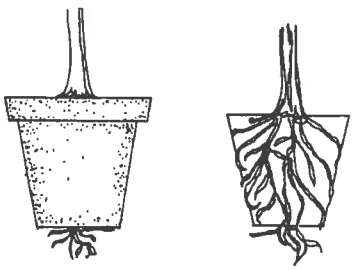
Ceramic pots are usually glazed on the outside, sometimes also on the inside. Those without drainage holes should be used only as decorative cachepots, to hold a suitably drained pot. Small novelty containers have little room for soil and roots and are largely ornamental. They should be avoided. It should be noted that putting pot chips, clay pot shards or gravel in the bottom of a pot does not improve soil drainage; they only provide a small space beneath the soil where some excess water can drain inside the pot.

Plastic and Fiberglass Containers

Plastic and fiberglass containers are usually quite light and easy to handle. They have become popular in recent years because they are relatively inexpensive and often quite attractive in shape and color. Plastic pots are easy to sterilize or clean for reuse, and because they are not porous, they need less frequent watering and tend to accumulate fewer salts.

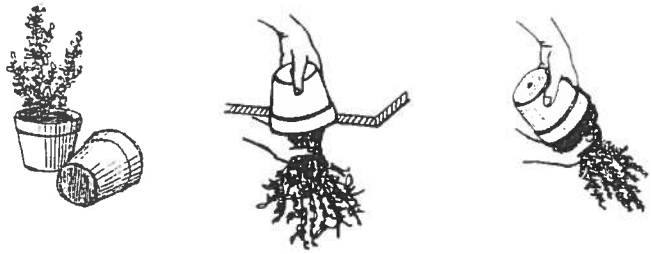
Repotting

Actively growing indoor plants need repotting from time to time. This occurs very rarely with some slower-growing plants, more frequently with others. Foliage plants require repotting when their roots have filled the pot and are growing out the bottom of the pot.

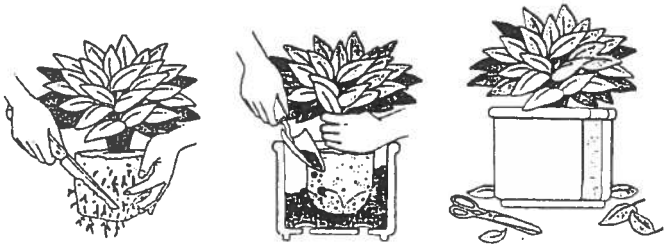


When repotting becomes necessary, it should be done without delay. The pot selected for repotting should be no more than 2 inches larger in diameter than the pot the plant is currently growing in; should have at least one drainage hole; may be either clay, ceramic, or plastic; and must be clean. Wash soluble salts from clay pots with water and a scrub brush, and wash all pots in a solution of 1 part liquid bleach to 9 parts water.

Potting media should be coarse enough to allow good drainage, yet have sufficient water retention capabilities. Most plants are removed easily from their pot if the pot is held upside-down while knocking the lip of the container sharply upon the edge of a table. Hold your hand over the soil, straddling the plant between the fore and middle fingers while knocking it out of its present container.



Potting media should be moistened before repotting begins. To repot, place a layer of potting mix in the bottom of the pot with some new soil. If the plant has become root-bound cut and unwind any roots that circle the plant, otherwise the roots will never develop normally. If the old soil surface has accumulated salts, the top inch should be removed. Set the rootball on the layer of the new medium. Fill medium around the sides between the rootball and pot. Do not add media above the original level on the rootball, unless the roots are exposed or it has been necessary to remove some of the surface medium. Do not pack the medium; to firm or settle it, tap the pot on a level surface or gently press the medium with your fingers.



After watering and settling, the medium level should be sufficiently below the level of the pot to leave headroom. Headroom is the space between the medium level and the top of the pot that allows for watering a plant. A properly potted plant has enough headroom to allow water to wash through the medium to thoroughly moisten it.

Training and Grooming

Some houseplants require training and grooming to perform well. Pinching is the removal of 1 inch or less of new stem and leaf growth, just above a node. This leaves the plant attractive and stimulates new growth. It can be a one-time or continuous activity, depending on the need and the desires of the plant owner. If a plant should be kept compact, but well-filled out, frequent pinching may be required.

Pruning of an entire branch or section of a plant thins the plant, encourages an open appearance, and allows more light penetration.

