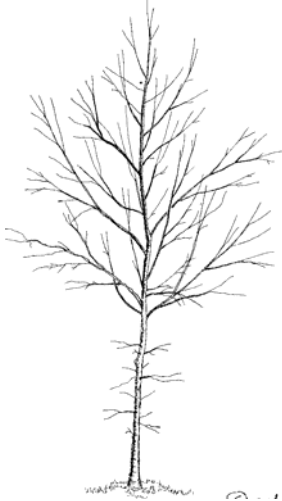


BMPs for producing quality shade trees

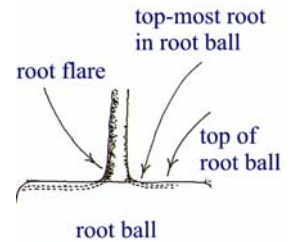
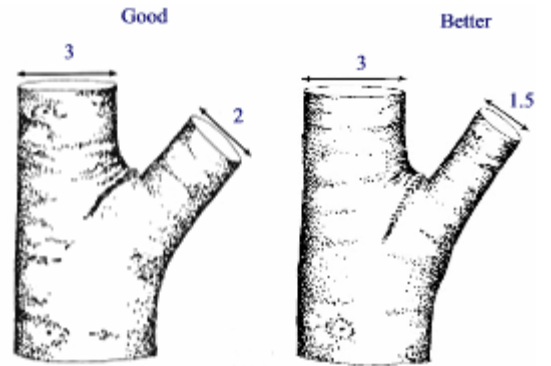
Ed Gilman, Professor
 University of Florida Gainesville
egilman@ufl.edu <http://hort.ufl.edu/woody>

Statements and illustrations to place in a planting specification to help ensure quality nursery trees are planted: (see www.floridaisa.org for detailed 12-page planting specifications)

- There shall be a dominant leader to the top of the tree with main branches spaced at least 6 inches apart. (there can be a double leader in the top 10% of the tree).

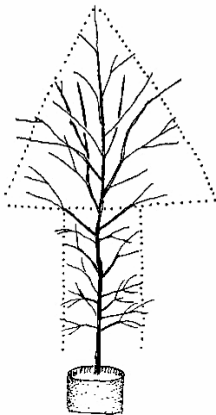


- Branches shall be less than $\frac{2}{3}$ the trunk diameter.
- There shall be no roots greater than $\frac{1}{10}$ diameter of the trunk circling more than one-third the way around in the top half of the root ball.
- The point where the top-most root in the root ball emerges from the trunk shall be visible at the soil surface.

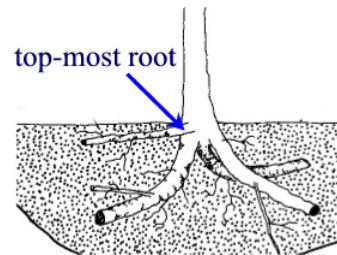


Producing consistent quality 2.5" caliper nursery stock:

General guidelines:



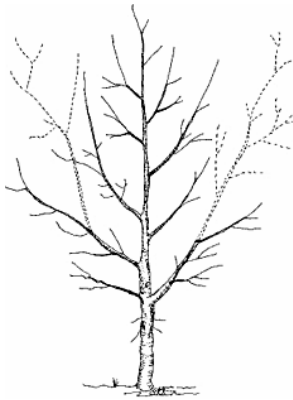
- Plant liners with top-most root at soil surface.
- Develop and implement a system to manage root quality.
- Plant short liners that are wider at the bottom than at the top: (2.5 ft in 1-gal; 5 ft in 3-gal).
- Plant cultivars for root and top consistency and ease of harvest.
- Space trees appropriately: (pot-to-pot OK in 1-gal; 2-3 ft in 3-gal; 4-5 ft in 15-gal; 6 ft in 30-gal). Good field spacing: 12x6; 12x8.



- Grow a teardrop on a cylinder but do not isolate the leader.

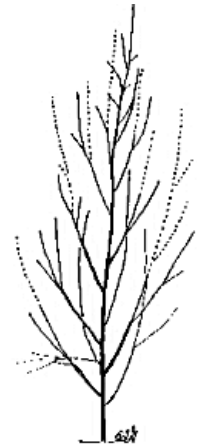
General guidelines continued

- Low temporary branches in the bottom 5 ft are your caliper builders and growth regulators for the permanent nursery canopy; cut them too short and leader over-extends, leave them too long and permanent nursery canopy grows slowly.



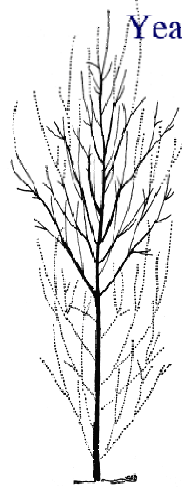
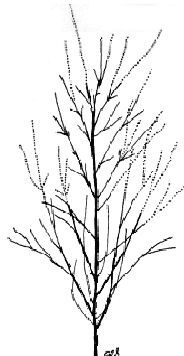
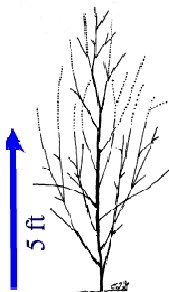
- Make reduction cuts on one-year-old stems in the permanent nursery canopy (pnc) to increase spread and develop a quality tree rapidly.
- Saws should not be needed in a quality protocol.

Year one

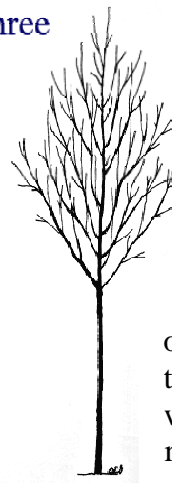


Year one: grow a cylinder around one stem; stake for straight trunk; shorten all upright stems with heading cuts except the one that becomes the leader; let most others grow unrestricted.

year two



Year three



Year two: begin spacing largest branches 6 inches or more apart in perm nursery canopy by reducing/removing others nearby; shorten temporary branches with heading cuts, remove the largest one or two and end of

season; make reduction cuts in pnc to subordinate codominant stems and increase spread.

Year three: remove half of temporary branches early, other half mid-year; make reduction cuts in pnc to increase spread and subordinate codominant stems; continue spacing largest branches 6 inches or more apart in pnc by reducing others nearby.