HOUSEPLANTS

HUMBER NURSERIES 'GREEN THUMB GUIDE'

AN INEXPENSIVE AND ATTRACTIVE SOLUTION

We have always used houseplants to create a pleasant environment, and now we are learning it is also good for our health. Plants can improve the quality of people's lives. Living foliage can affect our attitudes, lower stress levels, and increase job performance. Hospital patients with living plants in their rooms often recover faster than those with no visual contact with nature. Tending to plants or watching someone tend to plants has a soothing effect on most people. Plants can also reduce the noise level in our environment. In addition to these psychological effects, some plants perform an air cleaning service too. We are learning that houseplants in the home atmosphere can help filter and purify the air.

LIVING PLANTS REMOVE NOXIOUS GASES

Research has demonstrated that when house plants are present, levels of noxious gases were reduced dramatically within a short period of time. For example, the Philodendron, Spider Plant, and Golden Pothos were found to reduce levels of formaldehyde in an enclosed space by over 80% in a 24-hour period!

During photosynthesis (the process in which plants manufacture food) air is constantly absorbed, cleaned, and released into the atmosphere. Studies conducted by NASA have concluded that houseplants absorb pollutants and carbon dioxide from the air in exchange for oxygen. They are particularly effective in filtering benzene, formaldehyde (UF), and trichloroethylene (TCE). While broadleaf plants seem to be best, all houseplants act as air filters to a degree. The pollutants are broken down by plants into water and oxygen. Plant roots and soil bacteria are also important in removing trace levels of toxic vapor. It is best to use a 10" to 12" potted plant per 100 sq. ft. of floor space to help filter the air.

If you think that tending to houseplants takes too much time, we suggest using self-watering containers for your potted plants.

Common products in our home that release pollutants:

- ✓ New carpeting
- ✓ Poor quality carpeting
- ✓ Press board and particle board (used in counters and wall units).

These plants are especially good air filters:

- Heart Leaf Philodendron
- Elephant Ear Philodendron
- Lacy Leaf Philodendron
- Golden Pothos Ivy
- Spider Plant
- Aloe Vera
- Chinese Evergreen – Aglaonema
- Dwarf Schefflera
- Corn Plant – Dracaena massangeana
- Mother-in-Law's Tongue – Sansevieria

Ask one of our Nursery Professionals for more help concerning houseplants and air filtering.

LIGHT

Light is the most important element in successfully growing a houseplant. Without adequate light, a plant cannot produce the food it needs to survive. Turning your plant once or twice per month will ensure a nicely balanced plant.

It is almost always better to give a plant more light than it needs rather than not enough. For example, the Dracaena family is generally regarded as being part of the low to medium-light family of plants, but it is very common to see *Dracaena massangeana* and *Dracaena marginata*, among others, growing in the direct, blazing sun of the tropics. This family of plants grows naturally in high light but also do well in lower light areas and are thus well suited for most home and offices.

High-light plants (such as most flowering plants and Crotons) cannot be forced into lower light areas to suit a design function unless they are supplemented with proper additional electric lighting, provided in the form of spot grow bulbs, fluorescent grow tubes or various kinds of high-intensity, industrial-type lighting.

A good way to determine if an area has enough light to support a given plant is to take a light reading. You can easily do this by purchasing a combination light/moisture meter.

How to rate natural light exposure for your plants, based the direction of your windows

	Western Facing Window	Southern Facing Window	Eastern Facing Window	Northern Facing Window
Bright Light	Up to 4′ from window	Up to 6′ from window	Up to 4′ from window	Up to 1′ from window
Medium Light	5′ from window	8′ from window	6′ from window	4′ from window
Low Light	6′ from window	10′ from window	8′ from window	6′ from window

Before you go shopping for plants, try to determine what lighting you can offer.

