

Tree-planting for Success

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PLANTING

Proper planting is critical to the establishment of healthy, thriving trees. The planting guidelines below have been developed to help new trees get off to a successful start. The recommendations are based on nationally recognized standards as well as experience compiled by the Nebraska Statewide Arboretum and the Nebraska Forest Service. The recommendations assume that an appropriate tree has been selected for the planting site and that the site is suitable for planting.

DIGGING. Dig a saucer-shaped hole wider than the root system but no deeper than the root mass. Most holes do not need to be deeper than about one shovel's depth (10-14"). The bottom of the hole should be firm enough to prevent the tree from settling deeper after planting. **Note:** Using an auger is not recommended since trees often settle too deep and the sides of the holes become glazed. If using an auger, don't drill deeper than needed and loosen the sides of the hole.

PLANTING. Plant so the base of the trunk is at original ground level or slightly higher. **The first lateral roots** should end up just under the soil surface (1-2" deep) and the **trunk should flare** visibly at ground level.

- Always locate the first main lateral roots and remove any excess soil above them before setting the plant in the hole. The first main roots are often several inches below the top of the container or root ball.
- All graft unions should be visible above the soil line.
- Remove all pots and containers before planting.
- For balled and burlap (B&B) stock, try to remove the wire basket and burlap before placing the tree in the hole. If maintaining the integrity of the soil ball is important, then remove the bottom part of the burlap and wire basket before setting the plant in the hole and then remove the remaining burlap and wire basket after stabilizing the tree in the hole. Remember to check for and remove any excess soil at the top of the root ball before planting.
- **Loosen and spread circling roots before backfilling** (especially important for potted trees). It may be necessary to cut larger roots that cannot be straightened to prevent girdling, but this should be done with caution. Reject plants with severely circled or girdled root systems.
- For potted trees, try to remove as much of the original growing medium as possible before planting to help achieve good soil-root contact. Dunking in water or spraying with a hose will help in this effort.

BACKFILLING. Backfill with the original soil dug from the hole. Large clods and soil chunks should be broken up as much as possible. Adding water during backfilling can help remove air pockets and better moisten the roots.

MULCHING. Mulch individual trees with a 2-4" layer of wood mulch extending from the trunk to at least the drip line of the tree. Where possible, mulch trees and other plantings together en masse to help separate from surrounding turf. **Don't** pile the mulch deeply over roots or against the base of the trunk and **don't** mulch with rock or use plastic weed barriers under the mulch.

STAKING & BRACING. Brace the tree if it might dislodge or blow over in the wind (most trees typically benefit from staking). Some sway should be allowed in the tree after staking. Use only broad, belt-like materials to attach the bracing to the trunk to help prevent rubbing injuries. **Do not** brace with wire, rope or wire through hose. Remove staking within one year.

POST-PLANTING CARE

WATERING. After planting, keep the root zone moist but not waterlogged. In general, a newly planted tree should receive about 1" of moisture per week, including rainwater, during the first growing season. Check the root zone frequently for moistness—don't just guess. Many trees are lost to either under- or over-watering. Containerized trees often need more watering than bare-root or B&B stock, because the porous growing medium they are potted in dries out faster.

FERTILIZING. If the right tree was selected for the planting site, fertilizer is generally not needed. If fertilizer is desired, use only a slow-release, low-nitrogen fertilizer applied to the soil surface after planting.

- **Never** add fertilizer to the planting hole since it can damage newly transplanted roots. In addition, excess nitrogen in the soil can cause newly planted trees to add top growth at the expense of proper root development.
- Address major soil problems **before** planting. Adding organic matter to the planting site before planting can be very beneficial for poor, inorganic and/or compacted soils.

PRUNING. At planting time, prune only to remove dead or damaged branches and to correct structural defects. Never cut back healthy branches or trim the tree to try and "balance" the top with the roots. The tree will benefit from having as many food-producing leaves left on as possible. Also, try to leave lower branches on a tree for as long as possible after planting. Lower branches help protect the trunk from cracking, sunscald and animal damage and they aid in developing good trunk taper. If needed, limb the tree up gradually over a matter of several years after planting. Monitor the tree when young and prune, sparingly but properly, to prevent structural defects.

