

INSTALLATION (PLANTING)*

How to Move Your Tree

Carry your tree by its root package (ball or container)—not the trunk! Steady it by holding the lowest part of the trunk.

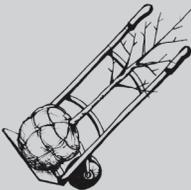
Large containerized trees may be tipped onto the bottom edge and rolled.



For balled-and-burlapped trees, you may find it easiest to place tarps or ropes under the ball as a sling.



A dolly or other cart may also be used.



⚠ **Protect the trunk.**
Even a small wound on a young tree can cause permanent damage.

Materials

- Tape measure or yard stick
- Metal skewer, coat hanger, stout wire, or pointed screwdriver
- Shovel
- Sharp knife or scissors
- Hand pruner—*bypass* type (p. 19)
- 5 gallons of water
- 4-5 cubic feet of mulch (one wheelbarrow load or two large bags)
- Large-gauge wire cutter if balled and burlapped
- Hand saw if containerized and the main root system is more than 1 inch below the soil surface (Step 4). An inexpensive folding pruning saw works well, but any saw would work.

Instructions

⚠ If you have NOT yet read the section on Pre-Installation (Preparing to Plant), do so now.

⚠ Do not dig until Step 6.

*Hargrave, R.; Johnson, G.; Zins, M. 2002. Planting trees and shrubs for long-term health. St. Paul, MN: University of Minnesota Extension Service. 12 p.

Step 1. Move the tree.



Young trees are not 2 by 4's.

Do not lift or carry your tree by its trunk (unless bare root). See the sidebar on How to Move Your Tree.

Step 2. Remove trunk and branch packaging.

Remove trunk wrap, twine around the branches, and labels. Leave any root packaging in place for now.

Step 3. Prune critical branches and no others!

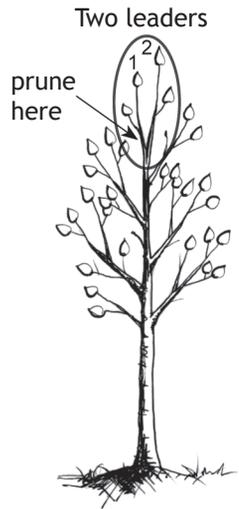
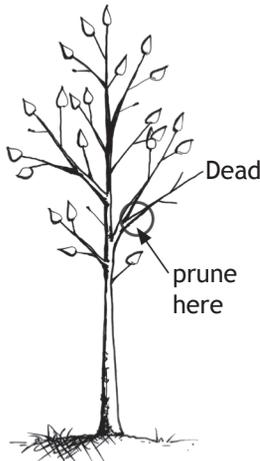
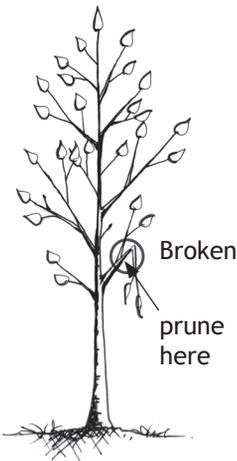
Prune only branches that are broken or dead. You may also remove competing leaders, if present. Most trees should have one central leader (p. 2-3). If there are two or more leaders, choose which one you want to remain and remove the other(s).



Minimize pruning at the time of planting!

Trees need as many leaves as possible to recover from transplant shock (leaves produce the tree's food).

See "Pruning" p. 18



Step 4. 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 2-4 inches of soil before finding the main roots.

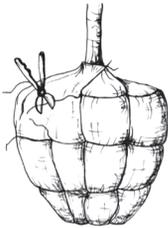


TIP: Probe the soil ball with a wire, kabob skewer, or screwdriver to find the main root system and estimate how much soil to remove. If the roots are located more than 4 inches deep, return the tree to the place of purchase.



Bare root trees: There is no soil or root packaging to remove.

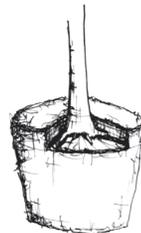
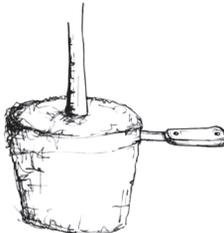
Balled-and-burlapped trees: Remove the top of the root ball packaging. Cut any twine from around the trunk taking care not to nick the bark. Then bend the wire basket back off the top of the ball. Remove soil from the top of the root ball until the main root system is found. You may have to cut some of the wire. Leave the rest of the wire basket in place until the tree is put in the ground.



Containerized trees: Remove the entire container. Pull or cut the soil off the top of the root ball until the main root system is found.



