



# Beginners Guide to Growing Houseplants: A Toronto Master Gardeners Guide

Growing houseplants can be just as rewarding as outdoor gardening. Healthy houseplants add beauty to the home and, for many, growing houseplants is the only way to express an interest in horticulture and love of plants. Plants in the natural garden rely on nature to meet their needs. Houseplants, on the other hand, rely on the gardener to meet all of their growing needs.

The essential requirements for all houseplants are light, soil, water, temperature, humidity and fertilizer. To a lesser degree fresh air through adequate ventilation and ongoing maintenance are also important. A plant will suffer if it receives too much of any of these required elements or is deprived of them. This gardening guide provides an introductory and general guide to successfully growing houseplants. Since there is a great deal to learn about growing houseplants, further reading is encouraged.

## Choosing Houseplants

Houseplants are most often chosen for aesthetic reasons. However, before buying a plant answer the following questions: What is the function of the plant (e.g. to provide a year round foliage screen in a particular area, to provide seasonal flowers)? How much skill and time will it take to maintain the plant? What is the preferred shape, size or texture of foliage? What are the growing conditions? How much do I wish to spend?

## Recommended Starter Plants

Many plants, usually the more expensive ones, such as azaleas, gardenias and orchids, require special maintenance that may prove difficult for the beginner. If inexperienced, consider growing plants that adapt readily to the existing conditions in your home. The following are some of the houseplants that are easy to grow and readily available at most nurseries.

### *Foliage Plants*

- Baby's Tears
- Coleus
- Dieffenbachia
- Fatshedera
- Jade Plant
- Sanseveria

### *Flowering Plants*

- African Violet
- Angel Wing Begonia
- Amaryllis
- Beefsteak Begonia
- Begonia Semperflorens
- Impatiens

## Choosing a Container

There are many types of containers that can be used for houseplants. The size of the container will be dictated by the needs of the plant. The type, appearance and shape of the container will be determined by such factors as cost and aesthetics. Often a decorative exterior pot, which conceals a more utilitarian plant pot, can be used for aesthetic purposes (e.g. brass pots, decorative wood containers, fine ceramic pots, glazed earthenware).

There are many types of plant pots on the market. These can be made with ceramic, clay, plastic, glass, hard fibre, or even plastic-lined wood containers or baskets. Each type has a different ability to retain moisture. Clay pots, because they are porous, will require watering more frequently than plastic or ceramic. Smaller pots will dry out more quickly than larger pots of the same material. Using the same type of pot for all houseplants will make it easier to establish an appropriate watering pattern.



Amaryllis (*Hippeastrum*) is an easy-to-grow and rewarding flowering bulb that is ideal for beginning indoor gardeners.

Photo: Helen Battersby

Drainage is extremely important. Always add a layer of gravel or broken clay chips to the bottom of each container to aid in drainage. Ensure that the drainage hole or holes are not blocked. If you choose to grow a plant in a container that has no drainage hole (e.g. impractical to drill holes in the bottom of a large decorative pot) it is even more important to consider adequate drainage, to minimize the risk of the plant roots becoming waterlogged. Add a layer of gravel to the bottom of the container, topped by a layer of charcoal.

Use pot bases to protect floors and furniture from excess water runoff.

## Cultural Requirements

### *Light*

Proper positioning will enable a houseplant to receive optimal light. Many gardeners consider light to be the most important element that will enable a plant to thrive, even when some of the other elements are not ideal. Most flowering and some foliage plants need ample sunlight and would therefore need a southern or western exposure. Many foliage plants and a few flowering ones require plenty of light, but little sunlight, and will thrive in an eastern or northern window. Choose plants that will thrive in the light conditions available in your home.

For more detailed information see the gardening guide entitled: Lighting Guidelines for Houseplants. Always check the particular light requirements of your plants and try to meet these as closely as possible.

### *Temperature*

Most houseplants are by nature tropical plants. However, most will not thrive in temperatures above 23 or 24 °C (73 to 75 °F) in our homes because light and humidity are considerably less than in their native habitat. Most houseplants will thrive in cooler conditions at temperature that are not comfortable for people. Most will grow in the range between 13 °C to about 24 °C (55 to 75 °F). However, some plants need considerably cooler conditions all year and some can survive only in consistently warmer temperatures.