Disbudding is the removal of some flower buds either to obtain larger blooms from a few choice buds or to prevent flowering of a very young plant (or recently rooted cutting) that would not bear the physical drain of flowering early.

Ivies and hoya, as well as philodendron and arrowhead, are frequently grown on trellises. It is important to keep plants clean and neat. It not only improves the appearance of plants but reduces the incidence of insects and disease problems. Remove all spent flowers, dying leaves, and dead branches. Keep leaves dust-free by washing plants with warm water. If tips of leaves become brown and dry, trim them off neatly with sharp scissors.

Care of Special Potted Plants

Too little light, excessive heat, and improper watering are the usual causes of failure of gift plants. These plants are grown in a greenhouse, where the night temperatures are usually cool, there is ample light, and the air is moist. When they are brought into a dry home, where the light is poor and the temperatures are maintained for human comfort, results are frequently disappointing. Do not expect to keep a gift plant from year to year. Enjoy them while they are attractive and in season and then discard.

Poinsettia Care

The poinsettia requires bright light and should be kept away from drafts. A temperature between 65 and 70 degrees F. is ideal. Keep plants well-watered but do not overwater. Some of the newer, long-lasting varieties can be kept attractive all winter.

Gardeners frequently ask whether they can carry their poinsettias over to bloom again next year. It is questionable whether the results are worth the effort, as the quality of home-grown plants seldom equals that of commercially grown plants. However, for those who wish to try, the following procedure can be followed.

After the bracts fade or fall, set the plants where they will receive indirect light and temperatures around 55 to 60 degrees. Water sparingly during this time, just enough to keep the stems from shriveling. Cut the plants back to within 5 inches of the ground and re-pot in fresh soil. As soon as new growth begins, place in a well-lighted window. After danger of frost, place the pot outdoors in a partially shaded spot. Pinch the new growth back to get a plant with several stems. Do not pinch after September 1st. About Labor Day, or as soon as the nights are cool, bring the plant indoors. Continue to grow in a sunny room with a night temperature of about 65 degrees. Since the poinsettia blooms only during short days, exclude artificial light, either by covering with a light-proof box each evening or by placing in an unlighted room or closet for a minimum of 12 hours of darkness each night. Plants require full light in the daytime, so be sure to return them to a sunny window. Start the short-day treatment on October 1st to have blooms by Christmas.

Azaleas

Azaleas require direct sunlight to remain healthy. A night temperature of 60 degrees will prolong bloom. Keep the soil constantly moist. If the leaves should turn yellow, the soil may not be acid enough. Use an acid fertilizer sold especially for azaleas. Do not use softened water. When repotting, use a mixture high in acid peat moss.

Azaleas can be planted, pot and all, in a shady spot in the garden during the summer months. Examine them frequently and keep them watered during dry periods. Greenhouse azaleas are not hardy, and need to be brought indoors before freezing weather.

Azaleas need a cool rest treatment before they are forced into bloom. Place the plants in a room with filtered light and a temperature between 35-50 degrees F. During this rest period, flower buds will develop. Then place in a well-lighted, warm (65° F.) room around January 1 to bring them into bloom. Unless you have the proper growing conditions for the azalea, you should not attempt to carry the plants over.

Gardenia

Gardenias grown indoors need special care. They demand an acid soil and should receive the same nutritional care as azaleas. The night temperature should be near 60 degrees and the humidity around the plant should be kept high. High temperature and low light intensity will result in flower bud drop.

Amaryllis

The secret of growing amaryllis is to keep the plants actively growing after they finish blooming. Keep the plants in full sun, with a night temperature above 60 degrees. As soon as danger of frost has passed, set the plants in the garden in a semi-shaded spot. In the fall, before danger of frost, bring them in, stop watering them to allow old growth to die back, and store them in a cool, dark place to rest. They will be ready to force again about November 1. Bring them into a warm light room and water moderately to begin new growth.

Christmas Cactus

The Christmas cactus has become increasingly popular with the development of several new varieties. At least three related species are sold in addition to a number of cultivars. All have similar cultural requirements.

The secret of good bloom seems to be one of temperature and photoperiod control. They will develop buds and bloom if given bright light, short days, and night temperatures between 55 and 65 degrees F. Christmas cacti bloom best when somewhat pot-bound. Repotting is necessary only about once in 3 years. Full sunlight is beneficial in mid-winter, but bright sun during summer months can make plants look pale and yellow.

