

# J&L Garden Center

*The All Season Gift  
and Garden Center*

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## Healthy Houseplants



Indoor plants are fabulous! They add color, greenery, life & a bit of the tropics to any home. Yet, questions abound about the success, and failure, of indoor plants. When we buy a new houseplant, it's usually love at first sight - at least, that's how many of us pick our houseplants. However, there's much more involved in selecting a new plant than just what meets the eye. Where will it grow, how big will it get, how much water and light does it need, are just a few of the questions to consider before making your final choice.

Several factors will influence your success with your indoor plants. Key elements for plant growth, such as light, temperature, humidity, fertilizer, and water will help determine the final outcome of your total houseplant experience.

### Houseplants can 'Clean the Air'

Do you remember what you learned about plants in your high school biology class? The part where you learned that all plants absorb carbon dioxide and produce oxygen?



Besides absorbing carbon dioxide, many houseplants can also absorb other chemicals that are common inside houses. **Formaldehyde, Benzene, and Trichloroethylene** are three of the most common chemicals found inside our houses. These chemicals, if present, are usually only found in very small quantities. They may not even be detectable in most homes, especially during the summer months when the windows and doors are open. Winter, when the doors and windows are kept closed, is the most likely time these chemicals may build up in the air. Many houseplants can absorb these chemicals and eliminate them.

**Formaldehyde** may be found in particle board, plywood, insulation, paper products (paper bags, paper towels, tissue paper), and in permanent press fabrics. **Benzene** may be found in inks, paints, oils, plastics, rubber products, dyes, pesticides, detergents, pharmaceutical products, and in gasoline. **Trichloroethylene** may be found in inks, paints, lacquers, varnishes, and in adhesives.



Some of the most popular houseplants are excellent air fresheners. Poinsettias can help remove formaldehyde. Chrysanthemums can remove benzene. Spider plants, Philodendrons, Aloe Vera, and Dieffenbachia can all remove formaldehyde. English Ivy, Pothos, and Dracena can remove trichloroethylene.

It's hard to imagine that something as simple as a houseplant can keep your home a little healthier; but it can. Of course, houseplants by themselves can't make your home completely chemical free, but they can make a difference. The more plants you have in the home the cleaner the air will be. The longer you keep your plants inside your house the more effective they will become. No matter where you live you can breathe a little easier when you surround yourself with **Mother Nature's Natural Air Fresheners - Houseplants.**

### If a Houseplant could speak



A plant can't speak, but luckily you can usually tell what's ailing it by looking for a few warning signs. Signs that a plant is ready for repotting are some of the easiest to recognize. When your houseplant wilts too quickly after being watered, this is a good indication that it needs to be repotted. Gently lift the plant from the pot. Are the roots encircling the inside of the container? If your plants looks stunted, deformed, or pale green, they're telling you that it's time to repot them.

Rootbound plants need more water, more often because there isn't as much soil, compared to roots, to maintain the needed moisture. If you let it go for too long, a big, fat root system may even start to strangle itself.

Although this symptom may be the most common sign that a plant needs repotting, each plant tells you it's time in its own way. Some plants, with extensive roots, may naturally send their roots riding up over the soil. Others may begin to yellow or die from the center, especially in spring. Sometimes you just have to make a judgement call. Take a step back and look at your plant. Does the foliage look overly large in proportion to the pot? But remember - some plants actually prefer being rootbound. African Violets, for example, will bloom best in small pots.

How often should you plan to repot? A good rule of thumb is every year. And sometimes, when a plant's suffering for no apparent reason, repotting helps, even if it's not rootbound. In this case, you don't need to move the plant to a larger container, it may benefit from a simple change of soil to freshen up the nutrient supply, and to improve the drainage.

Since different potting soils absorb water slightly differently, try to repot with the same kind of potting mix that the plant has already been growing in. Of course, if you're unhappy with the soil your plant is in, this is a good time to brush off the bad soil and start over.



Certain plants, such as African violets, orchids, and cacti, require their own specially formulated potting mixes. But with most other houseplants, it's more a matter of personal preference. **Black Gold All Purpose Potting Soil** is an excellent soil for most houseplants in your home.

If a plant's health is in danger you can repot it almost any time of year. But if you're simply doing routine maintenance, spring is best. This is when plants are entering an active growth phase, so they'll readjust and begin to grow new roots quickly.



Once you've examined your plants and decided that repotting is just what the plant needs, gather up a new container; your potting mix, a watering can, a small trowel, and you're ready to begin. Happy repotting!

## Light Requirements

All plants require different amounts of light to photosynthesize (manufacture food) and grow. Both the quantity and quality of light available indoors is significantly less than the light available outdoors in nature. Window size, distance from the window (to the side or under), the presence of curtains or shades, partial obstructions (awnings, overhangs, trees, etc.) influence the amount of light your plant receives.



