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Fact sheet

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Transplanting Trees and Shrubs

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Deciduous and evergreen trees and shrubs can be moved either in early fall or spring—except for some species such as the birches, beeches, most oaks, magnolias, and hemlocks. These species should be moved only in early spring. *Principles and Practice of Planting Trees and Shrubs* by Gary B. Watson, and E.B. Himelick, available through the International Society of Arboriculture, 217-355-9411 or online at www.isa-arbor.com.

It is important to maintain a proper balance between branches and the root system whenever a tree or shrub is transplanted. Trees or shrubs that are to be moved should be prepared for the move by root pruning for one or two seasons prior to the move. This will concentrate fine root growth within the root volume to be moved with the tree.

How To Dig

Size of Ball

Size of the soil ball should vary with size of plant. Root systems of plants differ depending on the type of soil in which they are growing. Before attempting to move a tree, remember that 1 cubic foot of soil weighs approximately 110 pounds and a 24-inch soil ball weighs approximately 390 pounds.

For shade trees, measure the diameter of the tree trunk 1 foot above the ground. Dig a ball approximately 1 foot in width for each inch of trunk diameter above the 1-inch diameter size, which should have a minimum ball diameter of 16 inches. Depth of the ball should be about 2/3 to 3/4 its width, with the smaller ball sizes having greater relative depths.

Digging the hole to the correct depth, but larger in diameter than the rootball, enables the new tree or shrub to develop a substantial supporting root system in its new location.

For shrubs and small trees, a good general rule is to start with an 8-inch ball for a 1-foot tall plant and add 2 inches to ball size for each additional foot in height.

Trees and shrubs collected from the wild should have a ball size that corresponds to the next larger size tree. The *American Standard for Nursery Stock*, ANZI Z60.1, published by the American Association of Nurserymen, gives more exact minimum specifications for various plant types. In all cases, it is better to err by making the ball size too large rather than too small.

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Keeping the Ball Together

Roots exposed to the air will dry out and die. Keeping soil in place around the roots when moving the tree or shrub will help to ensure better survival. In sandy soils, it is difficult to dig and maintain a good ball of soil around the roots; in fact it may be practically impossible on some sandy soils. Use extra care and patience with these soils.

Before unwrapping the rootball, make sure that the tree is at the proper depth, that it is standing vertically, and that it is placed in the hole exactly how and where you want it.

Dig a hole at least 12 inches wider and no deeper than is necessary to accommodate the ball of the tree or shrub, keeping the topsoil separate from the poorer subsoil. It is better to plant slightly higher rather than lower than the tree was growing prior to the move. Use the parent material (soil left from the planting hole) to fill around the tree. If the soil is of extremely poor quality, mix it with humus or well-rotted leaf compost.

Remove all twine, loosen, and pull back any burlap down into the planting hole before filling around the tree with any remaining parent soil. Add water to the hole to allow the soil to settle around the roots. Refill and topdress any settled area with remaining soil. During the first growing season, leave a slight hill around the tree near the dripline or edge of the branches to collect water. This basin can then be filled with 2-3 inches of mulch.

Remove all twine and pull the burlap back from the lower trunk before back-filling the hole to prevent girdling and decay problems.

Care After Planting

- *Staking*: For areas prone to severe winds, use stakes and supports to keep newly planted trees from tipping over. In most planting situations, however, staking may be unnecessary if proper tree selection, site location, and planting procedures have been followed.
- *Pruning*: Unless limbs are growing too closely together, are crossed, or have been damaged in transportation or transplanting, pruning newly transplanted trees and shrubs is unnecessary. If sufficient water is available, plants will usually grow better with little or no pruning than with severe pruning.
- *Watering*: Keep soil moist, but not waterlogged. Roots require air in open pore spaces in the soil for proper development.
- *Mulching*: Several inches of composted leaves, bark chips, or wood chips or other organic material under the canopy or crown of the tree will reduce soil water loss and discourage weeds and competition with turf roots. Keep mulch several inches away from the trunk to deter early decay or damage from overwintering mice or chipmunks.

Properly planted on the right site, a new tree will establish itself as a valuable addition to your yard or landscape.

- *Wrapping*: Thin barked trees and young trees may need to have the trunk wrapped during the winter to protect it from sunscald and frost cracks. Additional wraps may be reuqired for buck rub damage in areas of high deer populations.
- *Fertilizing*: Delay fertilizing until after the first growing season. It is easy to burn young tender roots by overfertilizing. Do not include dry fertilizer in the backfill hole!

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