Popular plants for a Low Light location

- Aglaonema varieties - Chinese Evergreens
- Aspidistra - Cast Iron Plant
- Dieffenbachia varieties - Dumb Canes
- Sansevieria varieties - Snake Plant
- Calathea varieties – Peacock Plant
- Dracaena, Lemon Lime, Janet Craig, werneckii, Corn Palm, marginata, Song of India and Jamaica
- Ferns – most varieties (suitable for Terrariums)
- Ficus – Midnight, Indigo, elastica and pumilia
- Fittonia – Snakeskin Plant (suitable for Terrariums)
- Hederan varieties – Green Ivy (suitable for Terrariums)
- Helxine – Baby Tears (suitable for Terrariums)
- Maranta varieties – Prayer Plant (suitable for Terrariums)
- Palms – Raphis, Kentia, Parlour, Fishtail
- Peperomia varieties
- Philodendron – many varieties of these air cleaners
- Radermachea – China Doll (suitable for Terrariums)
- Schefflera – Green Umbrella Plants

Popular plants for a Medium Light location

- Above list
- Orchids
- Anthurium varieties – Flamingo flower
- Aralia varieties
- Araucaria – Norfolk Island Pine
- Begonia varieties – Fancy Leaf
- Bromeliads varieties – eg. Urn Plant
- Chlorophytum – Spider Plants
- Dracaena – Marginata tricolour and Colourama
- Gardenias
- Palms like Areca, Bamboo and Majesty
- Podocarpus – Buddhist Pine
- Schefflera – veriagated varieties
- Spathiphyllums – Peace lilies will also grow in lower light but won't produce blooms.

Popular plants for a Bright Light location

- Above list
- Orchids
- Codiaeum varieties – Croton
- Cordyline varieties – eg Ti Plant
- Ficus – benjamina, Monique, Wintergreen, alii and Amstel King
- Hoya varieties
- Palms - Pony Tail, Sago, Triangle, Spindle, Date, Queen and Chinese Fan
- Strelitzia – Bird of Paradise.
- Cacti and Succulents
- Citrus varieties
- Flowering Plants like – Passion Flower, Hibiscus, Bougainvillea, Flowering Maples, Mandevilla, Oleander, Jasmine and Gardenia varieties

WATER

More houseplants are killed by over-watering than by all other factors combined. Water requirements vary for each different type of plant. Generally speaking, the more light a plant is exposed to, the more water it requires. Temperature and humidity change seasonally and the soil mix and the type of container the plant is in are also contributing factors to a plant's watering needs through the year.

It is a good idea to check plants at a regularly scheduled time, but it is almost impossible to say that a particular plant will need water every week because the above factors may vary from time to time.

Moisture meters can be a valuable tool when checking plants to see if they require water. However, they should be used as a guide only; always use your senses to determine if the moisture meter is working properly. Droopy plants usually indicate a need for water, but may also be a result of stress caused by over watering.

Generally speaking, houseplants should be allowed to completely (or almost completely) dry out between very thorough waterings. By using a moisture meter, putting your finger in the soil, looking at the soil, or by checking the weight of the plant you can determine if your plant requires water.

As you get to know your plant better you may even be able to know if it wants water by its weight, appearance or feel.

HOW TO WATER PROPERLY

Thoroughly soak the entire root system.

1) Set or keep your plant in a tray or saucer
2) Pour tepid water over the soil (usually the water will run straight through)
3) Let the saucer fill with water
4) Check the plant in ½ hour (the saucer will be partially empty)
5) Give the plant more water until the saucer fills.
6) Repeat steps 4 and 5 until the saucer remains full, this shows the plant has picked up all the water necessary.
7) Do not let the plant sit in water longer then 12 hours.
8) Remove excess water with a turkey baster if necessary. (Note: plants in **larger, deeper saucers** require less refilling because the saucer holds more water then the plant can absorb).
9) Allow the plant to completely or almost completely dry again before re-watering.