It's virtually impossible to give any plant grown indoors too much light, so plants in the lower light categories will also grow in the higher light areas. However, they may need more watering and fertilizer.

**FULL SUN** - Unobstructed south, southeast, or southwest window that receives direct sunlight for at least half the day. No curtains or shades. Plant should be directly in window (if plant is greater than 2 feet back, this is not Full Sun even if sunbeams are striking the plant).

**PARTIAL SUN** - Unobstructed east or west window that receives sunlight for 2-4 hours. Plant should be only 2 feet directly back from window.

**VERY BRIGHT LIGHT** - Directly in an unobstructed north window, full sun window with sheers, 2-4 feet back from S, E, W window, or fluorescent gardening light.

**MEDIUM LIGHT** - North window with sheers, or to side of sunny window, or 3-6 feet back of sunny window.

**LOW LIGHT** - Directly below interior office fixture, more than 6 feet back from window, or more than 2 feet to side of window. Plant species must be carefully chosen for this light level.

**NO LIGHT** - even low-light plants have trouble thriving.

## Indoor Plant Lights

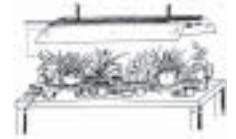
The gardening season is far too short for many gardeners. By using indoor plant lights, the gardening season can continue despite the weather conditions or the light limitations. You can use plant lights to start seedlings and cuttings, to overwinter tender plants, or to grow a special collection of plants, such as succulents, orchids, or African Violets.



The basic requirements for indoor plant lighting are either fluorescent light tubes or incandescent light bulbs. The fluorescent lights are much better than the incandescent bulbs. Always buy full-spectrum light tubes when possible. These tubes are more expensive than the common fluorescent tubes but they have the full complement of light rays that plants utilize during their growth cycle.

You can buy pre-built light carts. We have many styles to choose from, ranging from table top fixtures to moveable carts on wheels. You can also build your own light cart to meet your

specific needs. Be sure you can adjust your light fixtures, whether you buy a pre-built cart or build your own. You will need to be able to change the light placement for different kinds of plants.



You must consider the light requirements of your plants to determine the correct light placement. The closer plants are to the light source, the higher the intensity of the light they receive. Seedlings and other plants with high light-intensity needs, such as blooming plants and cacti, need the light to be within four to six inches of the leaves. Foliage plants, tolerant of lower light levels, will tolerate the light being a foot or more away from the leaves and still grow well.

Wherever you choose to place your plant lights, make certain the air temperature is suitable for the plants you're cultivating. It would be futile to grow tropical orchids, which like warmth, in a cold basement even with lights. Annual seedlings may germinate more rapidly in a warm environment, but their growth will be stockier and healthier if the temperature is kept cooler after germination.

Since plants require a period of darkness for good health it's wise to put your lights on timers, otherwise you may forget to turn them on and off as needed. **Plants need about fourteen to sixteen hours of light, but they also need eight hours of darkness.**

## Moving Plants - Cold weather below 50°F

Tropical houseplants brighten the indoors and add color to our homes. However, be aware that these plants do not like the cold and will suffer damage from even brief exposure to air temperatures near freezing. When transporting them in winter (or any day when the temperature is below 50°), it is important that plants be carefully wrapped. Wrap small plants in newspaper (roll the pot and all to make a tube, and fold the excess paper over at the top). Place larger plants in a large plastic garbage bag. Blow into the bag to create a bubble of warm air and seal the bag tightly. Warm your car up and move your plants directly from the heated house to the heated car. Drive straight to your plant's new home. Plants cannot be left in an unheated vehicle. Indoor plants will not survive the trip home in an open truck even when protected!



## Moving Plants - Warm weather

The key when moving plants in warm weather is to protect them from direct sun or excess heat. Plants left in the sun (even for a few minutes) will sunburn from the sun's ultra-violet rays that window glass normally screens out. If necessary, plants can be left outside for a while in the shade.



Just as your car heats up on sunny summer days, enclosed trucks can also get very hot inside. Plants will be damaged in heat above 100° (easily reached in closed vehicles in the sun **even in spring**) and any part of the plant that is touching glass or metal will be burned at much lower temperatures. Remember that plants left in plastic bags in the sun may overheat!

Your best bet is to load your houseplants last, into an enclosed vehicle (indoor plants will not survive highway speeds in an open truck!), drive directly to your destination, and unload the plants first and take directly inside.

## Vacation Tips

Larger Plants, ones that would not dry out more than once during your absence, should be watered thoroughly just before you leave. They may not need further care.

Plants which normally require watering every few days can be moved away from sunny windows and into bright, but indirect light. This will slow down the plant's use of water. Try this method a week or two before you leave, to get an indication of just how far it will stretch the plant's drying-out time.

