



Planting Trees To Live

Keys to Proper Planting

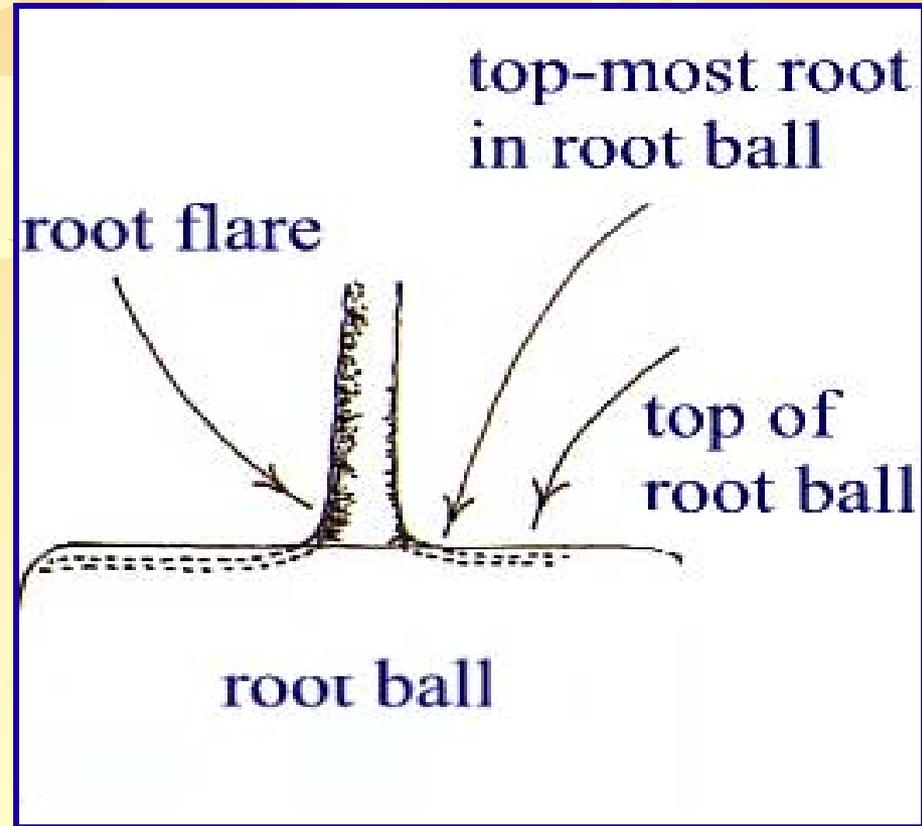
- **Root Flare**
- **Planting Depth**
- **Mulch Management**

ROOT FLARE



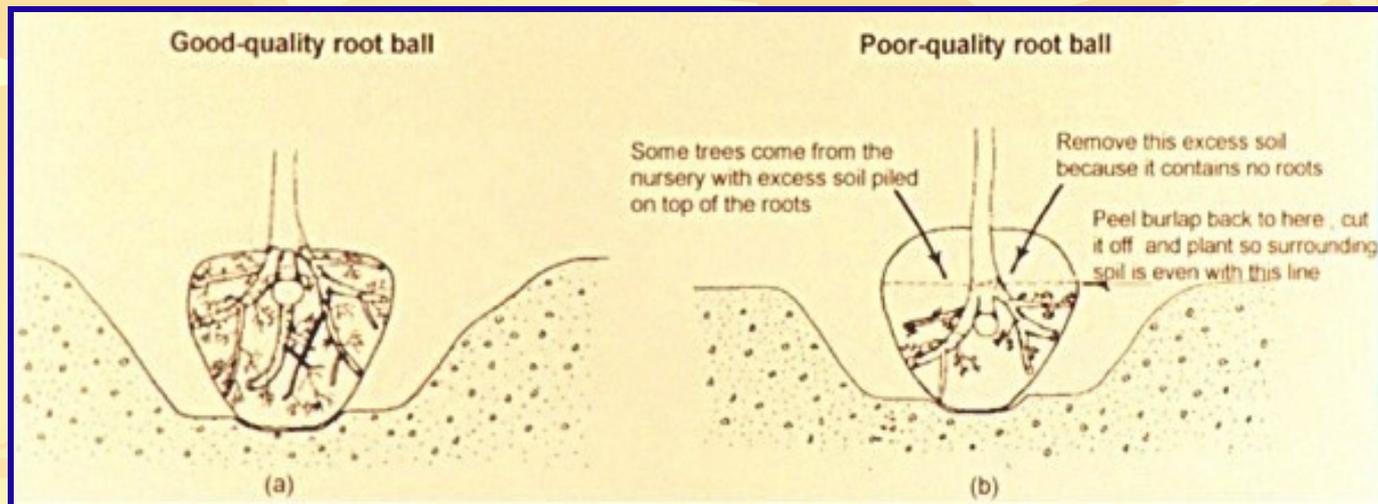
Locate the Root Flare

- Locate the top most root on the root ball.
- Approximately two inches above this root is the root flare.



