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"SP571 Successfully Transplanting Established Trees," The University of Tennessee Agricultural Extension Service, SP 571 - 15M - 12 - 00 R12 - 4910 - 21 - 003 - 01, http://trace.tennessee.edu/utk_agexfores/88

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Agricultural Extension Service
The University of Tennessee

SP 571

Successfully Transplanting Established Trees

Wayne K. Clatterbuck
Associate Professor
Forestry, Wildlife
& Fisheries

Planning and preparation are the keys to successfully transplanting established trees from one area of your property to another.

Transplanting should take place during the dormant season (December through March), if possible. To determine the required size of the root ball, measure the stem caliper (stem diameter six inches above the ground). The root ball to be transplanted should be 10 to 12 inches for each inch of stem caliper. For example, if the stem caliper is 3 inches, then the root ball should be 30 to 36 inches in diameter.

To prepare the tree for transplanting, insert a sharp spade to prune the roots around the root ball of the plant to be moved. Prune 8 to 12 inches deep, three to six months before transplanting. New roots will form from the severed roots. When it is time to transplant, dig 4 to 6 inches outside the original root pruning cut to capture the maximum number of new roots. If soil moisture is low, water the plant a few days prior to transplanting to keep the soil in the root ball from crumbling. The root ball should be about 1/2 to 2/3 as deep as the diameter. Dig carefully and completely around the root ball to keep the root ball intact. Place a large piece of burlap on the ground and gently roll the ball onto the burlap. The burlap should cover the entire root ball. Firmly wrap the burlap and tie it around the root ball. Keep the soil and roots together as much as possible to minimize damage to the root system during the move.

Wayne K. Clatterbuck

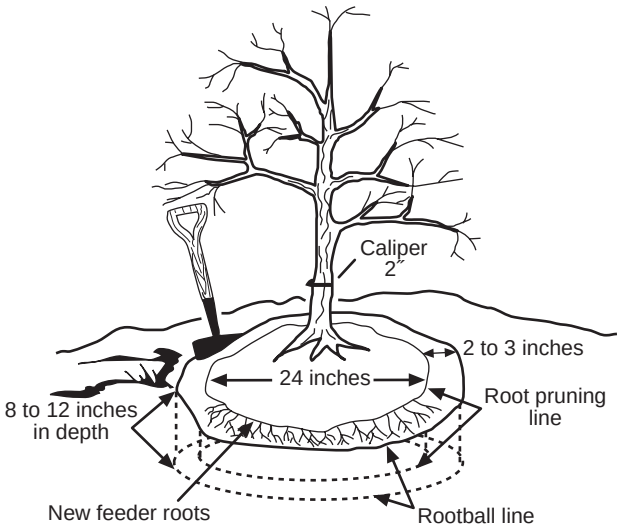
Root pruning with a spade should occur 3 to 6 months before transplanting.

David Vandergriff

Balled and burlapped trees should be handled carefully to minimize damage to the root system.

Root balls on larger plants could weigh several hundred pounds. In extreme cases, a tree dolly or heavy machinery may be required. Never lift the plant by the stem. Always lift from under the root ball.

Transplant the tree or shrub into a new hole using established planting recommendations (refer to UT Agricultural Extension Service publication PB 1621, **Planting Woody Ornamentals**). Do not plant too deep. The top of the root ball should be at or slightly above ground level. Refill the hole with original soil. Firm the soil and water thoroughly. Mulch with 2 to 3 inches of organic material. Do not use fast-release or high-nitrogen fertilizer at time of planting.



The inner circle represents the area for root pruning. the outer circle represents the edge of the root ball. New roots form in the area between the two circles. Adapted from Fare 1999.

Adequate soil moisture is critical for several months after transplanting. Water when necessary, but do not overwater. Water slowly to allow water to infiltrate and soak the ground thoroughly. Water once a week during drought periods, enough to have the soil damp to a depth of two feet. Soil moisture can easily be checked by using a spade to open the ground for inspection. Watch for signs of stress, such as wilting leaves, leaf scorch, discoloration of foliage and stunted growth.

Transplant existing plants only to similar environments. Homeowners often are disappointed when transplanting native plants from the woods because the plants perform poorly or die. Make sure that environmental factors such as light, soil moisture and soil type are similar between the two sites. Plants that are growing in the shade usually have a difficult time adjusting to full sunlight.

Be patient with your transplanted tree or shrub. Often, you will not see vigorous growth within the first 12 months after transplanting. Usually it takes a few years for trees to become established in your landscape.

References

Fare, Donna 1999. Planting woody ornamentals. Agricultural Extension Service PB 1621. University of Tennessee, Knoxville. 7 p.

Appreciation is expressed to Sam Jackson for design of this publication.

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Printing for this publication was funded by the USDA Forest Service through a grant with the Tennessee Department of Agriculture, Division of Forestry. The *Trees for Tennessee Landscapes* series is sponsored by the Tennessee Urban Forestry Council.