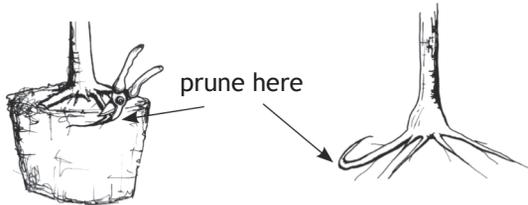
TIP: A saw works well to remove the top layer of soil. Be careful not to cut into the trunk.



Step 5. Remove problem roots.

A. Remove all small roots above the main root system with a hand pruner.

B. Examine the main root system for roots that extend out but then turn to the side or back towards the trunk. Prune these roots at the point where they turn.

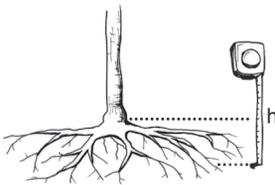


Step 6. Determine how deep and wide to dig.

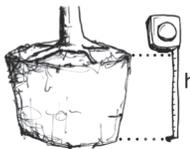
A. Measure the height of the remaining root ball. This is exactly how deep you should dig the hole.

B. 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 at least 3. This is how wide you should dig the hole.

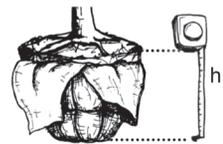
Bare Root
(roots spread out flat on the ground)



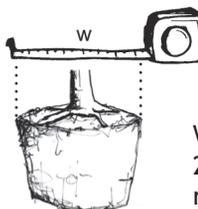
Containerized
(excess soil removed)



Bailed and burlapped
(excess soil removed)



h = depth of planting hole



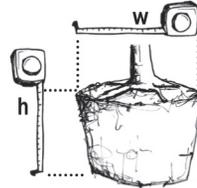
Width of hole should be 2-3 times the width of the root ball

Step 7. Dig a hole.

⚠️ Do not put a \$100 tree in a \$10 hole.

The dimensions of the hole are very important in determining the survival of your tree. Dig the hole **ONLY** as deep as the root system (NO deeper!).

HOLE DEPTH = height of root ball (h)
HOLE WIDTH = width of root ball (w) x 2 or 3

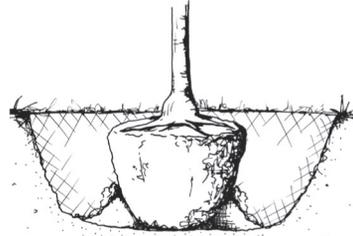
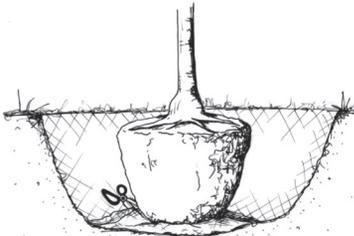


Step 8. Put the tree in the hole.

If the tree has a heavy root ball, slide it into the hole, and straighten the trunk.

Step 9. For balled-and-burlapped trees, remove root ball packaging.

Balled-and-burlapped trees: Without loosening the root ball, cut, peel back, and remove as much of the wire basket and burlap as possible (at least the top two-thirds).



⚠️ A root ball should remain a root ball.

If it starts to fall apart as you take off the wire and burlap, backfill the hole with enough soil to stabilize it. Then carefully remove the wire and burlap, and backfill as you go to keep the root ball intact.

Step 10. 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.

Step 11. Water.

Water the root ball and entire backfilled area.

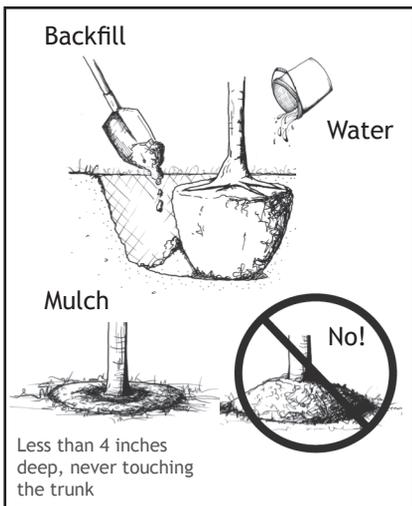
Step 12. Mulch.

Put a 2-4 inch layer of mulch over the backfilled area. Pull mulch away from the trunk so that none touches the bark.



Mulch becomes soil.

There should never be more than 4 inches of mulch over the roots. Too much can prevent the roots from getting necessary oxygen.



To Stake or Not to Stake

Some trees need to be staked to remain standing straight in their new planting site. Stake only if the root ball is unstable or the trunk is bending. Use wide nylon, canvas straps, or nylon stockings wrapped around one side of the trunk. The tree should not be tied tightly.



If the root ball is unstable, use 1-3 stakes attached LOW on the trunk.



If the trunk is bending, use 1 stake attached HIGHER (at least 6 inches below the first set of branches).



Remove stakes after 1-2 years.