HUMIDITY

Our homes, especially in the winter, can be very dry. **Indoor tropical plants (except cactus) need humidity to flourish**, **some more than others.** To supply these plants with the proper humidity one can do the following:

1. Mist the plant daily or a few times a week early in the day.
2. Group batches of plants together.
3. Put a humidifier in the room as close to the plants as you can.
4. Set plants on pebble trays. These are trays that are almost double the size of the pots the plants are in. Fill the trays with gravel (marble to penny size) then fill tray with water. Set plant on top of the gravel and don't let the pot touch the water.

DISEASE AND INSECTS

Until a particular insect problem or disease occurs, it would be difficult to suggest a remedy. However, a well-kept, healthy plant will resist most problems. To prevent insects, especially on new plants that are in shock when they first move into their new homes, use a mild product, such as insecticidal soap when the plant is brought home. Refer to our Green Thumb Guide to Insect and Disease control (GT103) for further information.

FERTILIZER

Some fertilization of tropical plants is necessary in order to provide the proper nutrients to sustain overall plant health and vigor. Plants should be fed when actively growing (usually March to October).

There are many different types of fertilizers on the market. Some are formulated for certain varieties of plants, such as African Violets, Orchids and Cactus, and others are general fertilizers. Two of the most popular general fertilizers are 15-30-15 and 20-20-20. There are also slow release, water soluble and organic types to choose from.

If you are unsure of which type would be best for you, please ask our staff for assistance.

REPOTTING

A plant's root system carries out the functions of anchoring the plant, absorbing water and nutrients and storing nutrients for the plant. All of this activity takes place in that little plastic pot that came with your plant when you bought it. As the leaves and stems of the plant grow, so do the roots. A healthy plant has a root system that can support the needs of the leaves and stems. When a plant's roots grow too large for the container they are in, the plant should be repotted into a pot that is one size bigger than the one it is in, especially if it is a flowering plant. If the pot is too big, the plant may have to spend a year or two growing roots to fill the pot instead of flowering.

WHEN TO REPOT

A healthy plant will grow and gradually reach a point where it needs frequent waterings to avoid wilting. This is the time to repot into a larger container. If a plant is top heavy and frequently falls over, repotting into a larger and heavier container will help.

The spring season is a good time to evaluate the need for repotting houseplants. The same guidelines apply for container grown ornamental plants that permanently live on your patio or in your greenhouse. If the top growth has increased in size by as much as 20%, they probably need to be repotted.

WHEN NOT TO POT

Some tropical plants (like flowering plants) thrive when their roots are bound tightly in the container. These are plants that evolved in their native environment to anchor their roots in small crevices in rocks or in heavily forested areas where competition with other plants was high and root space was scarce. Some plants, like Philodendrons, will also grow what is known as "air roots". These roots are specially grown for exchanging oxygen and carbon dioxide. When you see air roots, don't be concerned that your plant is root bound and is suffering because of it.

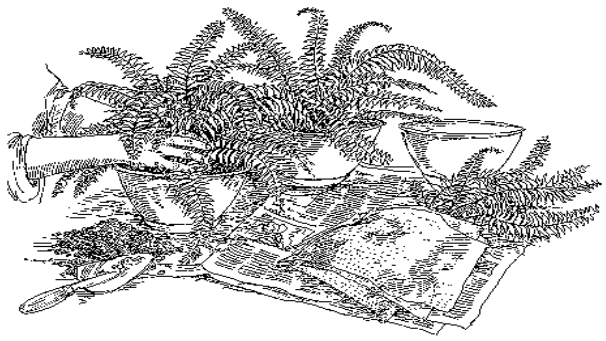
CONTAINER SIZES

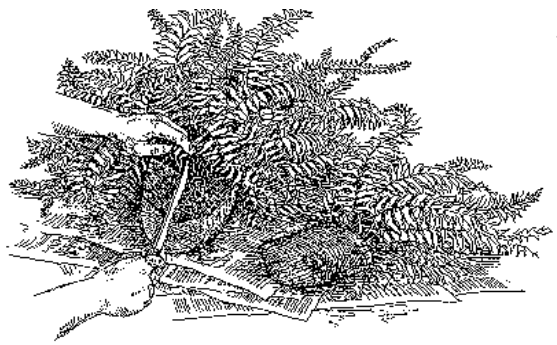
Transplant to only the next larger size pot. For example, a plant presently growing in a 10" pot should be transplanted into a 12" pot. Generally, plants will not begin to grow well unless the roots can almost completely fill the pot. Repotting a plant into an excessively large container may hold too much water and cause root rot. This does not apply to seedlings of fast-growing plants such as herbs, bedding plants, and vegetables. The pot's diameter should generally be equal to about 1/3 to 1/2 of the plant's height.