Those plants which need to be watered frequently can be enclosed (pot and all) in clear plastic bags. Punch a few holes in the bag to provide a small amount of circulation. It is essential to move these plants away from sunny locations and into INDIRECT light. This will avoid heating up the inside of the plastic bags and "frying" the plants.

If your bathroom is fairly bright, you can use the "bathtub method." Place your plants on bricks in the tub, fill the tub with an inch or two of water (not enough to reach the top of the bricks), set your plants on the bricks, and cover the bathtub with clear plastic.

For long trips, consider asking a friend to plant-sit. Be careful, do not ask a friend who doesn't have plants of their own; the lack of experience could prove fatal to your plants. Leave a complete set of instructions with that person. If possible, move your plants, scattered throughout the house, into one location.

As a last resort (in the summer only), place larger house plants outside in the shade, where sprinklers can water them for you. You can even put 'pot and all' in the ground on the north side of your house.

## Seasonal Tips

**May** Longer, sunny days bring accelerated growth, and an increasing need for moisture to indoor plants. By May, all of your plants should be actively growing. Any that are not should be knocked out of their pots, for a thorough inspection of the roots. A tangled mass of white or light brown roots signals the need for a slightly larger pot. We recommend the use of "Black Gold" potting soil for all indoor plants. Begin fertilizing a week or so after the plant is repotted or use a timed-release fertilizer, such as Osmocote. Regular application of plant food results in stronger, healthier, and fuller plants. This is the best time of year to trim plants that have grown out of shape. Trim or pinch tips of branches to encourage new growth. This repotting, trimming, and fertilizing will usually revitalize a fading plant.

**June** is an important month for all your indoor plants. Before you get busy with outdoor work, try to be sure to do the following, so your indoor plants can have the benefits of highly active summer growth.

**Fertilizing** – Plants really need a steady supply of nutrients through the active growing season. Your plants depend on you for these nutrients. Use Fertilome Blooming and Rooting fertilizer every two weeks, or Osmocote fertilizer every four months. Be careful, never fertilize plants that are dry – it is better to water thoroughly, wait 24-48 hours, then apply the fertilizer. With regular feeding your plants will grow 100% better!



**Watering** – With summer's warm temperatures, good air movement (open windows and doors) and increased sunlight, plants will use more water at a much faster rate. Houseplants outdoors, or in open windows, should be checked very often (even daily) for watering. Be sure to really soak your plants thoroughly, repot if necessary, and use plastic pots (instead of clay pots) for plants that like to stay moist.

**Repotting** – Now's the time to check all your plants for repotting. Carefully knock them out of their containers. If they retain a pot shape and no soil falls away, repot them in a container 1-3 inches bigger in diameter. Be sure to use Black Gold Potting Soil for repotting. Repotting in the summer will ensure more new growth, and require less frequent watering.

Consider putting your houseplants outside for the summer. This is a nice addition to porches and to other garden areas. A word of warning: Some houseplants are more cold-sensitive than others. Some plants may die, or have leaf damage, if the nighttime temperatures drop below 50°F. Be careful leaving any of your houseplants outside at night, until the temperatures will stay above 50°F all night.

Outdoor houseplants are exposed to the sun's ultra-violet rays. Window glass screens out these rays. Since your indoor plants are not accustomed to UV rays, they will sunburn if put directly out into the sun. Acclimate your plants to the UV rays by placing them in the shade for at least one to two weeks before moving them into the sunlight. Many types of houseplants prefer to be left in the shade all summer. If houseplants are in the sun all summer, they tend to shed more leaves when you bring them back inside the house in the fall.

**Remember:** Increased sunlight and air movement results in increased need of water. Check plants, at least once every day, for the first two weeks.

**September** It's time to think about bringing in the plants you put outdoors for the summer. The more temperature-sensitive plants should be brought in to stay. Others can be kept outdoors during the day and brought in at night, or when temperatures are expected to drop below 45-50 degrees.

There is a big difference between the quantity and quality of light your plants have been receiving all summer - outdoors, and the light which they will receive during the fall and winter - indoors. Just as you acclimated your plants to outdoor, direct sun, over a two-week period in the spring, it is important to re-acclimate them to indoor, low light conditions in the fall. Gradually decreasing the amount of light a plant is exposed to will result in minimal loss of foliage during adjustment. Put plants in the shade - outdoors - for one week, then put them in your sunniest window - indoors - for at least two weeks. Gradually move them into their permanent winter locations.

Just before you are ready to make the move from outdoors to indoors, give each plant a thorough inspection and a clean bill of health. Check the foliage carefully for pests. Pay special attention to the undersides of the leaves, new growth, and junctions of leaf and stem, these areas can harbor mites, aphids, and mealy bugs.

Even if you do not see any signs of insects, the next step should be a thorough washing with soapy water (use insecticidal soap). If there is a definite insect problem, be sure to isolate



that plant and carefully monitor it for the next several weeks.