Christmas cacti require less water from October to March than they do when growth is active from April to September. A rest period is very important if plants are to bloom abundantly. Dormancy should be started about the middle of September and continued for 8 weeks. Care should be taken that soil never becomes water-logged during the dark days of winter.

Cyclamen

Cyclamen require full sunlight and a night temperature of between 50 and 60 degrees. They are heavy users of water and must be watered whenever the surface of the soil is dry. Flower buds will fail to develop if night temperature is too high or if light is poor.

Cyclamen can be carried over, but as with the poinsettia, homegrown plants are seldom equal to those grown by a commercial grower. Let the plants die down after they finish flowering. Repot the fleshy tuber in June with the top of the tuber above the soil line. Allow resting tubers to dry, but not to become shriveled.

Plant Lists

The remainder of this chapter is composed of lists of plants that will withstand specific indoor conditions of light intensity, temperature, and cultural form.

Light Requirements of Selected Indoor Plants

PLANT (by common name)	DIRECT LIGHT	BRIGHT LIGHT	AVERAGE LIGHT	LOW LIGHT
Aluminum plant		x	x	
Areca palm		x	x	
Asparagus - Sprengeri	x	x		
Asparagus - Meyeri	x	x		
Aloe vera		x	x	
Boston fern		x	x	
Burro's tail	x	x		
Chinese evergreen		x	x	x
Coleus	x	x		
Corn plant		x	x	x
Croton		x	x	
Dumb cane	x	x	x	
Devil's ivy	x	x	x	x
Fiddleleaf fig		x	x	
False aralia		x	x	
German ivy - green		x	x	
German ivy - variegated		x	x	
Gold dust dracaena		x	x	
Grape ivy		x	x	
Heartleaf philodendron		x	x	x
Jade plant	x	x		
Japanese aralia		x	x	
Kangaroo ivy		x	x	
Maidenhair fern			x	x
Moses-in-the-cradle		x	x	
Norfolk island pine		x		
Parlor palm		x	x	x
Peperomia		x	x	
Piggyback		x	x	
Ponytail palm	x	x		
Rubber plant	x	x		
Schefflera	x	x	x	
Snake plant	x	x	x	x
Spider plant		x	x	
Strawberry begonia		x		
Swedish ivy	x	x	x	
Tahitian bridal veil	x	x	x	
Velvet plant	x	x		
Wandering Jews	x	x	x	
Weeping fig		x		

Temperature Requirements of Selected Indoor Plants

Cool temperature plants grow best at 50-60°F during the day and 45-55°F at night.

Azalea
Cacti and Succulents[2,3]
(during winter rest periods only)
Camellia
Cast-iron plant[2]
Chrysanthemum
Citrus (grapefruit, lemon, orange)
Creeping fig
Daffodil, Narcissus
Easter lily[2]
Euonymus japonica (Spindle tree)
Ivy[2]
Hyacinth
Hydrangea
Japanese aralia
Jasmine
Jerusalem cherry
Miniature rose
Mock orange
Norfolk Island pine
Persian violet
Primrose
Tulip
Tree ivy
Wandering Jew
White calla lily
Zephyr lily

Medium temperature plants grow best at 60-65°f during the day and 55-60°f at night.

Amaryllis
Asparagus fern
Avocado
Baby's tear
Begonia
Bird's nest fern
Bromeliads[3]
Bush violet
Cacti and Succulents[1,3]
Cast-iron plant[1]
Christmas cactus
Citrus[1]
Coleus
Crown of thorns[3]
Earth star[3]
Easter lily[1]
English ivy[1]
German Ivy
Gold-dust tree
Hibiscus
Kangaroo vine[3]
Living stones[3]
Palms
Panda plant
Peperomia
Piggyback plant
Pilea
Podocarpus
Purple passion plant
Schefflera
Shamrock plant
Snake plant[3]
Staghorn fern[3]
Strawberry begonia

High temperature plants grow best at 70-80°f during the day and 64-70°f at night.

