DIVISION OF AGRICULTURE
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Agriculture and Natural Resources

Timely Tips Series

Propagating Houseplants

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Growing new plants from an established houseplant collection is an interesting way to learn more about the habits of your plants. It is also an easy way to increase the supply of plants for personal enjoyment or to share with friends. Houseplants may be propagated in several ways. The most common methods are by seed, terminal cuttings, leaf cuttings, stem cuttings, division and air layering.

Seed

Houseplant seed is not as widely available as flower seed. Sources may be located by checking with some of the larger, mail-order seed companies or by scanning the advertisements in gardening magazines. Seeds are used almost exclusively for some houseplants such as schefflera, false aralia, fatsia, asparagus fern (not a true fern), Norfolk Island pine, sago palm, many cacti and succulents and most true palms.

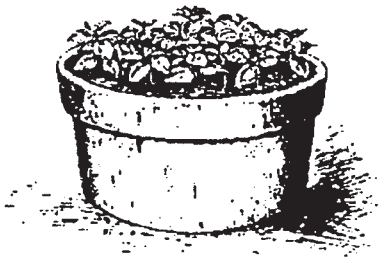

Figure 1. Many houseplants can be easily grown from seed.

Houseplant seeds do not usually store very well. They should be acquired fresh and planted as soon as possible. Unlike seeds of plants from the temperate regions, houseplant seeds lack any type of dormancy and germinate as soon as conditions are correct. The seeds should never be chilled.

Plant the seeds three times deeper than the diameter of the seed in any organic potting soil and water thoroughly. Allow the excess water to drain away, and then cover with a plastic bag. Locate the seed tray where it will stay warm and receive indirect light. A soil temperature of 75 to 80 degrees is ideal. Depending on the species, seedlings should begin to appear in two to four weeks. Transplant the seedlings to individual containers when the first true leaves develop.

Terminal Cuttings

The most common method of propagating houseplants commercially is using terminal or tip cuttings – a piece of stem with one or more buds. This technique is used on vining plants such as pothos, philodendron, grape ivy and some peperomias. It is also used for other houseplants such as weeping fig, pileas, wax begonias, geraniums, most cacti and succulents and a host of others.

The ideal terminal cutting is a healthy 2- to 4-inch long cutting with four to six leaves. Do not allow the cuttings to wilt after being removed from the plant. Remove the cutting by making a cut just below a node (the point where leaves are attached). Remove the lowest pair of leaves and insert the cutting into moist, sterile potting soil.

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Figure 2 illustrates the "rooting bag" technique for taking cuttings. This method works well for nearly all houseplants. Cuttings of several different species or just one species may be placed in the same container. When propagating most plants, it is a good idea to use more than one cutting. For example, when rooting a philodendron pot, stick six to ten cuttings in the pot, not just one. This gives more growing points and ensures a fuller pot in less time.

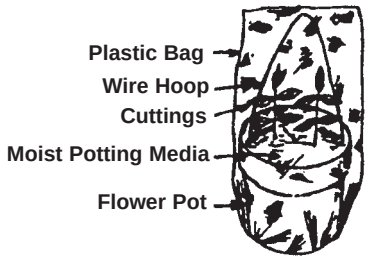

Figure 2. This easily constructed rooting bag is an easy way to propagate many different kinds of houseplants.

Once the cuttings are in place, stick a coat hanger bent in the shape of an inverted "U" into the pot to support the plastic bag. Use a plastic bag that is clear, or nearly so, and large enough to enclose the flower pot. A bread bag works well. Place the rooting bag in a warm place that receives good light but not direct sun. Once the bag is sealed, the container need not be reopened until the cuttings have rooted. This usually takes four to six weeks. Rooting hormones, available at most garden centers, speed rooting but are not a requirement for houseplant propagation.

Getting as many cuttings as possible from a parent plant is sometimes desirable. This can be done by using the "single-eye" technique. Plants with alternate leaf arrangement, such as the philodendron, pothos and nephytis, can be rooted by taking a piece of stem an inch or two long with a leaf attached. The stem will root, and the bud at the base of the leaf will form the new shoot. By making a cluster of six to ten of these single-eye cuttings, it is possible to have an attractive pot in short order.

Cacti and succulents contain a great deal of stored moisture. Because of this, they will sometimes rot when placed in a rooting bag. An easy way to root cacti and succulents is to remove the cutting as described above, but instead of inserting it in soil immediately, let it sit on the windowsill for 24 hours. This seals off the wounded area and reduces the chance for decay. Most of these plants can be inserted in the rooting medium without benefit of the plastic bag. Simply water normally (for a cactus or succulent) and new roots will form.

