

New Tree Planting

Information on proper practices for planting a tree with a nine-step approach to successful planting and establishment.



Purchasing a tree is an investment, and how well that investment grows depends on the type of tree selected, the location, and the care provided.

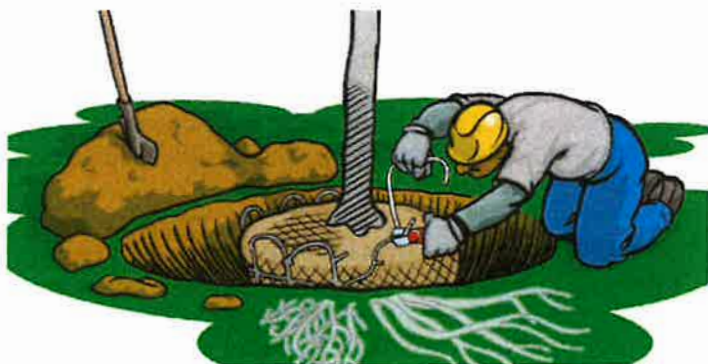
When to Plant

- Ideally during the dormant season—in the fall after leaf drop or in early spring before bud break.
- Weather conditions are cool and allow plants to establish roots in the new location before spring rains and summer heat stimulate new top growth.
- Healthy balled and burlapped or container trees can be planted throughout the growing season.
- In tropical and subtropical climates where trees grow year round, any time is a good time to plant a tree, provided that sufficient water is available.

Planting Stress

Balled-and-burlapped trees lose a significant portion of their root system when dug at the nursery. As a result, trees commonly exhibit what is known as “transplant shock.” Transplant shock is a state of slowed growth and reduced vitality following transplanting.

Container trees may also experience transplant shock, particularly if they have circling (girdling) or kinked roots that must be cut. Proper site preparation, careful handling to prevent further root damage, and good follow-up care reduces transplant shock and promotes faster recovery.



Steps to Plant a Tree

Note: Before you begin planting your tree, be sure you have located all underground utilities prior to digging. **811 is the national call-before-you-dig phone number.** Anyone who plans to dig should call 811 or go to their state 811 center's website.

Carefully follow these nine steps to help your tree establish quickly in its new location:

1. The trunk flare is where the trunk expands at the base of the tree. **Ensure trunk flare is partially visible after the tree is planted.** Remove excess soil prior to planting if flare is not visible.
2. Dig a shallow, broad planting hole. **Holes should be 2–3 times wider than the root ball,** but only as deep as the root ball.
3. If wrapped, remove any cover from around the root ball and trunk to facilitate root growth. Remove wire basket or cut one or two rings off so it is low-profile and will not interfere with future root growth. Inspect tree root ball for circling roots and straighten, cut, or remove them. Expose the trunk flare if necessary.
4. Place the tree at the proper height. When placing the tree in the hole, lift by the root ball, not the trunk. The majority of tree's roots develop in the top 12 inches (30 cm) of soil. Planting too deep can be harmful to the tree.
5. Straighten the tree in the hole. Before filling the hole, have someone examine the tree from several angles to confirm it is straight.
6. Fill the hole gently but firmly. Pack soil around the base of the root ball to stabilize it. Fill the hole firmly to eliminate air pockets. Further reduce air pockets by watering periodically while backfilling. Avoid fertilizing at the time of planting.
7. If staking is necessary, three stakes or underground systems provide optimum support. **Studies have shown that trees develop stronger trunks and roots if they are not staked;** however, it may be required when planting bare root stock or on windy sites. Remove stakes after first year of growth.

8. Mulch the base of the tree. Place a 2-3 inch (5-7.5 cm) layer of mulch, but be sure not to pile much right against the trunk. A mulch-free area of 1-2 inches (2.5-5 cm) wide at the base of the tree will reduce moist bark and prevent decay.
9. Provide follow-up care. Keep the soil moist by watering at least once a week, barring rain, and more frequently during hot, windy weather. Continue until mid-fall, tapering off as lower temperatures require less-frequent watering.