African violets
Bromeliads
Cacti and Succulents[1,2]
Caladium calathea (Peacock plant)
Chinese evergreen
Coconut palm
Copperleaf
Cordyline
Croton
Crown of thorns[2]
Dracaena
Earth star[2]
False aralia
Ficus
Geranium
Golden pothos
Hen and chicks
Impatiens
Kangaroo vine[2]
Living stones[2]
Peace lily
Philodendron
Prayer plant
Purple velvet plant[2]
Sensitive plant
Snake plant
Staghorn fern[2]
Swiss cheese plant
Screw pine

[1] Will also do well at high temperatures.
[2] Will also do well at medium temperatures.
[3] Will also do well at cool temperatures.

Plants for Specific Indoor Gardening Uses

Plants That Will Grow in Water:

Scientific Name	Common Name
Aglaonema modestum	Chinese Evergreen
Crassula arborescens	Jade Plant
Dieffenbachia (all varieties)	Dumbcane
Hedera helix	English ivy
Hemigraphis colorata	Hemigraphis
Hoya carnosa	Wax plant
Monstera deliciosa	Cutleaf Philodendron
Pellionia pulchra	Satin Pellionia
Philodendron cordatum	Philodendrons
Philodendron micans	(all climbing types)
Piper nigrum	Black Pepper
Piper ornatum	Celebes Pepper
Scindapsus aureus	Devil's Ivy
Scindapsus pictus	Painted Devil's Ivy
Stephanotis floribunda	Stephanotis
Syngonium podophyllum	Arrowhead, Syngonium
Tradescantia (all varieties)	Wandering Jew

Plants That Will Usually Withstand Adverse House Conditions and Abuse:

Scientific Name	Common Name
Aglaonema modestum	Chinese Evergreen
Anthurium aemulum	Climbing Anthurium
Aspidistra elatior	Iron Plant
Chamaedorea elegans	Dwarf Parlor Palm
Cissus rhombifolia	Grape Ivy
Crassula arborescens	Jade Plant
Dieffenbachia amoena	Dumbcane
Dracaena fragrans	Massangeana Dracaena
Euphorbia mili	Crown of Thorns
Ficus elastica	Indian Rubber Tree
Ficus benjamina 'Exotica'	Java Fig
Hemigraphis colorata	Hemigraphis
Howeia belmoreana	Kentia Palm
Pandanus veitchii	Screw pine
Peperomia obtusifolia	Peperomia
Philodendron cordatum	Philodendron
Sansevieria trifasciata	Snakeplant
Sansevieria laurentii	Golden stripe
Sansevieria zeylanica	Sansevieria
Scindapsus aureus	Devil's Ivy
Syngonium podophyllum	Arrowhead, Syngonium

Plants Well-Suited for Large-Container Decorative Specimens:

Scientific Name	Common Name
Acanthus mollis	Artists Acanthus
Acanthus montanus	Mountain Acanthus
Alocasia cuprea	Giant Caladium
Alsophila australis	Australian Tree Fern
Codiaeum pictum	Croton
Dieffenbachia amoena	Spotted Dumbcane
Fatshedera lizei	Botanical Wonder
Fatsia japonica	Japan Fatsia
Ficus eburnea	Ivory Fig
Ficus elastica 'Variegata'	Variegated India Rubber
Ficus lyrata	Fiddleleaf Fig
Monstera deliciosa	Cutleaf Philodendron
Pandanus veitchii	Screwpine
Philodendron elongatum	Philodendron
Philodendron giganteum	Giant Philodendron
Philodendron x mandaianum	Philodendron
Philodendron panduraeforme	Philodendron
Philodendron selloum	Philodendron
Philodendron x wendlandii	Philodendron
Polyscias paniculata 'variegata'	Jagged-leaf Aralia
Schefflera digitata	Schefflera
Strelitzia reginae	Bird of Paradise

Low, Creeping Plants for Ground Covers in Interior Planting Boxes:

Scientific Name	Common Name
Episcia cupreata	Episcia
Ficus pumila	Creeping Fig
Ficus radicans	Climbing Fig
Fittonia verschafeltii	Silver Fittonia
Hedera helix	Hahn's Star English Ivy
Hemigraphis colorata	Hemigraphis
Pellionia daveauana	Pellionia
Pellionia pulchra	Pellionia
Philodendron cordatum	Heartleaf Philodendron
Pilea nummulariifolia	Creeping Artillery Plant
Saxifraga sarmentosa	Strawberry Begonia
Scindapsus aureus	Devil's Ivy
Tradescantia (all varieties)	Wandering Jew
Vinca major 'variegata'	Variegated Vinca

