

Shrub Propagation

From Softwood Cuttings



What are we doing and when should we do it?

We are taking a cutting from a shrub or vine, and we are forcing it to grow roots so that it turns into a brand-new shrub or vine. This sort of non-seed propagation is called vegetative propagation. Our new plants will be genetically identical to their parent plant and are referred to as clones.

Woody plant stems typically go through 4 stages of growth:

1. Herbaceous – fresh spring growth; bendy
2. Softwood – early-summer; starting to toughen up, snaps when bent
3. Semi-hardwood – late-summer, woody bark forming
4. Hardwood – woody bark fully formed

The best stage for forcing the growth of roots is the softwood stage, usually early summer. At this stage, the cutting is at a lower risk of drying out than the herbaceous stage but faster growing than the semi-hardwood or hardwood stage.

What plants propagate well this way?

Some species work better than others. These species are known to root well:

- Redbud (*Cercis canadensis*)
- Hazelnut (*Corylus americana*)
- Dogwood (*Cornus*)
- Honeysuckle (*Diervilla lonicera*)
- Ninebark (*Physocarpus opulifolius*)
- Cottonwood (*Populus deltoides*)
- Willow (*Salix*)
- Elderberry (*Sambucus canadensis*)
- Blueberry (*Vaccinium corymbosum*)
- Viburnum

How do I prepare my cuttings?

1. Select a healthy stem with no flowers.
2. Cut a section with at least 3 leaf nodes. Cut approximately ¼-½" below the 3rd leaf node.
3. Remove the bottom set of leaves.

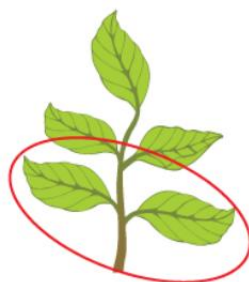


Fig 5.1 Cuttings need "spare" leaves at the base

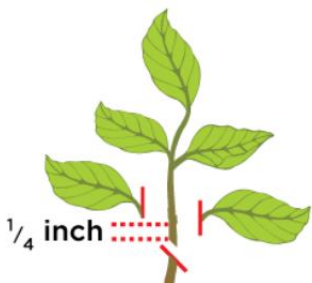


Fig 5.2 Where to cut

4. Cut a short slice into the end of the cutting.
 5. Dip in rooting hormone and tap off any excess.
- You can often prepare multiple cuttings from one stem. Each must have a minimum of 3 nodes.



Supplies needed

Containers:

- Plastic; milk jug, lettuce clamshell, etc. Containers should be large enough to hold at least 3 inches of sand, have drainage holes along the sides and the top should be clear/translucent with ventilation holes.
- If using a milk jug or other closed translucent container that does not already have a lid, it will need to be cut to create a bottom and top portion. You can leave a portion uncut to create a hinge. (best choice for milk jugs).
- Containers should be sturdy enough to withstand weather, allow room for root growth, be tall enough so the cutting doesn't touch the container sides and have easy access for checking on and watering.



Rooting medium:

- Basic sand works best. It will hold water and allow roots to grow without introducing organic matter that might promote the growth of mold.
- Pre-wet your sand. You want it wet enough that it will hold the shape of a hole poked into it.

***do not use potting soil, it will mold almost instantly.*

Also needed:

4-6 Cuttings per container ~ Rooting Hormone ~ Scissors or knife ~ Duct tape or zip ties or wire ~ drill or awl or sharp nail ~ Marker for labeling container and poking holes in the sand.

Directions

1. Using a drill, awl or sharp nail – poke drainage holes on the sides of your container 1" from the bottom. Make at least 4 to 6, depending on the size of your container. If using a milk jug, leave the cap off for top ventilation. If using a container with a lid like a clamshell, poke holes in the top for ventilation.
2. If using a container that needs to be cut, like a milk jug, cut it so that you have at least 4" on the bottom for soil depth and leave about 1.5" uncut at the base of the handle to create a hinge.
3. Fill the container with your sand. Wet the sand with water and tap the container on a hard surface a few times to settle sand and remove air pockets.
4. Poke holes in your sand using your marker. Make 1 hole for each cutting.
5. Prepare cutting.
6. Insert cutting into sand so that the first set of leaves is slightly above the level of the sand. Press sand against cutting to lock into place. Ensure that the leaves of your cutting are not touching the sand, any other cutting or the sides of your container.
7. Seal the container. If your container has been cut, seal it shut using tape or punch holes to use zip ties, wire, pipe cleaners, etc. You will need to open/close the container weekly.
8. Make sure to label your container using your marker.
9. Place the container in a warm area that receives bright, but not direct, sun. Look at the north sides of fences and buildings for ideas. Avoid direct sun as this will cause temperatures inside your container to get too high.
10. Check on your containers about once a week. Open the lid to allow for fresh air and remove any failed cuttings. Ensure sand is moist.
11. Cuttings should develop roots in about 6-10 weeks. At this point, you can pot the cutting up and over-winter it in a protected area.
12. Once your new plant has a strong root system in the spring or early summer, it is ready to be planted in the ground.
13. Practice patience and remember 1st year in the ground they sleep, 2nd year they creep and 3rd year they leap. Same holds true here.