Other follow-up care to consider:

- Minor pruning of branches damaged during the planting process may be required.
- Prune sparingly after planting. Delay corrective pruning until a full season of growth.
- If trunk wrapping is necessary, use biodegradable materials and wrap from the bottom.

What Is a Certified Arborist?

ISA Certified Arborists® are individuals who have proven a level of knowledge in the art and science of tree care through experience and by passing a comprehensive examination developed by some of the nation's leading experts on tree care. ISA Certified Arborists must also continue their education to maintain their certification. Therefore, they are more likely to be up to date on the latest techniques in arboriculture.

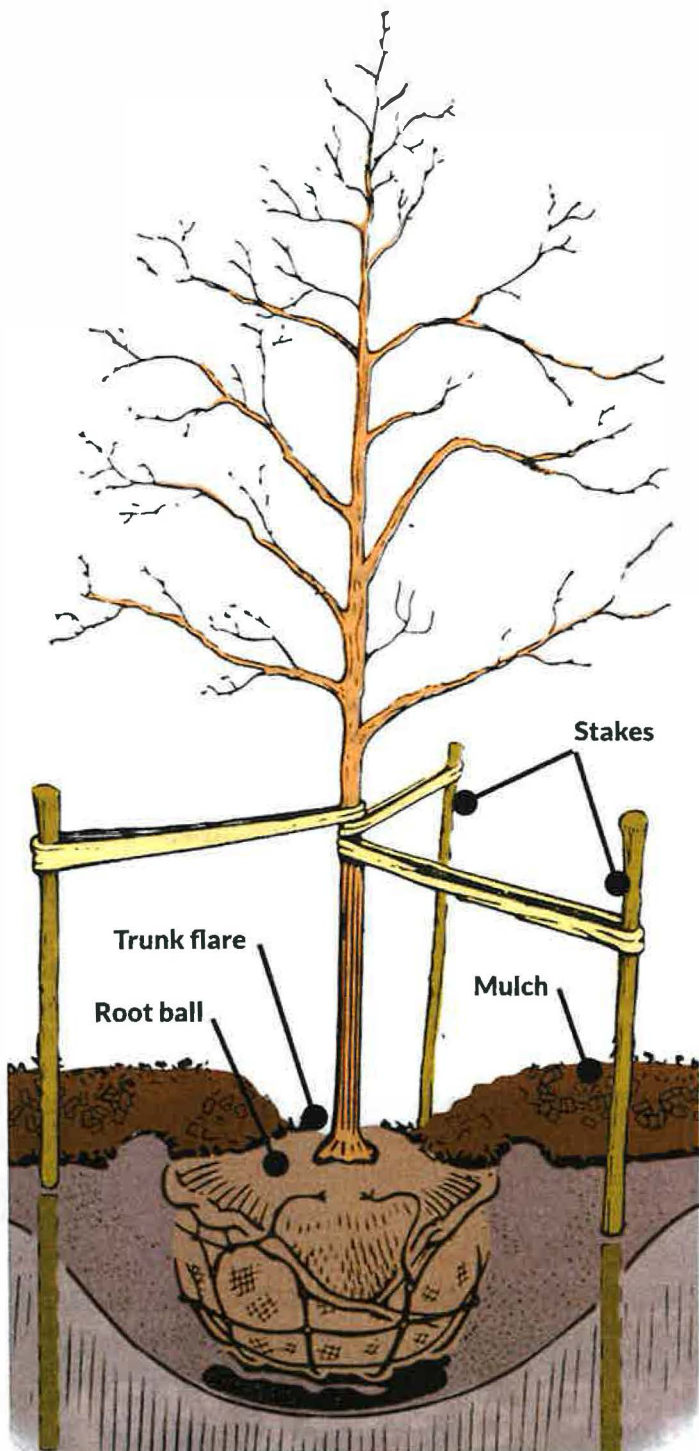
Finding an Arborist

Visit TreesAreGood.org for free tools:

- The "Find an Arborist" tool can help you locate an arborist in your area.
- The "Verify a Credential" tool enables you to confirm whether an arborist has an ISA credential.