Plants That Withstand Dry, Warm Locations:

Scientific Name	Common Name
Bromeliads	All species and varieties
Cacti	All species and varieties

Vines and Trailing Plants for Totem Poles and Trained Plants:

Scientific Name	Common Name
Anthurium almulum	Climbing Anthurium
Cissus antarctica	Kangaroo Vine
Cissus discolor	Begonia Cissus
Cissus rhombifolia	Grape Ivy
Clerodendrum Balfouri	Glorybower
Ficus pumila	Creeping Fig
Vanilla fragrans 'Marginata'	Vanilla

Plants Suitable for Tropical Terrariums:

Scientific Name	Common Name
Aglaonema commutatum	Chinese evergreen
Begonia boweri	Miniature begonias
Chamaedorea elegans	Neanthe bella, parlor palm
Cissus antarctica 'Minima'	Dwarf kangaroo ivy
Coffea arabica	Arabian coffee plant
Cordyline terminalis minima 'Baby Ti'	Dwarf ti plant
Cryptanthus bivittatus minor	Dwarf rose-stripe earth star
Dizgygotheca elegantissima	False aralia
Dracaena sanderana	Belgian evergreen
Dracaena surculosa	Gold dust dracaena
Ficus diversifolia	Mistletoe fig
Ficus pumila 'Minima'	Dwarf creeping fig
Fittonia verschaffeltii	Mosaic plant
Maranta leuconeura kerchoveana	Prayer plant
Nephrolepis exaltata cvs.	Boston fern
Peperomia sandersii	Watermelon peperomia
Pilea cadierei 'Minima'	Aluminum plant
Pilea depressa	Miniature pilea
Pilea microphylla	Artillery plant
Pilea nummulariifolia	Creeping Charlie
Pteris species	Brake ferns, table ferns
Saintpaulia cultivars	Miniature African violets
Selaginella	Club moss, moss fern
Selaginella kraussiana	Creeping club moss
Selaginella emmeliana	Sweat plant
Sinningia pusilla (and other miniature cultivars)	Miniature gloxinias
Syngonium	Arrowhead vine, Nephthytis

Plants Suitable for Desert Dish Gardens

Scientific Name	Common Name
Adromischus	Calico hearts, leopard spots
Aloe	Medicine Plant
Astrophytum myriostigma	Bishop's cap
Cephalocereus nobilis	Cylinder cactus
Cereus peruvianus 'Monstrosus'	Curiosity plant
Crassula	Jade plant
Crassula lycopodioides	Toy cypress, watch chain
Crassula rupestris	Rosary Vine
Echeveria Derenbergi	Painted lady
Echeveria elegans	Mexican snowball
Echeveria secunda var. glauca	Hens and chickens
Echinocactus Grusonii	Golden barrel cactus
Echinocereus pectinatus var. neomexicanua	Rainbow cactus
Echinocereus reichenbachii	Lace cactus
Echinocereus micromeris	Button cactus
Euphorbia lactea cristata	Crested euphorbia, frilled fan
Faucaria tigrina	Tiger jaws
Gasteria liliputana	Miniature gasteria, miniature ox tongue
Haworthia	Pearl plant, wart plant
Haworthia fasciata	Zebra haworthia
Haworthia margaritifera	Pearl plant
Lithops species	Living stones
Mammillaria bocasana	Powder puff cactus
Mammillaria elongata	Golden star cactus
Mammillaria fragilis	Thimble cactus

Plants Suitable for Desert Dish Gardens cont.

Scientific Name	Common Name
Opuntia erectoclada	Dominoes, pincushion cactus
Opuntia microdasys	Bunny ears
Opuntia vilis	Dwarf tree opuntia
Portulacaria afra	Elephant bush
Portulacaria afra variegata	Rainbow bush
Rebutia kupperiana	Scarlet crown cactus
Rebutia minuscula	Red crown cactus
Sedum	Stonecrop
Sedum acre	Golden carpet, gold moss
Sedum adolphi	Golden sedum
Sedum dasyphyllum	Golden glow
Sedum lineare	Carpet Sedum
Sedum morganianum	Burro's tail
Sedum multiceps	Miniature Joshua tree
Sedum pachyphyllum	Jelly beans
Sedum X rubrotinctum	Christmas cheer
Stahlii	Coral beads