



Transplanting Trees Successfully

Landscaped property is a definite asset to the homeowner in terms of monetary as well as aesthetic value. In addition, those who own tracts of forestland larger than their yard may be interested in adding trees to improve stocking for future personal use and for habitat enhancement. Using native trees is quite common in many areas of Alaska. Some trees may be left during initial construction and landscaping, but too often they are badly damaged or removed to allow for construction. The property owner must then replace them with hardy exotics or with the same species of native trees. For both homeowners and forestland owners, transplanting trees from one location to another is a common practice.

Whether you are undertaking the initial landscaping of your property, adding to the number of trees already there or moving a tree from one location to another, it is important to do it correctly. Even the hardiest native tree cannot overcome poor transplanting techniques.

Selecting a site

Selecting the site to transplant a tree is the first step in the transplanting process. The new planting site should be compatible with the tree you intend to plant and have enough room around it so that the transplant doesn't outgrow its new location. Consider the tree's requirements for sun, soil, water and air, drainage, wind protection and winter protection. The survival rate of a transplanted tree is increased greatly if you can satisfy its environmental needs. Don't plant under power lines, next to walkways, close to buildings or where people and animals frequently travel. Distance your new planting from locations where snow will be removed or stored.

Choosing a tree

Choosing a suitable tree for transplanting is the next step. The tree should have the standard characteristics of the species and be in good health. A tree that is growing very close to others is often narrow and tall because it

competes for light and space. Look for signs of physical damage and symptoms of insect or disease problems.

Choose a tree that can be removed successfully with the tools you have available. A sharpened nursery spade or digging shovel are the preferred tools. If you have a spade, a tree with a trunk diameter of 1 to 1½ inches is probably the largest you can move without seriously damaging the roots. The root systems of most native trees are relatively shallow and spread out horizontally due to cold underlying soil conditions.

Transplanting

Prepare the tree

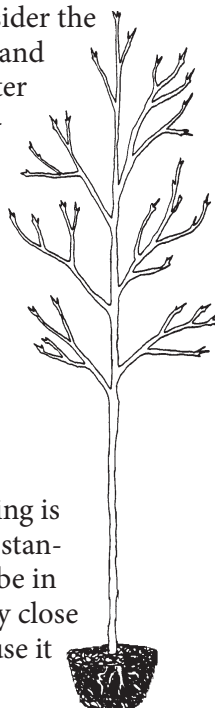
Prepare the tree you want to transplant. With a spade, slice down into the soil around the tree at or beyond its dripline all the way around it. A dripline is an imaginary circle drawn around the trunk of a tree from the outermost tips of branches. Root pruning increases and strengthens root development closest to the tree. This is best done a year or two before digging to give the tree time to grow feeder roots. Selecting small trees to transplant and making a larger root ball will enhance the tree's ability to overcome the shock of transplanting.

Prepare the new site

After selecting a site and before digging the transplant, dig the new hole. Select an area with good soil and the proper sunlight exposure for the tree being transplanted. Dig the hole. The replanting hole should be five times the diameter of the root ball or at least 2 feet larger than the size of the root ball on all sides. The hole should slant in without straight-cut or packed sides. This is especially important if the new site has compacted or poorly drained soil. The hole should be 10 to 12 inches deep to provide room for all the roots of the transplant.

Dig up the tree to be transplanted

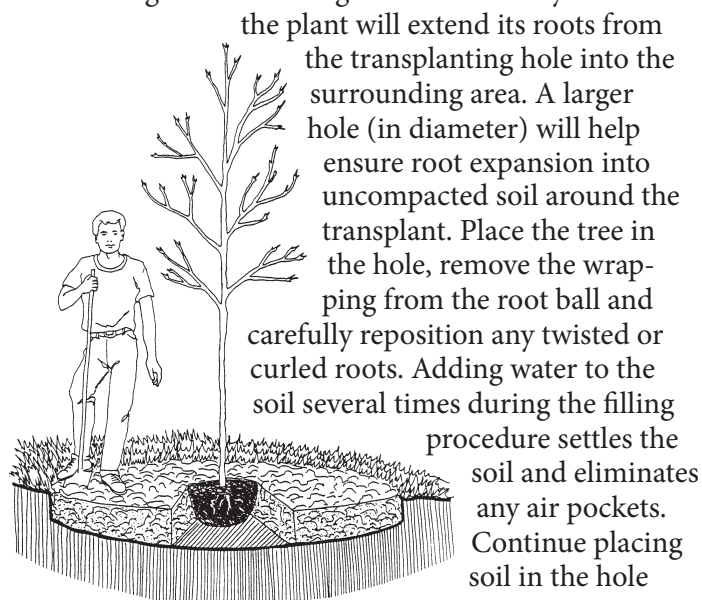
When you start digging, stay beyond the dripline of the tree. The small roots at the end are important for water and nutrient uptake; removing or damaging those important feeder roots puts additional stress on the tree after transplanting.