Generally, houseplants will continue to grow well if exposed, for short periods, to temperatures that are above or below their preferred growing temperatures. In addition, most are not affected by slight temperature changes (e.g. temperature is set a few degrees lower during winter nights compared with daytime temperature). However, most houseplants do not tolerate sudden significant fluctuations of temperature (e.g. significant temperature drop when exposed to frosty winds or cold draught) although cacti and succulents are the exception. As a result, it is very important that plants not be placed in locations that are exposed to considerable temperature fluctuation (e.g. near a drafty window during winter).

The temperature in most homes, during the winter, varies from approximately 20 to 23 °C (68 to 73 °F) during the day to about 18 °C at night. Many plants prefer lower temperatures, especially at night. It is important to choose plants that will adapt to the actual temperatures in our homes or in particular rooms that offer alternative microclimates (e.g. an unheated sunroom).

### *Soil*

Most garden soils are not satisfactory for growing houseplants. A general-purpose mixture is preferred that consists of 1 part loam, 1 part peat moss, and 1 part coarse sand or perlite. Readily available premixed potting soil works well for most house plants. However, it is important to remember that some plants (e.g. cacti) need a very specific growing medium. These specialty mixes can also be purchased from a local garden centre.

### *Humidity*

Most houseplants will benefit from higher humidity than is available in the average home. Winter dryness is a real problem for many houseplants. It has been said that the average centrally heated home has a humidity level similar to that of the Sahara Desert.

There are a number of ways that you can combat this problem:

- Move plants to rooms that naturally have greater humidity, such as the bathroom and kitchen.
- Use a small room humidifier to increase humidity in a room.
- Use a hand sprayer each day (morning is best in somewhat cooler conditions) to lightly mist the leaves of your plants with tepid water (preferably use city water that has been stored in an open containers for a day or two).
- Place pots on 'pebble' trays and keep the pebbles/gravel/clay chips moist.
- Place pots in groups. Air trapped between adjacent leaves will have higher humidity when compared to air around an isolated plant. Too much moisture, however, may enable the transfer of disease, so it is important to ensure good air circulation around the plants.
- Consider double potting your plant by placing your growing pot into a larger one with walls lined with peat. Keep the peat moist.

## Ongoing Care and Maintenance

### *Water*

It is generally agreed that overwatering causes about 90% of houseplant problems or death. Too little water will dry out the roots and too much will rot them.

The easiest way to determine when to water is to carefully look at the surface of the soil each week during the fall and winter months. As the temperature rises, during spring through summer, increase the frequency of monitoring and watering. Insert your finger to the top of your fingernail into the growing medium. If it remains dry then it is time to water. It is not appropriate to wait until leaves have wilted because this is usually a sign of considerable stress.

When watering, it is good practice to add water to the pot until the water runs out the bottom of the pot and then remove the extra water. Remember that all of the surface of the soil/growing medium should be covered with water. Never leave the pot standing in water. Watering should leave the growing medium slightly moist but not saturated. Some plants do not benefit from allowing the soil to dry out between waterings, but others require this. As a general rule, watering should be less frequent during the winter months.

A successful watering routine needs to meet the needs of each of your various houseplants throughout the year. A watering program has to be adapted to many factors including:

- The plant's growth patterns (e.g. plants may require greater amounts of water during rapid growth).
- Changes of season (e.g. no or little water may be appropriate during late fall and winter but watering may be necessary three times a week in summer).
- The needs of specific plants and/or their conditions, including each plant's particular micro-climates and factors such as whether it is newly planted plants or pot-bound.

Some species do not like their leaves to get wet. For these species (e.g. Cyclamen and Gloxinia) water immersion may be preferable to top watering. To do this, place the pot in a container of water. The water should be up to the top of the growing medium. The water will be absorbed through the bottom holes of the pot. Leave the pots in the water until the top of the soil/growing medium is moist.

In winter, the water from your cold water tap may be too cold for your plants. Soil temperatures can drop from 13 to 7 °C (55 to 44 °F) in about three minutes when water is used straight from the tap and may take three hours to return to normal temperature. To ensure a moderate temperature, run water into a container the night before you water, and then store the water in the container, at room temperature, until morning. This is especially necessary for Gloxinias and African Violets, but is also good treatment for Philodendrons and Dieffenbachias. As well, allowing the water to sit in an open container for several hours before using it permits harmful chemicals often present in municipal water to dissipate.