Container grown tree

Root Flare Planting Depth



- The root flare should be visible when tree is planted.
- The top-most root in the root ball should be slightly above the surrounding landscape soil.

Root Flare Not Evident



If your tree arrives from the nursery with no apparent root flare:

- Remove soil from the top of ball or container so the point where the top-most root emerges from the trunk is within the top 2 inches.
- Cut roots that circle, those that are kinked, or those that cross over major roots



Planting Depth

Tree Roots

Two main types – Structure and Feeder.

Structure Roots

- Begin at the root flare.
- Anchor the tree

Feeder Roots

- Fibrous
- Absorb water & minerals



Most Roots located in top two feet of soil.

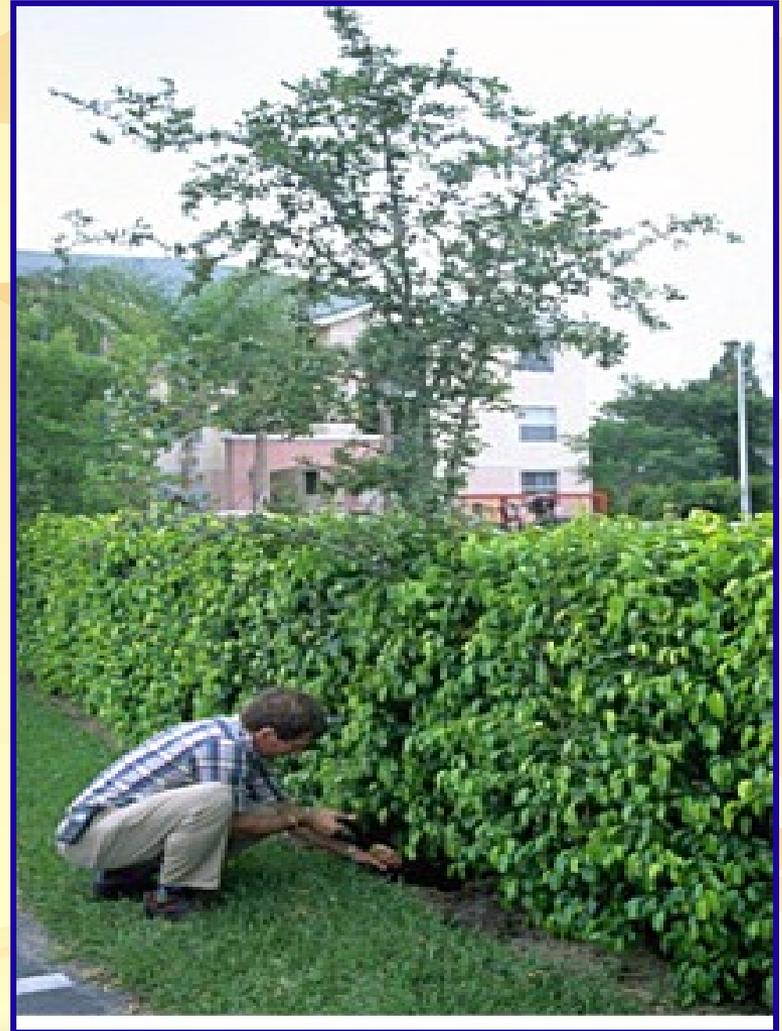
Correctly Set Root Ball

- Ensure the top-most root emerges from the trunk within 2 inches of the surface
- Set the top of the ball several inches higher than the landscape soil, and remove excess soil over the roots
- A shovel handle provides a convenient tool for gauging proper height



Tree Health

- The most common symptom of deep planting is sickly or dead trees.
- Tree can appear to “sit” for years without growing.
- This oak was planted 13 inches too deep.



Soil over root ball



- Suspect deep planting when there is no visible swelling (trunk or root flare).

Root Defects

- Causes some roots to grow up toward the soil surface
- Some can grow against the trunk. These can become girdling roots.
- Defective roots should be cut.



Root Defects



- Excavation (using an air spade) of root collar on trees planted too deeply.
- Roots severely defected.
- If this tree does not currently show above ground symptoms, it is likely to soon

Soil over root ball

- Root ball was buried 12 inches deep
- The green tape marks the location of the root ball surface after this tree was planted
- The main roots emerged from the trunk about 12" lower down
- This tree died two years after it was planted





HOW MULCH DEPTH AFFECTS ROOTS

Crown Dieback



Crown dieback indicates root problems. If you see a tree with dieback, it could be caused by the following:

- Tree is planted too deep,
- Root disease
- or in this case 16 inches of mulch was piled against the trunk.