Carefully dig up the tree and remove it with the root ball intact (ideally, this should be done a year after root pruning). Dig under the roots and toward the center from all sides and carefully slide (roll) the root ball onto a tarp, burlap or heavy piece of plastic. Wrap the root ball up with this material and tie securely to hold it in place and prevent the roots from drying out. Ideally replant within the hour. Gently transport the tree to the new location so that drying effects are kept to a minimum. Hauling trees in the bed of a pickup for long distances can cause severe water loss from the foliage, which could cause leaf drop after transplanting is done.

Plant the tree

Excavate the center of the planting hole so that the tree will be positioned at the same depth as it was originally growing. The soil used for replanting should be as similar as possible to the soil removed. This will ensure that drainage occurs through the soil and beyond and



The preparation of the planting area is critical to tree survival and vigorous growth. Rather than digging a hole, prepare a planting area at least 2 feet on all sides larger than the diameter of the root ball. Set the tree on undisturbed solid ground in the center of the area so that the upper surface of the root ball is level with the surrounding soil.

A tree that is in a dormant state is less likely to suffer transplant shock. A dormant tree places fewer demands on the root system than does an actively growing one. Winter is a dormant period, but digging in winter is usually not possible.

Early spring is also a dormant period, but leaf growth often starts by the time the ground thaws enough to remove the tree. In Alaska, the fall dormancy period is usually preferable for transplanting because it is followed by a period of time when a damaged root system can regrow and recover. Root regrowth occurs even though the tree appears dormant and the soil is cold.

It is important to water the transplant immediately after transplanting during a dry period so that the remaining roots may take up moisture successfully. Don't saturate the soil but keep it moist all the way to freeze up.

Summer may be the least preferable time to transplant a tree because the tree is susceptible to root damage, heat stress and shock.

and rake it until it is even over the entire area. A shallow layer of surface mulch no more than 3 inches deep around, but not touching, the transplanted tree trunk will help maintain moisture.

Stake the tree only if strong wind is a problem. You can damage the bark or girdle the tree if the guy wires are too tight or left in place too long. Short sections of plastic water hose wrapped in carpeting or soft rags can be used over the wire to prevent damage where the wire contacts the tree.

Keep the tree well watered during the transplant recovery period. Don't fertilize the transplant during the year it was transplanted and limit pruning; wait until after it has become established, at least one year. If you are careful in selecting your tree and follow correct transplanting procedures, your tree will continue to be healthy and grow in its new home.

www.uaf.edu/ces or 877-520-5211/907-474-5211

Jasmine Shaw, Extension Program Assistant. Originally written by Wayne Vandre, former Extension Horticulturist.



Published by the University of Alaska Fairbanks Cooperative Extension Service in cooperation with the United States Department of Agriculture. Language access services, such as interpretation or translation of vital information, will be provided free of charge to individuals with limited English proficiency upon request to amnorris2@alaska.edu.

The University of Alaska (<http://www.alaska.edu/alaska>) is an equal opportunity/equal access employer and educational institution. The university is committed to a policy of nondiscrimination (<http://www.alaska.edu/nondiscrimination>) against individuals on the basis of any legally protected status. This work is supported by the U.S. Department of Agriculture's National Institute of Food and Agriculture.

©2025 University of Alaska Fairbanks.

06-85/WV/11-24

Revised November 2024