



Cornell Cooperative Extension  
Westchester County

3 West Main Street

Elmsford, NY 10523

Tel: 914-285-4620 / Fax: 914-285-4624

E-mail: westchester@cornell.edu

Web: www.cce.cornell.edu/westchester

# How to Plant a Tree or Shrub

## Choosing and Siting Trees and Shrubs

All plants have preferences regarding their environment. Some require full sun and will tolerate exposed locations; others require a protected shady spot. Some plants tolerate or even thrive in wet conditions; others will rot if their roots do not have adequate air circulation. Take some time to learn your plants' needs so that you can site them properly. Be sure to pick a site that will accommodate the plant when it is mature. After planting, pay careful attention to watering and winter protection as necessary.

If you purchase a tree or shrub from a nursery, it will be either bare root, balled & burlapped (B&B) or in a container. Bare root trees are dug from a nursery row and the soil is removed from the roots; these are sold in a dormant state. Follow the instructions that come with the plants – you may need to soak them before planting. If you cannot plant them right away, heel them in (plant shallowly in a protected area) and move them to their permanent site as soon as possible, preferably before growth starts.



Balled and burlapped trees are field grown, then dug with a large ball of soil around the roots that is wrapped in burlap. This process, no matter how carefully done, leaves up to 95 percent of the plants' feeder roots (necessary for establishment on your site) behind in the field. Carry balled and burlapped trees by the earth ball, never by the trunk. Protect your trees before planting by keeping them in the shade and keeping the roots moist with soil, wet sphagnum or burlap.

Container grown plants may come in a fiber, plastic or wooden container. If possible, knock the plant out of the pot to see if it is pot-bound. Prune small circling roots, and score the root ball vertically with a knife in three to five places before planting. This will encourage the growth of new roots. If the circling roots are larger than the width of your finger, consider purchasing a different plant. Roots that wrap around the trunk will eventually girdle and choke the tree.



## Planting Times

### Deciduous Plants (those that lose their leaves)

Bare root trees and shrubs should be planted while they are still dormant in the spring.

Balled and burlapped plants should be planted **at least six to eight weeks** before an anticipated stress period of heat or cold - April or September in Westchester County. Container grown plants have a wider planting window. You may plant them later in spring (May) and fall (October) if proper precautions are taken.

### Evergreen Plants

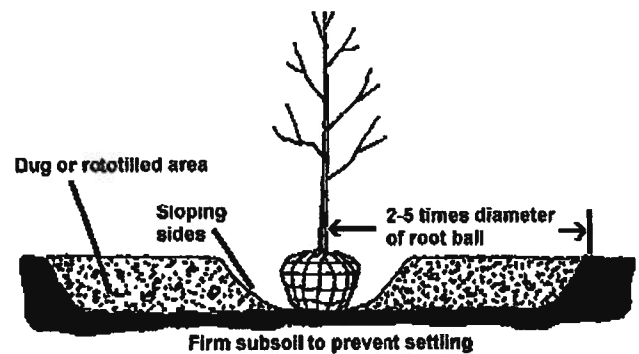
You will find evergreens sold as container or balled and burlapped plants. Most evergreens, especially broad-leaved plants, are best planted in spring (April). Some evergreens, particularly needled evergreens, may also be planted in early fall (September). Planting at other times is not as likely to be successful.

*Building Strong and Vibrant New York Communities*

"Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities"

## Preparing the Planting Hole

The planting hole or pit for a tree or shrub should be dug before the tree is moved to the planting site. Loosen the native soil to facilitate root growth. This will minimize damage to the tree from drying out. The hole should be as deep as the root ball and at least twice as wide. Before you get started, call Dig Safe NY at 1-800-962-7962 to locate and protect any underground utilities.



## Positioning the Tree or Shrub

The plant should be placed so it will stand straight in the pit. Bare root trees should be set so the root flare (the wider area at the base of the trunk) is just above the soil line, so the trees will settle to the same depth as they grew in the nursery. Pack a cone of soil under the plant, and spread the roots over the cone. Balled and burlapped or containerized plants should be set so they are slightly (**no more than two inches**) above the existing ground level. This will allow the plants to settle. Plants that are planted too deeply may develop girdling roots. Remove any container materials, all synthetic burlap and all rope or wire from the trunk and sides of balled and burlapped trees. Remove natural burlap from the sides as far down as possible. Burlap that sticks up above the soil line will wick moisture away from the roots of your tree or shrub. Burlap around the root ball will prevent rapid establishment of new roots into the surrounding soil. You do not have to remove all natural burlap beneath the root ball – roots will grow over the top of this burlap or it will eventually rot away.

## Backfilling the Hole

Before placing the tree or shrub in the hole, add a layer of backfill so the tree will be at the correct planting depth as previously described. Lightly pack the backfill under and around the ball or bare roots to eliminate air pockets. Gradually add more soil and water until the hole is full. If your tree has a wire cage around its roots, you may have to cut away the cage and fill in the hole in small increments.

The soil that was removed from the planting hole will be satisfactory for backfilling around the plant's roots. **Do not** add any amendments to the soil, such as compost or peat moss, unless you don't have enough soil to fill the hole. If this is the case, you may add up to one shovelful of compost or peat moss for every two shovelfuls of soil. Remove rocks or other debris as you find it. **Do not fertilize** the plant for at least one year.

## Post-planting Maintenance

Water is required for all plant functions – providing adequate water is the most important thing you can do to help your plants become established. Remember that bare root or balled and burlapped plants have lost up to 95 percent of their root systems. Your plants will need one inch of rainfall or its equivalent weekly, especially during the first year after planting. A thorough watering once weekly is better than more frequent, light applications. An easy way to water is to lay a soaker hose near the dripline (the area where the branches end) of the plants. Water until the top six inches of soil are moist: do not overwater. A two-inch thick layer of mulch that extends at least to the dripline will help conserve moisture in the soil and keep soil temperatures even. Keep mulch away from the trunk or stems of the plant. If the plant is evergreen, consider protecting it for winter with a burlap windscreen on the windy side (usually west to northwest) of the plant. Be prepared to follow this maintenance schedule for a few seasons at a minimum, or longer if stressful conditions, such as drought occur.

## Staking a Tree

**Do not stake** unless absolutely necessary. Staking is necessary only if trees are planted in a very windy area. If a shade tree will not stand up on its own in a windless site, choose another tree. Stakes may be metal or two by two inch hardwood. The stakes should be eight feet long for small trees, ten feet long for tall trees. Place one stake on the windward side of the tree (the side the wind comes from). Guying wire, enclosed in a piece of garden hose to protect the delicate trunk, is then attached to the stake. Trees should be tied in a way that allows movement. Trees that can sway in the breeze a little will develop stronger trunks. **All stakes must be removed after one year.** Remove stakes before this if they begin to cut into bark or damage the tree.