

Tree Planting Guide

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Increase Their
Knowledge of
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Manage Their
Landscape
Investment &
Protect the
Environment

Most homeowners plant trees for their beauty, but a well-situated tree also can reduce energy costs by shading a house from the sun's rays in summer and providing shelter from harsh winter winds. They act as noise buffers, and provide homes for wildlife, making your home a more pleasant place to live.

Trees also can reduce soil erosion by slowing the movement of water that would otherwise carry topsoil away. And since trees take carbon dioxide and other pollutants from the air and release oxygen, they help improve air quality. As you can see, your community shares some of the benefits you receive from trees you plant.

Proper selection and planting are critical to ensure your new tree's long-term survival. This guide will help you select and plant trees.

Selecting the Right Tree for the Right Place

First consider the type of tree for the location you have selected. The right tree in the right place ensures a lifetime of satisfaction with low maintenance. For a list of appropriate trees for North Carolina go to www.ncstate-plants.net or contact your county Cooperative Extension Center. Visit www.ces.ncsu.edu and click on County Centers for contact information.

Consider the tree's final height and spread when making your selection. Will the tree still fit its location after it has been growing taller and spreading for 10, 20 or 30 years? Always look up before planting. Don't plant a tall tree under utility lines. Constant pruning will be required, and the tree's health will suffer. Also consider if the tree can thrive in a particular site. Will the tree tolerate the site's sun or shade? Is the soil too wet or dry for the tree to grow healthy and vigorously? What about pruning, mulching, watering, raking leaves, cleaning up fruits and seeds, and disease and insect concerns? Keep maintenance in mind when you select a tree.

Trees are sold as container-grown, balled-and-burlapped or as bare-root plants. Bare-root plants are the most economical; however, they are usually smaller and can be planted only while dormant, in the fall, winter or early spring. Container-grown and balled-



and-burlapped trees can be planted year-round as long as you can water them. Small trees establish faster than large plants and are more eco-

nomical. Larger landscape trees are grown in the field and are traditionally sold as balled-and-burlapped.

Prior to purchasing and planting the tree, inspect the size, form, vigor, trunk appearance and roots. If you order your trees, make sure the delivery matches the dimensions specified in the order (trunk caliper, height, container or root ball size). The form of the tree should be typical of the species or cultivar. Numerous broken branches are a sign of mishandling. Avoid trees that have numerous branches that originate from a single area. They might look more like a tree at this point but the branching will become a problem later, particularly if the tree will grow to be large. Look for a scaffold of branches 12 inches apart and with a branch angle of 45 degrees or greater. This will contribute to strong limbs as the tree grows.

Stems, foliage, buds and bark should look healthy. Do not choose trees that look unhealthy or have insect or disease problems. Avoid trees with damaged, swollen, shrunken or discolored bark. When choosing a balled-and-burlapped tree, be sure the trunk is centered in the root ball and that it feels firmly attached. The trunk should not seem loose. Container-grown trees should be well rooted and established in the container in which they grow. Where possible, check the appearance of the roots. Healthy roots are white, not brown. Roots circling in the container indicate that the tree has been in the pot too long. Circling roots can cause problems later by creating girdling roots as the tree matures. Bare-root trees should have their roots protected from exposure with moist packaging materials. The roots should be damp and flexible.



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After purchasing your tree, wrap the roots, stem and foliage loosely in burlap or some other cloth to protect it as you transport it home. Be sure to keep the root ball moist until you plant the tree.

Proper Planting Techniques

Dig a hole no deeper than the root ball and two to five times wider than the diameter of the root ball. To encourage root growth away from the root ball, rototill or loosen soil with a shovel several feet around the planting hole. This is particularly important in heavy, compacted soils and is more beneficial to the tree than the addition of soil amendments to the planting hole.

If planting a container-grown tree, carefully remove the tree from the container. Check for circling roots. With a sharp knife, make four or five vertical cuts along the side of the root mass to sever circling roots. Place the tree in the planting hole, making certain the root ball is on solid soil and not on loose backfill. Also ensure the top of the root ball is even with or, in heavier soils, a little higher than, the surrounding soil.

If planting a balled-and-burlapped tree, either remove the burlap or fold it down into the planting hole. You don't need to completely remove the wire basket, but do cut it once the tree is in the hole to allow for future root development. Remove all twine and wire from around the base of the trunk as it can girdle the stem. Also be sure to remove any nylon strings or straps.