Be an Informed Consumer

One of the best methods to use in choosing an arborist is to educate yourself about some of the basic principles of tree care. Visit TreesAreGood.org to read and download all brochures in this series.

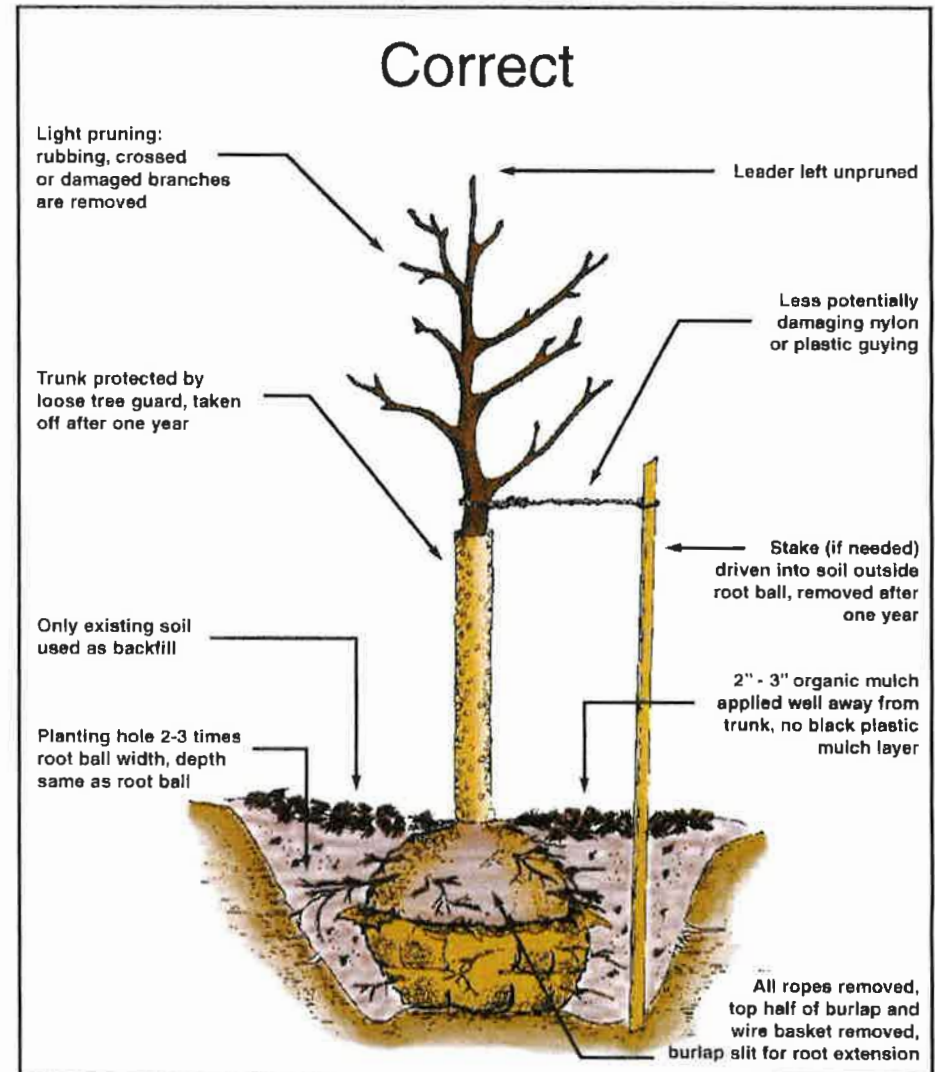
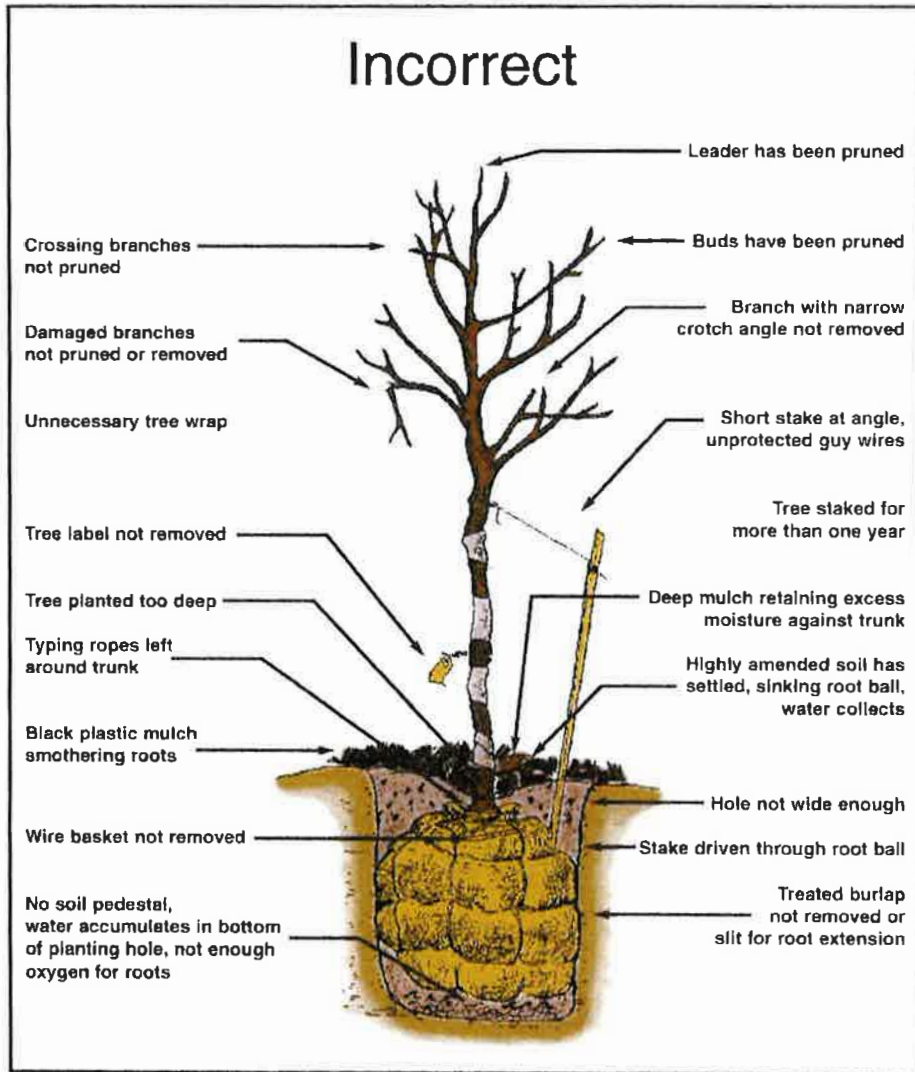


