

UNL Extension: Acreage Insights

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Tree Planting Depth

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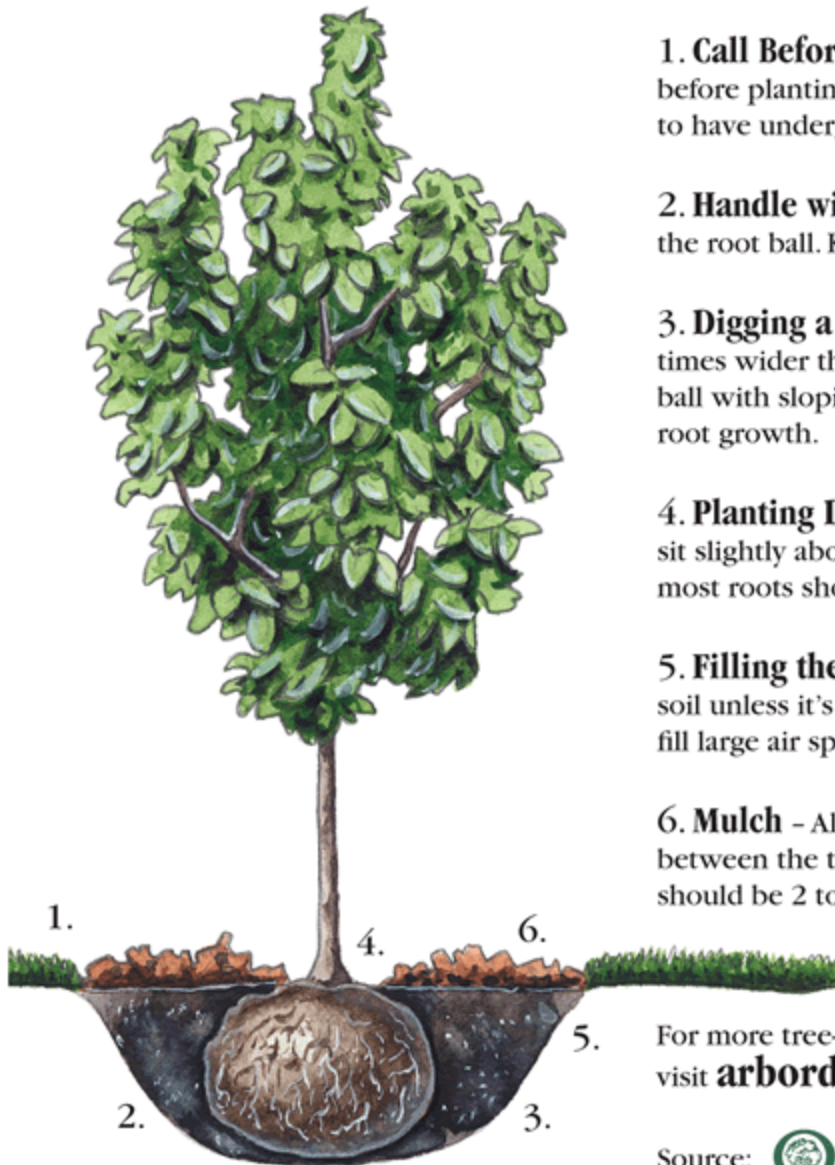
Arbor Day is in April, making this a good time to write about not planting trees too deep. This is a practice that is becoming an epidemic and killing or stressing many trees.

Researchers at the Bartlett Tree Research Laboratories in North Carolina excavated 363 newly planted trees and found 93 percent had either excessive soil or excessive mulch covering the root collar (the area where roots meet the trunk and the trunk flares slightly at the base).

Trees planted too deep may not survive for more than two years. Those that do survive often remain in a weakened condition for a number of years. Eventually, some stress like drought, disease or insects are more likely to kill them.

If a tree trunk enters the ground as straight as a telephone pole, with no flare visible, the tree has been planted too deep. Deep planting kills or stresses trees because the roots do not receive the level of oxygen needed for healthy root growth.

Six things you should know when planting a tree.



1. Call Before You Dig - Several days before planting, call the national 811 hotline to have underground utilities located.

2. Handle with Care - Always lift tree by the root ball. Keep roots moist until planting.

3. Digging a Proper Hole - Dig 2 to 5 times wider than the diameter of the root ball with sloping sides to allow for proper root growth.

4. Planting Depth - The trunk flare should sit slightly above ground level and the top-most roots should be buried 1 to 2 inches.

5. Filling the Hole - Backfill with native soil unless it's all clay. Tamp in soil gently to fill large air spaces.

6. Mulch - Allow 1 to 2 inch clearance between the trunk and the mulch. Mulch should be 2 to 3 inches deep.

5. For more tree-planting tips and information, visit arborday.org.

Source:  **Arbor Day Foundation**
90075201

As little as one to two inches of soil placed over the roots of established trees can cause trees to decline and die. During tree planting, it is not unusual for trees to end up being planted as much as six to nine inches deeper than they should be.

To avoid planting trees too deep, do not follow the old recommendation of planting trees at the same depth they were at the nursery or in the container. Instead, locate the root collar of the tree before digging the planting hole. Some soil may need to be pulled away from the trunk to locate the root collar.

Again, the root collar is the area where the roots meet the trunk. This area is also referred to as the trunk flare since the trunk flares slightly at this point. After the tree is planted, the trunk flare needs to be visible above the soil line with the first lateral roots just below ground.

After locating the root collar, dig the planting hole only as deep as needed so the trunk flare remains just above the soil line after planting. If the hole is dug deeper, settling will occur after planting and the tree may end up too deep. When planted, set the root ball on undisturbed soil.

Do dig the planting hole two to three times wider than the root ball. Tree roots grow outward with the majority of roots growing in the upper 18 inches of soil. Digging a wide planting hole loosens the surrounding soil to encourage root growth.

When planting, remove all containers, even peat pots. After balled and burlapped trees are planted, remove the twine around the trunk, cut away as much of the burlap as possible, and snip off all or as much of the wire basket as possible.

When backfilling the hole, backfill with soil that was removed from the planting hole. Do not add soil amendments to the planting hole as this may encourage roots to grow in the planting hole and not outward into surrounding soil.

As the hole is backfilled with soil, water every few inches to settle the soil. Do not tamp the soil with your foot as this can create compaction. Once the hole is filled with soil, place a two to four inch layer of organic mulch in a four foot diameter ring around the tree.

Avoid using a deeper mulch layer or piling the mulch against the trunk. Just as planting too deep can decrease oxygen levels for roots, using too deep of a mulch layer will also decrease soil oxygen levels. Deep mulch is another epidemic killing or stressing young trees.

Along with not planting too deep or using too much mulch, other general rules of thumb at planting time are do not prune living branches (it's okay to remove dead or broken branches); do not fertilize, especially with nitrogen; and do not wrap the trunks of trees during the growing season.

For larger trees planted on windy sites, stake the tree low on the trunk and use staking materials that will not damage or girdle the trunk. The purpose of staking is not to prevent the top half of the tree from gently swaying with the wind, but to prevent the root ball from shifting and damaging new roots. Trees should only be staked for one year after planting.