Compare Water and Mix for Rooting Cuttings

An observation log for two rooting methods



Photo: an established pothos houseplant, Matt Stevens (Pitt County), CC BY 4.0. Context only; this is not a photograph of the comparison or its results.

Two methods. One careful record. Follow similar pothos cuttings in water and in rooting mix. Notice plant condition, care effort and what you can actually observe, without declaring a universal winner from one pair.

Use the setup sheet, paired log and closing reflection to make your next propagation choice more informed.

STP-GROW-F053 | G04 Seeds, Cuttings & Propagation

Make a small fair comparison

Use a plant suited to both methods

This exercise uses an identified, healthy pothos (*Epipremnum aureum*) plant. It can root in water or a suitable rooting medium. Do not assume the same protocol suits every houseplant, woody cutting or succulent. [1, 2]

Choose two similar stem-tip cuttings from the same healthy parent: similar length, stem thickness, node count and leaf area. About 3-6 inches (8-15 cm) with at least two nodes is a useful starting format, not a requirement to cut through a node. Prepare both promptly. [2, 3]

Label one **W** for water and one **M** for mix. A coin toss can assign the methods rather than giving the stronger-looking cutting your preferred treatment. Record remaining differences. This is a practical home comparison, not a controlled laboratory experiment.

Keep these things similar

Start on the same day. Use the same plant variety, nearby bright indirect light and similar room temperature. Keep both away from direct hot sun and drafts. Record any cover, location change, hormone or other treatment rather than pretending it was identical.

One cutting per method is a small trial. If the parent can spare more, repeat with additional matched pairs, each in labeled containers. Do not weaken the parent to obtain a larger sample.

Set up W and M

Clean tools and containers before disinfecting them as appropriate. Follow the disinfectant label, including contact time and any rinsing or drying; never mix chemicals. Keep disinfectant out of rooting water and mix. [4]

Use sharp scissors or pruners with fingers clear. Cut below a lower node so the node stays on each cutting. Remove leaves that would enter water or mix; keep healthy upper leaves. The original base points down. [2, 3]

W - water	M - rooting mix
Use a clean stable jar and room-temperature water.	Use a clean small pot with drainage and fresh, well-aerated propagation mix suitable for cuttings.
Submerge the cut base and a lower node, but no leaves.	Premoisten the mix. Make a hole with a pencil, insert the base with a lower node covered and no leaves buried.
Support the stem without pinching it.	Gently firm around the stem, water to settle and let excess drain. Do not leave the pot standing in water.

The two media need different care. Giving both the same volume of water would not make the trial fair. Record the mix product or ingredients, containers and actual care. [2, 5]

Plant safety: pothos can irritate skin and is not edible. Use gloves for sap contact, wash hands, and keep cuttings, water, mix and trimmings out of reach of children and pets. [1]

Care without hiding the differences

W needs a stable waterline

Keep the lower node and developing roots covered, with leaves above the water. Replace water once or twice weekly and sooner if cloudy. Use fresh room-temperature water; record each change. [2, 5]

M needs moisture and air

Check the mix rather than watering by a fixed calendar. Keep it moist, not saturated; let excess water escape. Do not pull the cutting out for each entry. A loose clear cover can reduce moisture loss, but keep it off leaves and out of direct sun; ventilate if condensation is heavy. Record whether you used one. [3, 5]

For this simple trial, omit rooting hormone from both. If you choose a different setup, record it as another difference; never add hormone to a jar merely to make treatments seem equal. Hormone use is product- and method-specific. [2, 3]

Check both daily for care needs. At your chosen recording interval, write a paired entry even if nothing changed. Remove a soft, collapsing or obviously decaying cutting rather than keeping it solely to finish the log. Record the loss and clean the container before reuse.

Do not rescue the comparison by rewriting it: if one cutting dried out, overheated or needed different care, that event belongs in the record.

Decide what counts as evidence

Visible roots are not an equal test

Water lets you see developing roots; opaque mix usually does not. Write **not visible** for M rather than **no roots**. The day you first see roots in W cannot, by itself, prove that W rooted faster than M.

Use the same easy observations for both: stem firm or soft, leaves upright or wilted, leaves retained or dropped, and new growth present or absent. These describe condition. New growth or resistance alone does not measure root quantity or guarantee a well-rooted plant.

Avoid damaging the evidence

Do not repeatedly tug, unpot or wash roots to obtain a number. Record visible roots only when they can be seen without disturbance, such as through a clear jar or at a drainage hole. Note exactly how you observed them.

Water-rooted cuttings can need adjustment when moved into potting mix. Root appearance in a jar is not the same outcome as continued growth after potting. Plan later care separately and record the transfer date and subsequent condition. [2]

A fair conclusion sounds like: “In this pair, W showed visible roots first; M roots were hidden. M needed fewer water changes. I need more observations before deciding which method suits my routine.” This is an example of reasoning, not a reported result.

Paired observation log

Plant and parent label _____ Pair number _____

Start date _____ Mix used _____

W container _____ M pot / drainage _____

Location and cover differences _____

Record date, condition, root evidence and care for both. Use “not visible” when roots are hidden. Copy this page for longer observation; blank rows are not a rooting deadline.

Date / day	W - water observations	M - mix observations
_____	_____ _____ _____	_____ _____ _____
_____	_____ _____ _____	_____ _____ _____
_____	_____ _____ _____	_____ _____ _____
_____	_____ _____ _____	_____ _____ _____
_____	_____ _____ _____	_____ _____ _____

Prompts: firm / soft; upright / wilted; leaves lost; new growth; roots seen how; water changed or mix watered; cover or location changed.

Close the trial honestly

Choose a review date, not a promised rooting date. Keep caring for healthy cuttings that need longer. Record failure, uncertainty and a decision to continue as valid outcomes.

Decision to record	My notes
Review date and condition of W and M	_____ _____
What I could actually see about roots	_____ _____
Care differences or disruptions	_____ _____
Potting or next check planned for each	_____ _____
What I can and cannot conclude	_____ _____

My preference for the next attempt: water / mix / undecided

Reason based on this record:

_____

Repeat before generalizing: plant variety, cutting condition, season and home conditions can change the outcome. This sheet does not establish a universal success rate.

Sources and photo credit

Primary guidance checked 2 November 2026. The paired-log design and cautions about unequal visibility are original teaching choices, not claims that an extension source conducted this trial.

1. NC State Plant Toolbox - Pothos identity, propagation and toxicity.

2. Iowa State University Extension - Rooting media, water care and transfer stress.

3. University of New Hampshire Extension - Healthy cuttings, nodes and humidity.

4. University of Minnesota Extension - Tool and container cleaning.

5. University of Vermont Extension - Water and mix rooting.

Photo: Matt Stevens (Pitt County), *Epipremnum aureum (Pothos) houseplant view*, via NC State Plant Toolbox gallery figure 40476, CC BY 4.0. Source also credits Pitt County Arboretum. Full frame proportionally resized and JPEG encoded. No endorsement implied or additional restrictions on the licensed photograph.

Scope: Steadleaf Press observation aid for a small home trial. No guaranteed rooting time, disease diagnosis, universal method ranking or laboratory sterility claim. Continue plant-specific care after this record ends.