

## A Greener View: Learning to divide and multiply recommended for octogenarian-to-be

*by Jeff\_Rugg*

Q: My doctors said I should take up gardening, at age 79. I'm interested in learning to propagate some plants: crotons, red tie and schefflera, for starters.

A: I like your doctors. Gardening indoors or out is an excellent way to get the mind and body moving.

Plant propagation can occur in many ways. Seed production involves the transfer of genetic information, while other forms of propagation do not and, therefore, produce a clone, or identical plant, to the original.

Some plants are easy to propagate because they use natural methods to divide themselves into many pieces. Plants that have more than one stem coming from the ground can simply be cut apart into pieces. This is called division - even though it is a form of multiplication.

Division is often done to perennials and is usually best done when the plant is dormant and during the time of year opposite the plant's blooming season. In other words, divide a fall-blooming plant in the spring and vice versa.

If division is done when the plant is dormant, there needs to be at least one bud capable of growing a new stem. Typically, growth is stronger at the edges of a clump, so the divisions are cut from the center, which may or may not be discarded.

All three of the plants you would like to propagate are native to tropical climates. They often grow in clumps, making division a possible choice, but softwood cuttings are probably a better choice.

After division, cuttings are the second most common form of propagation. With this method, you take a part of the plant off the original and allow it to grow the missing parts to form a new plant.

Cuttings are taken from the original, or stock, plant. The stock plant should be examined to be sure it is healthy and has desirable characteristics that make it a good candidate for propagation, since the new plants will be genetically identical to it.

Some plants can be propagated from leaf cuttings - including African violets, many succulents and some begonias - but usually stem cuttings are used. Soft wood cuttings are taken when the stem is young, before it has developed woody tissue, and hard wood cuttings are taken when the stem is older.

Since the cutting does not have roots, care must be taken in how it is handled. Most cuttings require high humidity, warm temperatures and no direct sunlight. It will take from one or two weeks to three or four months for a cutting to develop roots, during which these conditions must be maintained.

Roots most often grow from the same location as existing leaves. Cut the stem off just below a leaf node and pull off the leaves. Placing this section of the stem into moist, sterile soil will promote root growth from the healing tissue that will be formed at the cut and at the leaf node. The cutting doesn't have to be buried deeply unless more than one leaf node is close enough to grow roots. A few plants, such as coleus and tomato, produce roots all along the sides of the stem cutting.

Some cuttings root more quickly with the addition of plant growth hormones applied when the cutting is taken. Fungicides are also beneficial as disease organisms rapidly infect wounded tissue.

If you are only propagating a few plants, cuttings can be rooted in individual flowerpots set into large plastic bags to keep the humidity high. Use a sterile media like perlite or vermiculite. Coarse sand mixed with peat moss is OK, too, as are compressed peat pots that expand with the addition of water. Until you see roots, no

additional watering is needed after the initial watering and the bag is sealed.

After the cutting has rooted, it will start growing a larger top that needs to come out of the plastic bag. The plant is used to high humidity and warmth, so it should be moved slowly from the old conditions to the new. First, just open the bag and let the room air mix for a few days, and then lower the bag around the pot so it can be raised again if the plant needs to be warmed up.

A shortcut to taking a cutting that ensures there are roots is called layering. If the plant is flexible enough, bend a stem over until it can lay on the ground. If necessary, remove the leaves from a section of stem and then bury it in a few inches of soil. Scratching some wounds into the stem will cause healing tissue to grow that might send out roots faster. (If not using sterile soil, apply a fungicide and rooting hormone to the wounds.) Nonwoody stem tissue works better than hardwood. If the stem is long and flexible, several sections can be buried with unburied sections in between. Do not bury the tip of the stem, and make sure the whole thing is pinned down securely.

Aboveground layering involves cutting a section of stem partially through. Hold the cut open with a small stick, apply rooting hormone, and wrap the cut in wet peat moss and a plastic bag. Then wait until roots are visible before cutting the stem off.

Another asexual way to propagate plants is with root-cutting and underground portions of the plant such as bulbs, rhizomes and corms. None of these will work as easily as stem cuttings for your plants.

Grafting is also used to propagate plants, but it is best learned by watching, along with lots of practice.

One last note: Many plants are patented and it is illegal to propagate them for 17 years after the patent is issued without permission from the patent owner. The tag on the plant when you buy it will tell you if it is patented.

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