Too Much Mulch

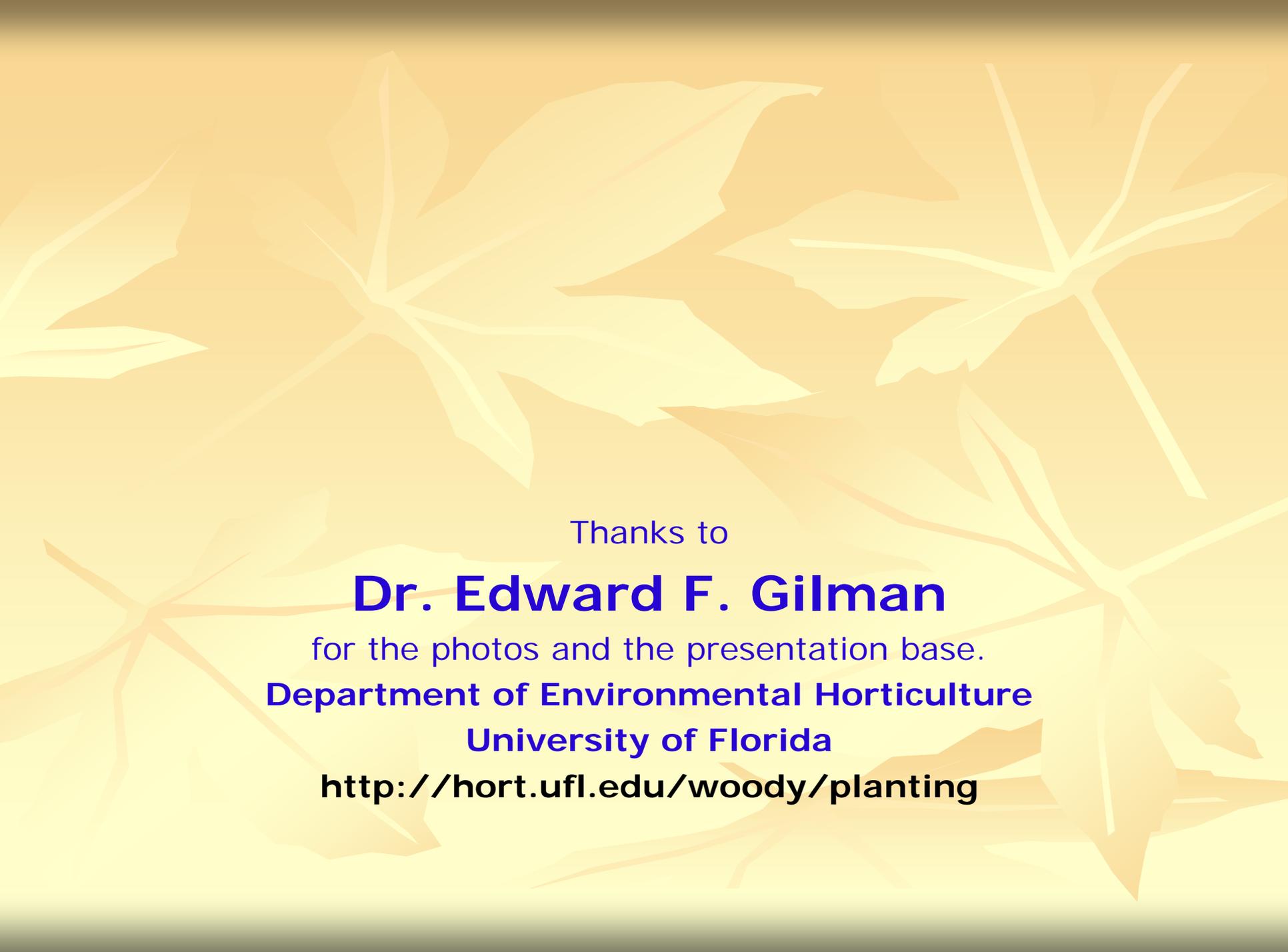


- Keeps trunk tissue too wet
- Increases rodent damage on the buried portion of the trunk
- Intercepts rain and irrigation meant for the roots
- Can keep poorly drained soils too wet
- Encourages surface roots
- Encourages stem girdling roots

Proper Mulch Management



- No mulch within 4" to 6" of the tree trunk.
- Mulch should be placed to canopy edge.
- Turf roots are very competitive with tree roots and can dramatically slow establishment
- Once the tree is established, the mulch area can shrink some

The background of the slide features a stylized, low-poly illustration of several large, overlapping leaves in shades of yellow and orange. The leaves are arranged in a way that they appear to be part of a larger plant, with some leaves in the foreground and others behind them, creating a sense of depth. The overall color palette is warm and autumnal.

Thanks to

Dr. Edward F. Gilman

for the photos and the presentation base.

Department of Environmental Horticulture

University of Florida

<http://hort.ufl.edu/woody/planting>