ROOT PRUNING

If you find that roots are too matted when you remove the plant from the container to separate in a larger pot, make three or four ½" deep cuts from the top to the bottom of the root ball with a sharp knife. This will stimulate new root growth and let the roots spread into the soil surrounding the root ball.

Many flowering plants are seasonal and having flowered once they won't do so again until next season. A knowledge of the growth of the plant is necessary if you wish to make the plant flower next year. Some plants may need a resting period (dormant stage), a cold requirement or a regulation of the length of daylight in order to initiate flower buds.





HOUSEPLANT PROBLEMS

Over half of the problems we encounter with houseplants are caused by the plant's environment (over watering, improper light, etc.). Other causes are pests or diseases. Please ask our Nursery Professionals to help evaluate your specific houseplant problems. To aid you in diagnosis, use this table of houseplant problems and causes.

1. The plant is green and appears healthy, but there is little or no new growth.	Possible causes: A. Not enough light B. Poor soil mixes C. Disease D. Drafts E. Improper temperature.
2. The leaves are drooping and the entire plant is wilting.	Possible causes: A. Improper watering B. Poor soil mix C. Disease D. Drafts E. Improper temperature.
3. The houseplant is stretched and leggy with pale leaves.	Possible causes: A. Not enough light B. Too high temperature C. Needs fertilizing
4. Even with good care the plant is growing slowly; soil dries out quickly. Roots growing through drainage holes.	Cause: Root bound; repot in slightly larger container.
5. The plant's lower leaves are yellowing and falling off.	Possible causes: A. Over watering B. Not enough light C. Insects D. High temperature E. No problem, some leaf drop is normal.
6. The entire houseplant is losing its leaves.	Possible causes: A. Change in location or environment B. Under watering or over watering C. Needs pruning as dense growth is keeping light from the inner leaves
7. There is burning and browning of leaf tips and edges.	Possible causes: A. Under watering B. Over fertilizing C. Low humidity D. Drafts
8. The leaves have a white, cottony growth on them	Cause: Insects i.e. Mealy Bug
9. The leaves have rotting brown or black spots.	Possible causes: A. Disease (leaf spot) B. spray damage
10. Leaves are distorted, curling or mottled yellow.	Possible causes: A. Insect damage B. Poor light C. spray damage.
11. Leaves on variegated plants are turning green, losing their variegation.	Possible Causes: A. Not enough light B. Lack of fertilizer
12. Lower and middle leaves are turning yellow.	Possible Causes: A. Over watering B. Cold drafts C. Needs fertilizer.
13. Rotting, discoloured or mushy stems or roots.	Possible Causes: A. Over watering B. Disease (stem rot) C. Soil mix too heavy
14. The stems or branches are dying back.	Possible causes: A. Disease B. Insects C. Improper watering D. Not enough light
15. The roots are brown and dry	Possible causes: A. Over fertilizing B. Improper Watering
16. Flowers and buds wilt, turn brown, and drop off.	Possible causes: A. Lack of water B. Not enough Humidity
17. Flowering houseplants have elongated stems and few or no flowers.	Possible causes: A. Over fertilizing, too much nitrogen B. Not enough light
18. The soil has very fine, white-crusted build up.	Cause: Salt build up due to improper watering. Use tepid (room temperature) water.
19. The soil has white, cottony strands on it	Cause: Disease (mold or mildew)
20. There are small, black flies on the soil, or flying around.	Cause: Insects (fungus gnats)
