PLANT TREES RIGHT!

Kelly Feehan, Extension Educator
University of Nebraska - Lincoln
Kfeehan2@unl.edu
Trees are Vital Community Assets

Communities need tree canopy
  • *Tall, long-lived, weather ready*
  • Diverse forest of quality shade trees with good structure and planted right!
  • A well-planted and maintained tree will grow faster and live longer

Photo: Kelly Feehan
Avoid Common Planting Mistakes

• Planting too deep
• Amending backfill soil of the hole
• Stomping on soil as you backfill the hole
• Not dealing with or preventing girdling roots
• Pruning at planting
• Staking too high, too tight and for too long
• Not removing wires, tags, wrapping, strings....
• Mulching too deep and piling it against the trunk
• Under or overwatering
• Fertilizing with nitrogen at planting - usually
Planting Depth

“If a tree is planted at the same depth it was in the container and/or the soil is loosened beneath where the root ball will sit, chances are very good it’s planted too deep.”

Too deep = no root flare visible  Correct depth = root flare visible above ground
How to Plant at Correct Depth

- Don’t just plant at the same depth trees are in their container
- WAIT to dig the hole until you locate the root taper or first lateral root; may need to remove some soil
- Plant so root flare is just at or slightly above soil grade and first lateral root is just below ground
Correct Tree Planting

1. Find taper first!!

2. Only then, dig a wide but not deep hole!

3. Set root ball on firm, undisturbed soil

4. Backfill hole with same soil removed from hole

Diagram: Kansas State University
Roots grow outward up to and well beyond a tree’s height; encourage outward growth and 90% of water/nutrient absorbing roots are in the upper 12”.
Deal with or Prevent Stem Girdling Roots (SGRs)
Cut encircling roots or tease out – stressful and roots may continue to circle!
Buy Trees in Grow Bags or Start With Bare Root
Minimal, if any, Pruning at Planting

- Branches/leaves needed to recover from transplanting and to promote root growth
  - Plant hormones (i.e. gibberellins/auxins)
- Avoids wound response during planting stress
- Only remove double leaders, dead or severely damaged branches
- Leave lower limbs as long as possible or until about one inch in diameter
  - Increased trunk caliper
  - Reduced sunscald

Photo: Purdue Extension
Stake Trees Right

• Only if needed
• Low on tree – goal is to keep root ball from shifting in soil
  • No higher than 1/3 its height
• Allow top 2/3 to move w/ wind
  • Strengthens trunk
  • Stimulates growth hormones
• Use wide material
• Remove after one year
Mulch Trees Right

- Not too deep
  - Reduces soil oxygen
  - Roots grow in mulch
    - Dry out in summer
    - Winter kill in winter
- 1” deep on top of root ball; 2” to 4” deep beyond that
- Not piled against trunk
  - Trunk decay
  - Rodent homes
Water Right – too much is as lethal as too little

- Plants require oxygen & water
  - Oxygen is absorbed by root hairs
- For newly planted trees:
  - Consistent watering through fall for up to two years
  - Know your soil
  - Water when soil beginning to dry
    - Check with probe
  - Moisten 8” to 10” deep and at least 12” outside root ball/planting hole
    - One rule - provide water at the rate of 5 gallons for every inch of trunk diameter measured at 6” above soil
As rule – avoid fertilizing (nitrogen) at planting

• Do not fertilize at planting unless
  • Construction has removed topsoil
  • Soil test determines nutrients needed

• At planting:
  • Stress period
  • Fast release N sources can burn new roots
  • Canopy growth may occur at expense of root growth

• What about root starters?????
  • Phosphorous
  • Research shows not a lot of benefit
  • Maybe in cold, wet soils during spring
Thank-you!!

Kelly Feehan
Kfeeihan2@unl.edu