This is a good time to get rid of excess mineral salts which have accumulated in the soil from fertilizing. To do this, run clear water through the pot, using approximately ten times as much water as it normally requires to water your plant. This will dissolve any mineral salts in the soil and will flush them away. A one-time flushing will not harm your plant, and it will actually help your plant make the transition from outdoor to indoor conditions.

After you bring your plants indoors, do not expect them to carry on as if nothing has happened. You should be prepared for some loss of foliage during the first few weeks. Your plants' growth will probably slow down, or even come to a complete stop. They may use water slowly, or not at all. Be sure that you do not water them until they need it. A moisture meter may help save your plants during this transition period.

After the plant adjusts to the lower light intensity, to reduced air movement, and to cooler temperatures, you should not expect to water or fertilize them as often.

Just remember to give your plants sufficient light and individual attention when watering. Fertilize your houseplants about half as often as you were during the summer.

**October** The days are becoming shorter.

How do indoor plants react to these changes? The growth processes of plants, are regulated by the environment. In the summer the warm, long daylight hours, high light intensity, and plenty of air circulation influence their growth in a positive way. The faster growth is evident by a frequent demand for extra watering and fertilizing.



Autumn brings cooler temperatures, shorter days, lower light intensity, and limited circulation of air, resulting in a slower plant growth. Since houseplants are not growing as rapidly as before, they will use much less water. Many plants will stay wet for weeks. The drying effect of furnaces in some homes may cause the soil to dry quickly, so monitor your plants closely, don't just water them indiscriminately.

**Winter**

Roots need oxygen to grow. When you keep your plants wet too long, you fill in all of the air spaces in the soil with water. If the soil is full of water, there is no oxygen available and you drown the roots. Eventually the plant will die. The best way to prevent this from happening to your plants is to check each plant individually before watering. Use a moisture meter, or let the feel and appearance of the soil tell you when it is the time to water that plant.



Most plants (excluding water-loving-plants, such as ferns and plants in very small pots) would like to become drier than usual between waterings, rather than stay too wet all the time. Although many plants need to dry out between waterings in the fall and winter, no plant should become bone dry, through the entire pot, and then stay dry, not even Cacti.

At this time of year, a moisture meter can be a very wise investment for the health and longevity of your plants. A reliable moisture meter is calibrated to show the percentage of moisture in the soil. This enables you to determine accurately whether a plant is dry enough to require watering, or whether you should wait and check it again in a few days. It is especially handy for use on large plants and on plants which need to dry out between waterings.

Fungus may attack plants which have been damaged by overwatering, insufficient light, or because of poor air circulation. A good preventive can be the use of a systemic fungicide when you water your houseplants. Even if you are careful in your watering, a fuzzy mold may appear on top of the soil on some plants. This is due, in part, to limited air circulation. It is a normal occurrence and the mold can just be scraped off.

Fertilizing once every three or four weeks will be sufficient for most house plants during the winter.

Often times in the fall and winter, the amount of light that some of your plants receive will be insufficient for survival, even though lighting was adequate in the summer months. This may prove to be the case with plants that are in locations away from windows.



That Philodendron may have done quite well in your not-so-well-lit corner during the summer, but it could develop problems as the amount of light, intensity of light, and number of sunny days decrease in winter.

The answer to the problems of limited natural light is artificial lighting. Artificial lighting provides a consistent, dependable source of quality light. Flowering plants, such as African Violets, will bloom throughout the year with the correct amount of artificial lighting. You also have the advantage of being able to select a spot in your house for your plants, without worrying about the availability of natural light from windows.

There are florescent fixtures and incandescent grow-light bulbs available, normal house lamps will not work. The plant must be directly under the light, not even a foot or two to the side. The light must be turned on for 8-12 hours every day, so be sure to use a timer to help regulate the lighting. With artificial lighting, and a little bit of imagination, that basement or dark living room corner, can become an interesting, attractive, and "fun" part of the house.

Plants need a few more 'special care' procedures during the winter months! Try to move plants closer to the windows so they get more light. Rotate them 1/4 turn every week to help maintain an even growth habit. Don't have your plants near doors where cold drafts can damage tender leaves. Don't let any leaves of your plants touch the window panes during the cold months. Don't use cold water on plants, the roots like at least room temperature water. Don't place houseplants in front of furnace vents that will dehydrate the leaves.



*No one sets out to kill a houseplant, yet most dead houseplants are killed with kindness. Gardening indoors is an artificial climate and all plants need a period of adjustment. Expect to see a few leaves drop at first, but don't become panicked too quickly.*



*The best thing you can do for indoor plants is to learn something about their growing needs and provide as close to those conditions as possible. If you see a problem developing, take action quickly.*

**Good Luck Houseplanting!**