www.isa-arbor.com • www.treesaregood.org

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 Through research, technology, and education, the International Society of Arboriculture promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees.

Tree Planting

To ensure healthy trees, start with Right Tree/Right Location.
Once you select a tree suited for your site and its microclimate, be sure to plant the tree correctly!



5 steps to plant a tree



DANECLIMATEACTION.ORG/INITIATIVES/TREE-CANOPY



1

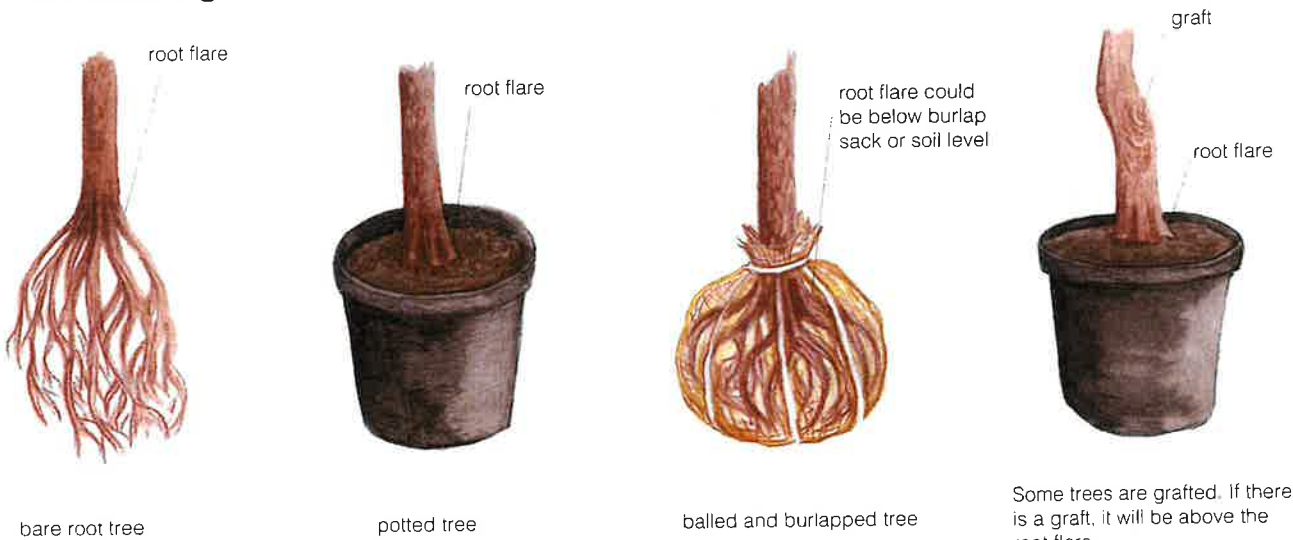
Call Digger's Hotline

Call 811 or visit diggershotline.com to mark under-ground utilities. Check for overhead lines. Make sure to site your tree in a spot that matches its needs.

2

Find the root flare

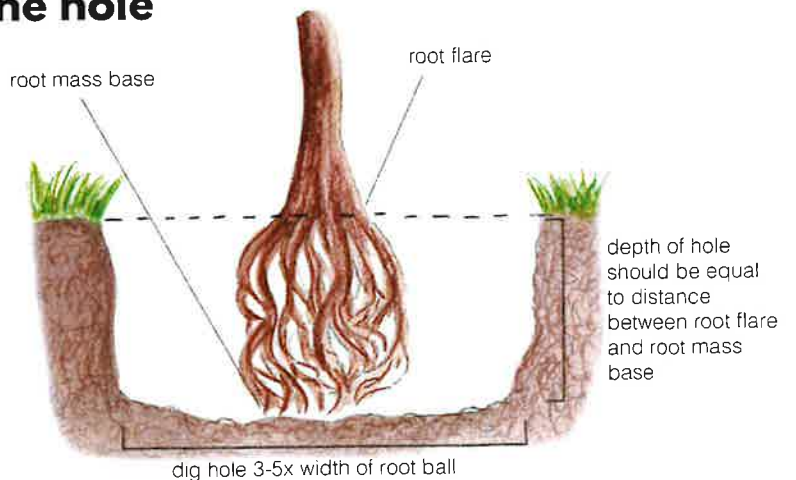
The root flare is the bulge between the stem and the roots. Be careful not to confuse a graft with a root flare.