Some species do not thrive with regular watering. Cacti and succulents, for example, do not require water during the winter months unless there are signs of stress or the plant has begun to shrivel.

### *Fertilizer*

Like all living things, plants require food. While there may be a small amount of nourishment in the original potting medium, regular feeding is necessary for most plants to thrive. Local nurseries or garden centres have a number of excellent water-soluble fertilizers for houseplants. These give excellent results because they provide all the needed nutrients. Using one of these will enable you to water and feed at the same time. It is very important to follow all instructions with the fertilizer.

### *Cleaning Plants*

Generally, all plants have dormant or resting periods (e.g. after active growing season and the flowering period) when feeding should be stopped or considerably reduced. Periods of growth and flowering call for increased feeding and watering. This period tends to be spring to autumn for flowering types and during the winter for species that flower in winter. Remember to find out if your plant has particular nutritional needs.

In addition to making plants look unsightly, dust can be very problematic for plants. A layer of dust will impede the ability of the plant to 'breathe', by blocking leaf pores. Dust may also impede the plant's ability to take energy from sunlight. Clean the leaves of plants with a moist sponge or cloth while gently supporting the leaves. Do this early in the day so that the leaves will dry during the day.

Never dust using a cloth sprayed with a chemical (e.g. Endust). Do not wash or spray plants with needles, such as cacti, or those with 'hairy' leaves. Dust using a soft brush to clean these plants.

### *Signs of Stress*

Some plant problems are the result of inadequate care. It is important to become familiar with signs of stress so that they can be addressed as soon as possible. For example, yellowing leaves, spindly growth or inadequate blooms might signal too little light, limp or curled brown leaves may signal too little water and brown leaf tips may signal too much water.

### *Insects/Disease*

Certain pests or disease can affect houseplants. Becoming familiar with pests and diseases that may affect your houseplants will permit timely control of problems before they become too serious. Examples of pests that may affect houseplants include aphids, whitefly, and spider mites.

A wide range of diseases can also affect houseplants. These appear more readily when growing conditions are poor. It is recommended that you use organic controls. (See the gardening guides on Organic Gardening).

Consider consulting a Master Gardener or your local nursery for specific advice if you are unable to diagnose the problem or unsure how to remedy the problem.

## Propagation: Making New Plants With Cuttings

Many houseplants can be propagated through cuttings. Cuttings are usually taken in spring or early summer. However, for some species like Geranium it is done in late summer.

Use small pots or a shallow propagator tray (for larger numbers of cuttings). Fill these containers with a soilless growing medium, either a soilless potting soil or a growing medium specifically made for cuttings.

Cuttings from healthy stems or from leaves (for plants with no stems and with leaves arising from the crown of the plant) should be approximately 2" or 5 cm long and should be taken either by breaking or cutting with a sharp blade. Only take cuttings from healthy plants with no signs of disease or pests. The cuttings should be dipped immediately into a rooting hormone and inserted into the prepared soilless growing medium. Water the cuttings gently.

For most cuttings, the pot should be covered with a polyethylene bag held open with small sticks to ensure needed humidity. The covering is not appropriate for cacti, succulents or Geranium cuttings. Propagator trays usually have clear tops with air vents. The containers with their cuttings should be placed in a room with a minimum temperature of 16 or 17 °C, with light shade or bright light but not direct sunlight. Be patient.

During the first week the new cuttings will appear quite limp but there should be no cause for alarm. A gently spray with water will help them to get through the shock and by the end of the week all cuttings should be standing firmly. By the end of the second week they should be rooted and growing. Remove yellowed or rotted leaves or cuttings that appear unhealthy. Transfer the young plants to small pots (e.g. 3" pots), filled with a soilless potting mix, when there is new growth at the tips of the stem cuttings or at the base of the leaf cuttings. Continue to water regularly. Two or three weeks later transfer these to permanent pots.

## References

1. Hessayon, Dr. D.G. *The House Plant Expert*. London:Transworld Publishers, 2002
2. McHoy, Peter. *The Complete Houseplant Book*. New York, N.Y.: Smithmark, 1995

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