

SOUTHEASTERN PENNSYLVANIA CHAPTER sepa.wildones.org

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Live Staking

Live staking is an inexpensive and easy way to establish more woody plants in your home landscape. It is one of the simplest bioengineering techniques from the field of ecological restoration. Live staking is often used in streambank and shoreline restoration. It also can be a great way to get the most bang for your buck in your landscape.

A live stake is simply a dormant stem cut from a woody plant and planted in the ground. Late February to early March in our area is the best time for live staking. You want to cut stakes while plants are dormant and focusing on root growth, not on leaf development, but after the soil has thawed.

Generally, the best material for live staking is hardwood growth (material that has turned woody) that is just a few years old and is cut from near the base of the plant.

You won't harm the plant by taking cuttings. The plants listed here are well adapted to disturbances and have the ability to re-sprout after being cut.

1. Identify the plant you're cutting, to avoid propagating an invasive species. Here is a guide to identifying plants in winter for live staking:

> https://www.chesapeakeconservancy.org/wpcontent/uploads/2022/01/LiveStakeID_2021-2022Revised.pdf

- Cut stakes 1/2" to 2" thick and 2' tall. Make sure each one contains 3 to 5 leaf nodes. Cut the bottom of the stake at an angle, just below a node, and the top of the stake straight across, just above a node.
- 3. Aim to plant your stakes right after cutting. If you can't plant right away, the stakes will keep

up to a few weeks if kept wet and cool in a bucket or jar of water, angled side down.



- 4. Push each live stake into the ground so that at least 2/3 of the stake is in the ground. You can use a piece of rebar to make a pilot hole if the ground is hard. Make sure your pilot hole drill has a smaller diameter than your stakes, because you want your stakes to make good soil contact all the way down. You can use a rubber mallet to gently tap the stakes in, but be careful not to crush or split the tops.
- 5. Painting the tops of the stakes with latex paint will help keep them from drying out.
- 6. After planting, stakes need constant moisture until they develop their own root systems. Survival rates are best in wet areas, such as along a stream bank or in a rain garden.

There's no digging or backfilling with this method -just push the stakes into the ground. You should see good results in just one growing season!

Some species with the best survival rates for live staking include:

- Buttonbush (Cephalanthus occidentalis)
- Grey Dogwood (Cornus racemosa)
- Silky Dogwood (Cornus amomum)
- Red Twig Dogwood (Cornus sericea)
- Virginia Sweetspire (Itea virginica)
- Ninebark(Physocarpus opulifolius)
- Pussy Willow(Salix discolor)
- Black Willow (Salix nigra)
- Elderberry (Sambucus canadensis)
- Arrowwood (Viburnum dentatum)
- Nannyberry (Viburnum lentago)

One idea is to plant willow live stakes where fence posts were recently installed the hope that, as the fence posts decay over time, they will be replace by a living fence that also acts as a productive windbreak hedgerow.

The fence posts below were installed 1 year ago, so the soil around each post had been loosed relatively recently to a depth of about 3 feet. This made it very easy to drive the live stakes right next to the posts. In addition, the microclimate created by the fence posts may help water "wick" from lower down in the soil profile, helping to provide for the water needs of the willows.



https://www.permaculturenews.org/2015/05/07/live-stake-propagation/



Yourgardensanctuary.com

For more information:

Live Staking: A Trusty Technique for Planting Trees and Shrubs on the Cheap, Alliance for the Chesapeake Bay

<u>Live Staking for Stream Restoration</u>, Penn State Extension

<u>Tree Talk: Live Staking</u>, Alliance for the Chesapeake Bay

<u>Backyard Buffer Program</u>, Philadelphia Water Department

<u>Conservation Landscaping Series</u>, Univ. Tennessee Extension Institute of Agriculture

<u>Live Stakes for Landscaping as Inexpensive Plants</u>, Yourgardensanctuary.com

<u>Live Stake Propagation</u>, Permaculture Research Institute

Winter Watershed Restoration: Live Stakes and other Vegetative Streambank Stabilization Practices, Cuyahoga Soil & Water Conservation District