Leaf Cuttings

African violets, rex and beefsteak begonias, peperomias, several succulents and a few other thick-leaved plants may be propagated by leaf cuttings. Because leaf cuttings do not contain a vegetative bud, a longer time is required to produce a plant. In fact, two to four months is the usual time. If you are in a hurry, this is not the preferred way of propagating houseplants.

For plants such as African violets, peperomias and most succulents, insert the petiole (stem of the leaf) up to the leaf blade. For large-leaved plants such as rex begonia, lay the leaf on the surface of the rooting medium. Cut the veins of the leaf in several places. Place small weights on the leaf to hold it in firm contact with the soil. New plantlets will form at the location of the cut veins. When the plantlets are being repotted, the old leaf should be broken away from the plantlets.

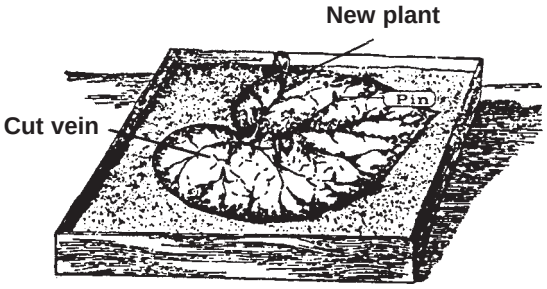

Figure 3. Many houseplants, such as this rex begonia, can be propagated by leaf cuttings.

Cane Cuttings

Dumbcane, aglaonema, dracaenas, ti and a few other cane-producing plants can be propagated by cane cuttings. The cane can be from 2 inches to many feet long. To produce the maximum number of plants, cut the cane into 2-inch long segments, making sure there is at least one node on each segment. Place these segments on their side and half buried in the rooting medium. If longer pieces of cane are desired, for example when dracaenas are rooted, insert the base of the cutting in the soil. New roots will form from the cane, and a shoot will grow from the uppermost axillary bud.

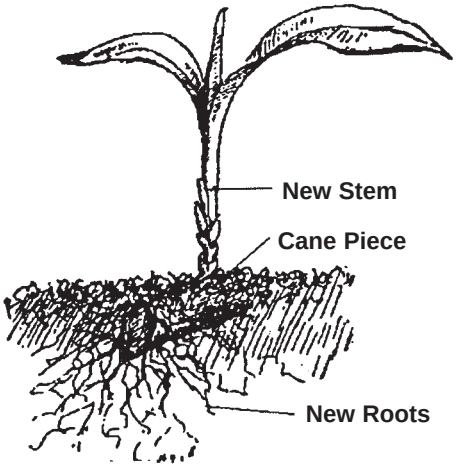

Figure 4. Plants which produce stout canes (stems) can be easily grown from cane-piece cuttings.

Methods of Propagating Houseplants

Common Name	Seed	Cuttings				Division	Air Layer
		Terminal	Single-eye	Leaf	Cane		
Abutilon	yes	best	yes	no	no	no	yes
African Violet	no	yes	no	best	no	yes	no
Agave	yes	no	no	no	no	yes	no
Airplane Plant	no	yes	no	no	no	best	no
Aloe	yes	best	no	no	no	yes	no
Aluminum Plant	no	best	yes	no	no	no	no
Aphelandra	no	best	yes	no	no	no	yes
Aralia	best	yes	yes	no	no	no	yes
Begonia, Angelwing	no	best	yes	no	no	yes	yes
Begonia, Beefsteak	no	yes	yes	best	yes	no	no
Begonia, Rex	yes	yes	yes	best	yes	yes	no
Begonia, Wax	best	yes	yes	no	no	no	no
Bromeliads	yes	no	no	no	no	best	no
Cactus	best	yes	no	no	no	yes	no
Candelabra Cactus	no	best	no	no	no	no	yes
Castiron Plant	no	no	yes	no	no	best	no
Chinese Evergreen	no	best	no	no	yes	yes	yes
Coleus	yes	best	yes	no	no	no	no
Copperleaf	no	best	yes	no	no	no	yes
Croton	no	best	yes	no	no	no	yes
Crown of Thorns	no	best	no	no	no	no	no
Dieffenbacia	no	yes	no	no	yes	no	best
Dracaena	no	yes	no	no	best	no	yes
Elephant's Foot Yucca	no	yes	no	no	best	no	yes
English Ivy	no	best	yes	no	no	yes	no
False Aralia	best	yes	yes	no	no	no	yes
Fatsia	best	yes	yes	no	no	no	yes
Fern, Artillery	yes	best	no	no	no	yes	no
Fern, Asparagus	best	no	no	no	no	yes	no
Fern, Birdsnest	spores	no	no	no	no	no	yes
Fern, Boston	no	no	no	no	no	yes	no
Fern, Holly	spores	no	no	no	no	yes	no
Fern, Maidenhair	spores	no	no	no	no	yes	no
Fern, Staghorn	spores	no	no	no	no	yes	no
Fittonia	no	best	yes	no	no	yes	no
Flame Violet	no	best	yes	yes	no	yes	no
Gloxinia	best	yes	yes	yes	no	no	no
Grape Ivy	no	best	yes	no	no	yes	no
Haworthia	no	yes	no	yes	no	best	no
Hibiscus	no	best	yes	no	no	no	yes
Nephytis	no	yes	best	no	no	yes	no
Norfolk Island Pine	best	yes	no	no	no	no	yes
Orchids	no	yes	no	no	no	best	no
Palm, Bottle	best	yes	no	no	no	no	yes
Palm, Lady	no	no	no	no	no	best	no
Palm, Parlor	best	no	no	no	no	yes	no
Palm, Sago	best	yes	no	no	no	yes	no
Peperomia	no	best	yes	yes	no	no	no
Philodendron	no	yes	best	no	no	yes	no
Pothos	no	yes	best	no	no	yes	no
Prayer Plant	no	best	no	no	no	yes	no
Rubber Plant	no	yes	yes	no	no	no	best
Schefflera	best	yes	yes	no	no	no	yes
Shamrock	no	no	no	yes	no	best	no
Snakeplant	no	no	no	yes	no	best	no
Spathiphyllum	no	no	no	no	no	best	no
Succulents	yes	best	yes	yes	no	yes	no
Swedish Ivy	no	best	yes	no	no	no	no
Wandering Jew	no	best	no	no	no	yes	no
Weeping Fig	no	best	no	no	no	no	yes

