

**Softwood cuttings:** taken from first flush of new growth in spring/summer.

**Greenwood cuttings:** taken when stems are young, but beginning to firm up.

## How to Take Softwood or Greenwood Cuttings

**Choose healthy stems** from disease-free plants that show the characteristics of what you want in your clone. For example, choose a variegated stem of a variegated plant. Ideally choose stems that are not flowering.

**Cut stems** about 8-10." This is longer than you need, but the lengthier cut is so that you can examine each branch and make an optimum cut just before sticking into a medium. Cut enough stems to make about 20 cuttings (this might mean 10 to 20 stems). Place your stems in a bucket of water to keep them from wilting. Record the botanical name and the cultivar on a **label**, for example *Hydrangea macrophylla* 'Snowball'. If collecting more than one type of plant, tie each in a bundle with a label to keep track of your plants.

## Potting Media and Containers

Cuttings can be placed individually in 1" or 2" **cell packs**, or communally in 4" or 6" **pots**. For a large number of cuttings use a flat that has enough depth. In all cases, make sure there are adequate holes for water drainage.

**Media** used for cuttings should be lighter and have better drainage than regular potting soil. Use a 1:1 mixture of potting soil and perlite. Sand, pumice, vermiculite, and crushed gravel are all acceptable mix-ins. Add your medium to each container, press down firmly, place in a catch basin, soak with tap water, and set aside. Note: Generally, quicker-rooting plants are more forgiving of the medium. For example, fuchsias root well in commercial potting soil, whereas plants that take a very long time to root should be placed in pure perlite.

## Preparing Cuttings

Before you begin, **sanitize** tools with rubbing alcohol or Lysol to reduce the chance of spreading plant diseases. Then, select a stem and gently swish in a bowl of water containing one drop of dish soap. This action will remove any dust, dirt and critters on the sample.

Locate where the leaves emerge on each stem. These are the **leaf nodes** where active plant division and root formation can occur! To avoid bruising the stem, use a sharp instrument to **make a cut just below a leaf node**. For softwood cuttings make this cut at the point where the stem is still quite flexible. For a greenwood cutting, make the cut just below where the stem has started to become more rigid or woody. Again, always make your cut right below a leaf node ( $\frac{1}{8}$  to  $\frac{1}{2}$  inch below).

**Trim off the bottom sets of leaves** without damaging the stem so that you have preferably 2-3 leaf nodes to put into the soil. Snip off the soft tip as its presence will inhibit lower branching. Also snip off any flower buds as flowers will compete with root production. At a minimum there should be 1-2 sets of leaves on the stem above the soil to allow nourishment via photosynthesis until the cutting makes roots. If the leaves are big they may wilt and rot, so cut them in half. As you prepare each cutting, place each in a separate bowl of clean water to keep the plant hydrated until ready to add to the medium.

Use a sanitized stick to **poke several holes** into the moist, well-draining medium in your container. This action avoids jamming and potentially damaging plant tissue when you insert your cuttings into your medium.

Plant hormones, called auxins, regulate plant growth. Roots form more readily where auxin concentrations are high so supplementing the natural plant hormones will speed up root generation in cuttings. Their use is not always necessary, but used correctly, and in most cases, they improve the chance of root formation. Whether using the powder or liquid form of **rooting hormones** it is important to not contaminate the bulk of the material by dipping plant stems directly into the main reservoir. Pour some of the material into a separate container and **dip the cut end of each plant into rooting hormone**, tapping off the excess (if using powder). Discard the remainder by wrapping in a moistened paper towel and place in the trash.

**Insert each cutting** almost up to the first set of leaves in each hole you've made in your container. The bottom of each cutting should sit 0.5-1" above the bottom of the container and not touch the bottom. Gently firm up the medium around the base of each cutting and then water to remove any potential air pockets in the medium. Make sure the pot drains well, that the stems are making good contact with the medium and that they are upright. **Do not fertilize yet!**

Label each individually movable unit of cuttings (cell-pack, 4" pot, etc.) with the **plant name, cultivar, and date**. Ideally, each should contain only ONE type of plant but there can be more than one cutting per container.

**Mini greenhouse.** Place each container of cuttings into a sealable plastic bag, closing it to create a mini greenhouse. You can also use the top half of a capped plastic bottle or other cover system. It is important to maintain humidity as the cuttings can easily dry out.

## After-care

**Lighting.** Before rooting, the cuttings need light but should be out of direct sun. If they are in a dark room provide supplemental lighting such as fluorescent or LED lights. If they are in a greenhouse make sure they don't get too hot, for example provide a shade cloth.

**Temperature.** Cuttings need to be in a warm environment, at about room temperature. If the environment is too cool, they will rot.

**Water.** If condensation forms on the inside of the temporary greenhouse, there is no need to disturb the setting. Make sure to keep the cuttings moist but not too wet while waiting for roots to form. Do this by opening the container to add water and mist the plants. Make sure that the drain holes don't sit, long-term, in water.

**Roots!** Rooting can take anywhere from 10 days to 4+ months depending on the plant, cutting type, etc. Curious patience is advised. As a general guideline, after a couple of weeks check a cutting by giving it a gentle tug. If this meets with resistance, it may be a sign that roots have formed. However, know that even a small tug can disturb or break off tender newly formed roots. It will be safer to check the drainage holes for roots sticking out.

**Acclimation.** With new roots poking out of the drainage holes and growth visible above the medium, the viable new plant can be acclimated to regular growth conditions. This is best done in stages by changing one factor at a time, and reverting back to the previous conditions if the plant starts to wilt or scorch. Begin by opening the bag (or removing the cover) for a few hours a day. If all looks well, remove the plants from their temporary greenhouse. Slowly increase the light

exposure (full/part sun) over time to match what the plant needs. You may need to provide supplemental light depending on the season. Finally, after a resting period and now that your plant has filled its container with roots, pot it up into a larger container or area.

**Fertilizer.** Make sure to fertilize your new plants after you transplant each to its new environment.

Have fun experimenting and making clones of plants!

### **Resources:**

Free download from WSU Extension on Propagating Deciduous and Evergreen Shrubs, Trees, Vines with Stem Cuttings, Mohan G.N. Kumar, 2016, 9 pages.

<https://extension.oregonstate.edu/catalog/pub/pnw-152-propagating-shrubs-vines-trees-stem-cuttings>

Within this article is a link to a spreadsheet for “Recommendations for propagation of evergreen woody plants common to the PNW”.

Propagation of Hardy Shrubs from Softwood Cuttings, Washington State University. 2 pages.

[https://s3.wp.wsu.edu/uploads/sites/2069/2020/07/Propagation-of-Softwood-Cuttings\\_Preble-2020.pdf](https://s3.wp.wsu.edu/uploads/sites/2069/2020/07/Propagation-of-Softwood-Cuttings_Preble-2020.pdf)

Helpful videos by Helen Dorbolo, Washington County Master Gardener:

How to Propagate Plants by Stem Cuttings (~30 min)

<https://www.youtube.com/watch?v=g6wwlyovMo8>

Demonstration of Hardy Fuchsia Propagation by Cuttings (~9 min)

<https://www.youtube.com/watch?v=CyclUIfWvAM>

*modified/revised by Karen Anderson, Summer 2025*