After planting, the trunk flare (where the roots spread out from the base of the tree) should be visible. Do not plant too deeply. Make sure the tree is straight, and then gently fill the planting hole with the original soil that was removed from the hole. When the hole is half-filled with soil, slowly water to remove air pockets. Then finish filling the hole with soil.

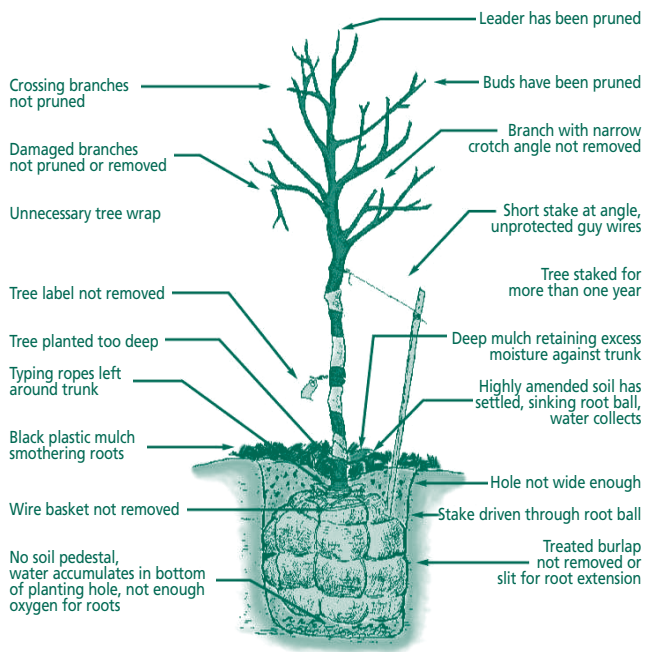
Remove any broken, dead or crossing branches; other pruning is not necessary. Sometimes a newly planted tree will require additional support. Stake the tree only when necessary, and remove the supports following the first growing season.

Mulch is also very important. Apply a 2- to 4-inch layer of mulch evenly around the base of the tree. Do not, however, let the mulch touch the trunk of the tree as this can lead to decay.

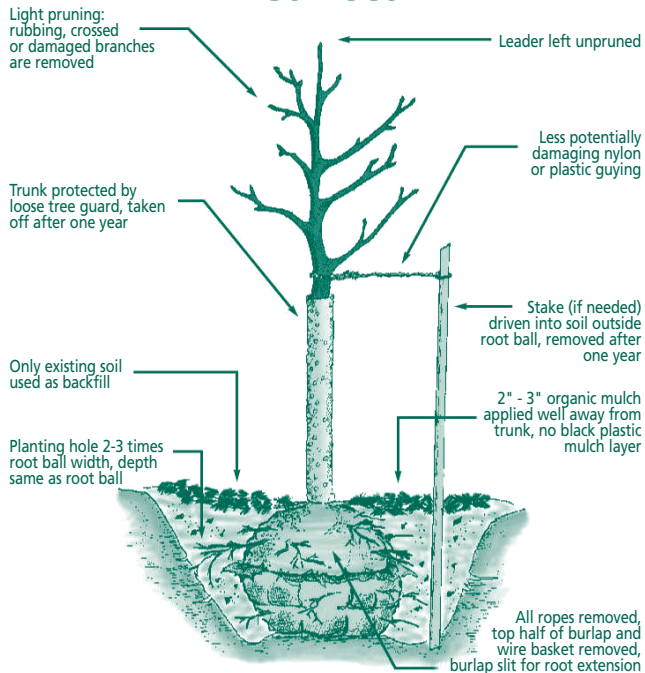
When you have finished planting, water the tree slowly and thoroughly. Water an area beyond the root ball to encourage root spread. Watering will be necessary for the first year until the root system becomes established. As a general rule, trees need 1 inch of water every 7 to 10 days. Water when natural rainfall does not provide this amount.

For more information go to www.ncstate-plants.net or www.arborday.org. To get involved with tree planting programs call your Cooperative Extension Center.

Incorrect



Correct



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Extension's Successful Gardener
This Tree Planting Guide was produced by Extension's Successful Gardener team. To learn more about the Successful Gardener newsletter and seminars, visit www.successfulgardener.org.



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Funding for this project was provided in part through an Urban and Community Forestry Grant from the North Carolina Division of Forest Resources, Department of Environment and Natural Resources, in cooperation with the USDA Forest Service, Southern Region. 2/04 • 20M

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