

PROTECTING THE INVESTMENT

Tree Planting and Establishment

It's exciting and important work to plant trees. Just like bringing a newborn child home from the hospital, planting and caring for your new trees requires nurturing to raise healthy, strong and independent trees. By doing so, life will be a shade better.

10 Steps to Successful Tree Planting

- 1 **Move the tree.** Young trees are not 2 by 4's; avoid carrying trees by their trunks, unless bare root.
- 2 **Remove trunk and branch packaging.** Leave root packaging in place.
- 3 **Find the main root system and remove excess soil.** Remove soil from the top of the root ball until the top of the main root system is exposed. There should be several roots at least as big around as a pencil extending in opposite directions from the trunk. You may have to remove several inches of soil. **TIP:** Probe the soil ball with a wire, kabob skewer or screwdriver to find them and estimate how much soil to remove.
- 4 **Determine how deep and wide to dig.** Measure the height of the remaining root ball. This is exactly how deep you should dig the hole. Measure the approximate width of the root ball or root system. Multiply this by 2 or, if your soil is hard (clay or compacted), by 3. This is how wide you should dig the hole.
- 5 **Dig a hole. Do not put a \$100 tree in a \$10 hole.** The dimensions of the hole are very important. Dig the hole ONLY as deep as the root system.
- 6 **Put the tree in the hole.** If the tree has a heavy root ball, slide it into the hole and straighten the trunk.
- 7 **Remove root packing. *B&B trees:*** Cut, peel back and remove as much of the wire basket and burlap as possible. **TIP:** Cut the bottom of the wire basket off before placing it in the hole; then you can easily cut up the sides of the basket and peel it away. ***Container trees:*** Remove any circling roots by cutting them off in 5 cuts - four around the ball like a box and one across the bottom.
- 8 **Backfill with the same soil.** Make sure the trunk is straight. Put the original soil back in the hole, breaking up large clods, and working it in with your hands or a shovel. **TIP:** Do not amend the soil unless you are amending a larger area, this could prevent the roots from leaving the planting hole.
- 9 **Water.** Water the root ball and entire backfilled area.
- 10 **Mulch.** Put a 2-4 inch layer of organic mulch over the backfilled area. Pull mulch away from the trunk so none touches the bark. Replenish mulch to maintain this depth; doing so will also improve soil structure. There should never be more than 4 inches of mulch over the roots. Too much can prevent the roots from getting necessary oxygen.



Many tree problems start with poor planting, take the time to protect the investment by planting it right.



Never mound mulch around the base of a tree like a volcano. This can result in rot and root collar damage.



Apply mulch like a donut around a tree's trunk.

Call to locate underground utilities before you dig! 1-888-DIG-SAFE



Root Washing: A Technique to Consider

Field applications over the past two decades demonstrate that root washing B&B and container trees leads to improved tree establishment and survival. Using a large bucket or trough, immerse the roots in clean water, allowing the soil to slough off gently. Duration of soaking depends on degree of clay in root ball and soil compaction of root ball, allow for 24 hours. Use a garden hose to gently wash away the remaining soil. Use your fingers or three-pronged garden trowel to remove clay and re-orient root system. Prune root defects. Plant on a prepared soil mound arranging roots radially. Backfill with native soil while continually applying water and making a mud slurry – this is called muddying in. Release air bubbles by moving the tree's trunk. Mulch and stake if needed. By using so much water, the tree is typically very stable and generally does not require staking.

Watering

Water is critical during the first three years after planting. Too little or too much can kill a tree.

- Water where the roots are. The first year they are right around the root ball. Expand the watering area as the tree and roots grow.
- Watering devices such as TREGATORS™ or a five gallon bucket with holes release water slowly, soaking the soil while minimizing surface runoff.
- Use less frequent but more thorough watering sessions, rather than frequent shallow watering.
- It is difficult to prescribe a certain amount of water to apply to a tree. Different trees, soils and weather conditions will affect the amount and frequency. As a general guide, ten gallons of water should slowly be applied once or twice a week if rainfall is insufficient.



Staking

Stake only if the root ball is unstable or the trunk is bending. The movement of the tree actually produces hormones that will make the tree stronger. Use wide nylon or canvas straps wrapped around one side of the trunk. Leave enough slack to allow the tree to sway. If the root ball is unstable, use 1-3 stakes attached LOW on the trunk. If the trunk is bending, use one stake attached HIGHER (at least 6 inches below the first set of branches). **Remove stakes after 1-2 years.**

Other Helpful Tips

- **Fertilization** - Only apply those nutrients that are deficient in the soil. Applying unnecessary nutrients may be harmful to the tree. Soil tests can be acquired from your local UVM Extension office. Use organic fertilizers or those with a low salt index.
- **Pruning** - You may remove dead or broken branches at time of planting.
- **Trunk Guard** - If winter rodent damage is of concern, install a trunk guard. However, trunk guards should be removed in the spring to prevent moisture retention around the trunk.

References

Community Forestry Consultants. *Planting Trees: The Root Washing Method.*

USDA Forest Service, NE Area State & Private Forestry. *Tree Owner's Manual For Northeastern & Midwestern United States.*

The Vermont Department of Forests, Parks and Recreation in partnership with the University of Vermont Extension.

Factsheets paid for by a grant from the USDA NIFA Forestry Program as part of the University of Connecticut's FREMO initiative.