

Staking Trees

Sally Scalera

Spring and summer are popular times to plant new trees. If you have just planted a tree you may want to consider staking it or, check that it has been staked correctly. Many trees installed in landscapes do not require support from stakes following planting. Their trunks are strong enough to hold them upright and they are relatively small so the wind will not blow them over. There are a couple of reasons to stake trees and one is to support the trunk in an upright position and another reason is to anchor the tree to stabilize it against strong winds.

Support and anchor stakes must be connected to the tree to accomplish their function. Support stakes secure trees in the upright position until the trunk is strong enough to hold the tree erect. These are only necessary if the trunk is too thin or weak to support the top. Bamboo or similar support stakes are often taped to young tree trunks in the nursery to help them develop straight trunks. If it is possible, you may want to choose a tree without a support stake taped to the young tree that way you will know it is already able to stand upright on its own. If a tree stands upright, it does not require support staking.

If the tree has a trunk that remains straight yet leans over after planting or the tree has a large canopy that could be blown over in strong winds, before their roots have become established, then the anchor stakes can be used. Container grown trees also often require stakes to hold them firm in the soil until roots become established due to the light weight of the root ball. Root balls must remain firm and stable in the soil so the fragile new roots growing into the backfill soil are not broken as the root ball moves in windy weather. Anchor stakes function to stabilize the tree until regenerated roots grow into the landscape soil far enough and in great enough numbers to hold the tree firmly in the soil. Even slight root ball movement can break new roots and slow plant establishment. Trees in open areas that are unprotected from winds such as commercial parking lots and parks are more likely to require anchor staking than those planted in protected areas. All trees field-grown in fabric containers require anchor staking.

Trees with trunk diameters less than two inches can usually be anchored by a single 36 inch wood stake. Trees two to three inches in diameter require two to three stakes. The stakes should be placed next to the root ball and inserted 18 inches into the soil. Secure the stake to the trunk with ties made from wide, smooth material or hose-covered cable or wire. For the most trunk movement, secure the ties as low on the trunk as possible. Check the ties periodically for any signs of tree injury and adjust accordingly. The smaller the trunk diameter the quicker the tree will establish and the sooner the staking material can be removed. Typically, staking material should be removed after one year.

Trunk movement is necessary for the development of a strong and well proportioned trunk. Rigid anchor-staking restrict trunk movement and reduce development of proper supportive tissue. Staking should allow some trunk movement, however the stakes should be rigid. Ties should be somewhat flexible and attached to the stem at one level.

Another method of staking newly planted trees eliminates the need to go back and remove the staking material. This method is used by urban foresters in moist climates where wood decays rapidly in the soil. One such method is to drive two to three wooden dowels through the edge of the root ball. The wooden dowels must

be much longer than the depth of the root ball so that they go down much deeper into the soil. The other method also uses two vertical two by two stakes that are driven down through the root ball on one side of the tree. Another two by two is screwed in a horizontal position into the tops of the two vertical stakes. A second set can be used on the other side if needed for larger trees.

Though I feel we have paid our dues when it comes to hurricanes, and therefore we should be spared this year and for the next five years for that matter, you may want to play it safe and stake any newly planted trees that might not have had a chance to fully establish.