3

Measure for and dig the hole

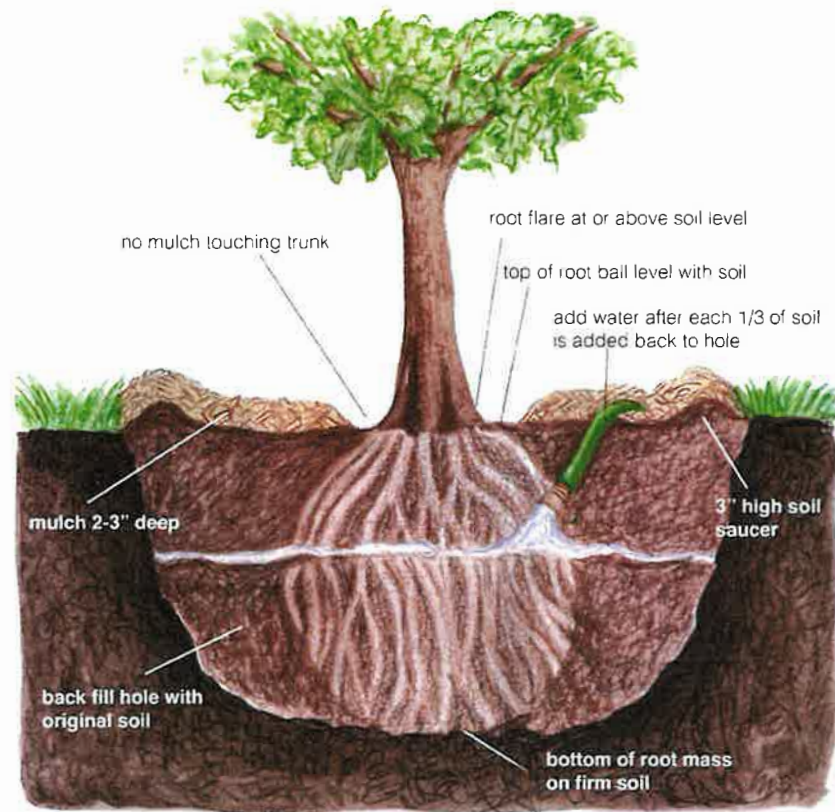
Measure from the root flare to the bottom of the root ball to determine hole depth. Dig the hole 3-5 times the diameter of the root ball.



4

Set the root ball in hole and water

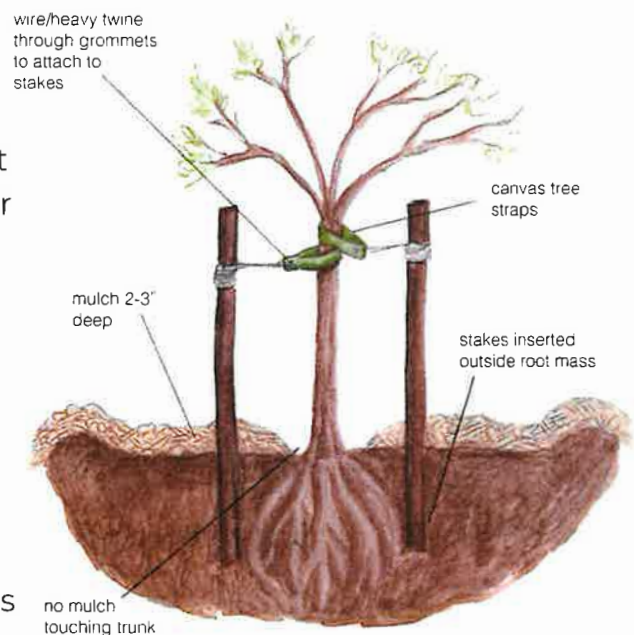
Remove the wire basket, if present. Use a tarp to slide the tree into the hole if the root ball is heavy. Remove burlap (if present). Spread and separate roots if circling. Fill the hole in thirds with soil originally removed. Eliminate any air pockets after each addition. Water and let drain after each soil addition.



5

Finish up

- **Build a 'soil saucer'** (narrow berm) at least 3" high around the hole edge for a water reservoir. Fill it with water, and let it drain.
- **Mulch** no more than 3" deep inside the saucer area. Mulch should not touch the trunk.
- **Stake** bare root and small trees for one year only. Install two opposing stakes outside the root mass. Loop flat canvas tree straps with grommets around the trunk. Attach to stakes with wire via the grommets.



Illustrations by Evie Woltil Richner
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