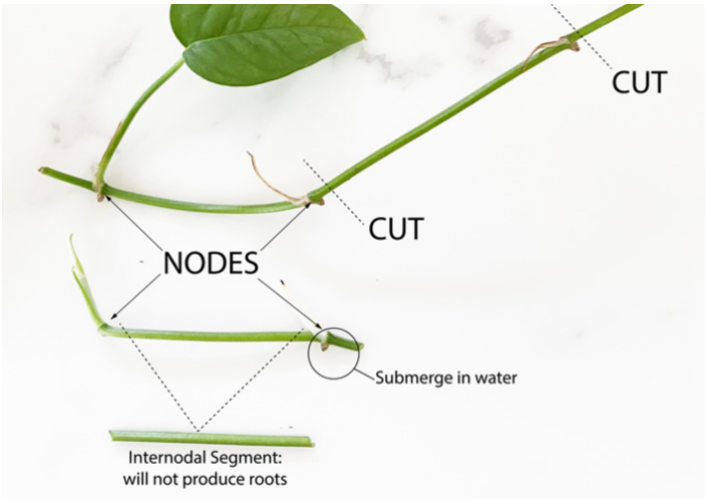
A GUIDE TO PROPAGATIONS

PICK A PLANT THAT NEEDS TO BE PROPAGATED

Do you need to cut back a plant that's gotten too big for it's space, create a fuller plant, or create new plants to share with friends? All of these are great reasons to try propagating your plants.

But it's important to know what kind of plant you are working with to decide the best way to propagate.



KINDS OF PROPAGATIONS

NODAL PROPAGATIONS (THE GOLD STANDARD)

A node is the specific point on a stem where a leaf, bud, or branch grows. This area is dense with the specialized cells needed to create brand-new roots and stems.

How it works: You cut a piece of stem that includes at least one node. Even if you remove the leaf, the node has the ability to grow a whole new plant.

Best for: Most vining plants like Pothos, Monstera, and Philodendron.

Success Rate: Highest. Because the node is already a growth point, it matures much faster.

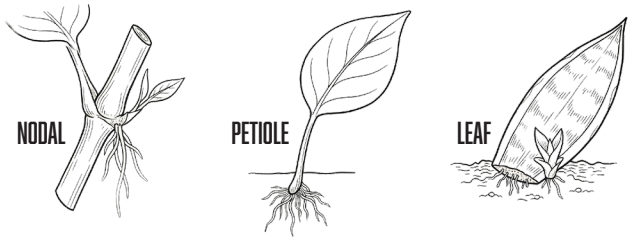
PETIOLE PROPAGATIONS

The petiole is the stalk that connects a leaf to the main stem. It is not a stem itself.

How it works: You take a leaf with its petiole attached and put it in water or soil.

The Catch: While a petiole can often grow roots, it frequently lacks the necessary structures to grow new stems or leaves. So this won't work for all plants.

Exception: Some plants, like African Violets or Begonias, have "adventitious" cells throughout the petiole that can eventually form a new plantlet, but it takes much longer than a nodal cutting.



LEAF PROPAGATIONS

This involves using just the leaf or even just a fragment of a leaf.

How it works: The plant must be able to develop "adventitious" roots and shoots from non-specialized tissue.

Best for: Succulents (Jade, Echeveria), Snake Plants, and Rex Begonias.

The Process: You typically lay the leaf on top of soil or tuck a fragment into the dirt. A tiny "pup" or baby plant will eventually sprout from the base or the veins of the leaf.

Note: If you propagate variegated varieties via leaf cutting, it will usually lose its variegation and revert to solid green. To keep variegation, you must use division or nodal propagation.

Virginia Cooperative Extension
Virginia Tech • Virginia State University

MGNV Master Gardeners of Northern Virginia
Arlington • Alexandria • mgnv.org

WATER, SOIL, OR DIVISION? WHICH IS BEST?

WATER PROPAGATION

This is the easiest method for beginners because you can actually watch the roots grow.

Best for: Pothos, Philodendron, and Monsteras.

THE PROCESS:

Locate a Node: Find the small bump on the stem where a leaf meets the vine. This is where roots grow.

Make the Cut: Use clean scissors to cut about 1/2 inch below the node.

Submerge: Place the cutting in a glass of water, ensuring the node is underwater but the leaves stay dry.

Wait: Change the water weekly. Once roots are 2-3 inches long, transplant to soil.

DIVISION

This is used for plants that grow in clumps rather than long vines.

Best for: Snake Plants, Peace Lilies, Spider Plants, and Calatheas.

THE PROCESS:

Unpot: Gently remove the "mother" plant from its pot.

Separate: Use your hands (or a clean knife) to pull a sections of the plant apart from the rest of the root ball.

Repot: Pot each new section into its own container immediately.

SOIL PROPAGATION

Some plants prefer to start their new lives directly in their permanent home.

Best for: Succulents and Geraniums.

THE PROCESS:

Cut & Prep: Take a 4-6 inch stem cutting. Strip the leaves off the bottom 2 inches. Or take a few leaves from the plant you are propagating.

Callous (Succulents Only): For succulents, let the cut end dry for 2 days before planting to prevent rot.

Plant: Poke a hole in moist potting mix and insert the stem. For succulent leaves you can lay them across the top of the soil.

Humidity: Cover with a clear plastic bag to create a "mini-greenhouse" until new growth appears.

TROUBLESHOOTING COMMON ISSUES

MUSHY STEMS:

This is root rot. Usually caused by dirty water or lack of airflow. Cut off the mushy part and start over with fresh water. Change the water in your propagation containers regularly to avoid bacteria build up and increase oxygen.

WILTING:

Normal for the first few days! The plant is redirecting energy from its leaves to its new roots.

NO ROOTS AFTER WEEKS:

Be patient! Some plants take 48 hours, others take 2 months. As long as the stem isn't rotting, there is still hope. Using a rooting hormone powder can speed up the process for stubborn woody stems.

Virginia Cooperative Extension
Virginia Tech • Virginia State University

MGNV Master Gardeners of Northern Virginia
Arlington • Alexandria • mgnv.org