Division

Boston fern, snakeplant, asparagus fern, castiron plant and many other plants may be propagated by division. In fact, any plant producing underground stems (rhizomes) or any plant producing a crown (a plant which does not produce an elongated, above-ground stem) can be successfully divided. The best time to divide houseplants is when they are coming out of a period of inactive growth, usually late winter or early summer. Simply tear apart the plant taking care to leave as much of the root system intact as possible. Replant all divisions at the same level they were growing. It may be desirable to plant several divisions in the same container to give the pot a fuller effect in the shortest possible time.

Air Layering

When a plant is greatly overgrown and the only attractive leaves are at the end of a stem, air layering is an easy way to restore it to a more presentable form. Weeping fig, schefflera, Norfolk Island pine, dumbcane and tree philodendrons are often propagated using this method. In traditional rooting techniques, the plant is brought to the soil, but in air layering, the soil is taken to the plant. The stem is prepared as shown in Figure 5.

If the plant has a tree-like bark (rubber tree, weeping fig, etc.), the stem should be girdled entirely around the stem. The girdle should be at least one-third inch wide. If the plant is a dracaena or tree philodendron, cut a diagonal slice halfway through the stem of the plant. This slice should be held open with a small stick. Dusting rooting hormone onto the wounded area speeds rooting. Next, place a moist ball of sphagnum peat moss 4 to 6 inches in diameter around the wounded area. Wrap the moist ball of peat moss in plastic kitchen wrap or aluminum foil. Secure the ends of wrapping material with wire ties.

Inspect the ball every few weeks for moistness and water if necessary. When roots appear, usually after two to four months, remove the new plant just below the root ball. Repot the new plant as with any rooted cutting. Do not try to layer too large a piece or there may not be enough root system to provide water for the new plant's needs.

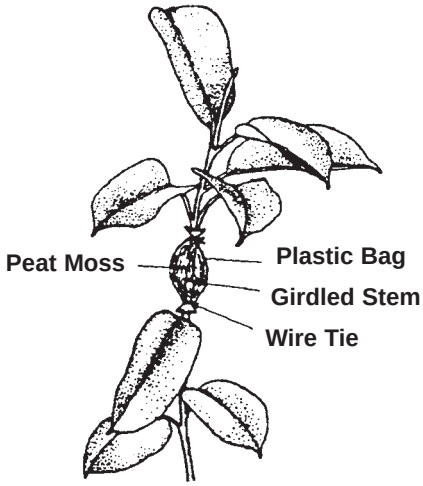

Figure 5. Air layering is a simple way to propagate plants that are badly overgrown.

Specific Plants

The table on page 3 gives the propagation methods which may be successfully used for 60 of the most common houseplants. The method which is most commonly used, or the method used commercially, is the method designated as "best." If the technique works but is not commonly used for some reason, it is indicated with a "yes." If the method does not work, "no" is used. Some groups such as cacti and succulents are generalizations.

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