GREAT GARDENS

Washington County Master Gardener™ Association

PLANTING TIPS FROM HORTICULTURAL RESEARCH

Much of what we know about gardening has been handed down from generations of folk knowledge and trial and error. New information from research about crops and home gardens increases success with the plants and trees in our gardens.

Figure 1 from Vecteezy

Three important best practices

1. Plant shrubs and trees in the fall
2. Plant in existing garden soil
3. Plant using current techniques

Fall Planting -

- Plants suffer less environmental stress than those planted in the spring. Fall planting results in
  - ◊ Hardier roots because, plants put more energy into root growth rather than top growth when the air temperature is cooler than the soil temperature
  - ◊ Less need for supplemental watering.
  - ◊ Fewer weeds

Use existing soil

- Roots, water, and nutrients have difficulty going from one type of soil into another.
- The interface between different soils (for example clay, sand, sandy loam, silt) impedes movement of water, roots, and nutrients.
- To assure good root growth, and movement of water and nutrients,
  - ◊ avoid putting gravel in the bottom of a planting hole.
  - ◊ fill the planting hole with native soil, not amended soil

Current planting techniques

- Remove container media from roots of trees, shrubs, and perennial plants, straighten roots and prune to reshape as needed
- How to Prepare a Planting Hole
  - ◊ Dig the hole after you have prepared the roots. This is because the size of the hole is determined by the size of the root system.
  - ◊ Make the hole in the shape of a shallow bowl -- same depth as the root system and at least twice its width.
  - ◊ Remove roots and large rocks from the hole.
  - ◊ Fill the hole with water and let drain.

- How to Plant
  - ◊ Break up the excavated native soil into small pieces. Mound some of the excavated soil in the center of the hole to support the roots. Place roots over the mound and spread it outward like rays of a starfish.
  - ◊ You need enough soil so the plant's crown (where the stem meets the roots) is at or just above soil level of the surrounding garden.
  - ◊ Water well and let drain.
  - ◊ Check crown level again and adjust if needed.
  - ◊ Fill the hole and firmly press soil with hands.
  - ◊ Water again.

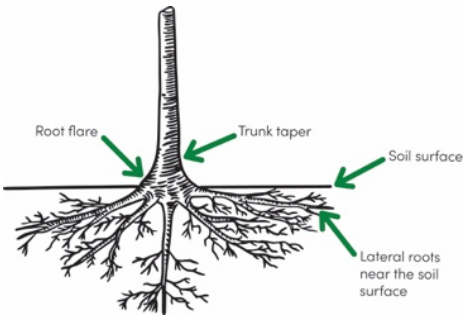

Figure 2 Royal Botanical Gardens Root Flare

- Guidelines for Soil Improvements
  - ◊ The principle for soil improvement is to not amend at all or amend the entire area that supports plant roots.
  - ◊ For long-lived plants such as trees and shrubs, don't amend. Instead, mulch over the soil surface with a layer of organic matter such as 4 inches of arborist's wood chips or 1-2 inches of compost.
  - ◊ Extend the mulch 30 inches or greater from the trunk; feather to the trunk to keep it from touching the bark.
  - ◊ For shorter-lived plants such as annuals and edible plants where immediate performance is paramount, amend the entire planting bed.

Resources:

- Videos
  - ◊ Soil and Planting by 10-Minute University https://clackamascountymastergardeners.org/10-minute-university/soil-planting/
  - ◊ How to Properly Plant a Tree by Sacramento Tree Foundation https://www.youtube.com/watch?v=z30jQa8-Lvg
- 5 reasons why fall is the best time to plant UC Davis Arboretum and Public Garden https://goodlifegarden.ucdavis.edu/blog/5-reasons-why-fall-best-time-plant
- Tree Planting Tips. Royal Botanical Garden https://www.rbg.ca/tree-planting-tips/
- Some garden myths and what science has to say. OSU Extension Service https://extension.oregonstate.edu/gardening/techniques/some-garden-myths-what-science-has-say

This handout is adapted from "Attracting Pollinators," presented by 10-Minute University™ Clackamas County Master Gardener Association "Planting Tips Based on Horticultural Research",

More information: